# A BUSINESS ANALYSIS OF THE SOUTH AFRICAN DOMESTIC COMMERCIAL AIR TRANSPORT MARKET

**(Low-cost carriers and full-service carriers in the context of the business environment and passenger behaviours)**

By

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# ABSTRACT

This study attempted to establish the travel behaviours and choice criteria of the South African domestic air passenger and how they differed between low-cost carriers (LCCs) and full-service carriers (FSCs). The study was quantitative and used structured questionnaires to collect data via personal interviews. Descriptive and inferential techniques were used to analyse the data, including a binomial logistic regression to identify predictors of model choice.

Analysis showed that passengers had a limited understanding of the functioning of the models. This results in consumer perceptions and expectations being discordant with the true differences. In distinguishing between models, LCC passengers rate LCCs more favourably than FSC passengers, but both rate FSCs higher than LCCs. This shows the need of consumers to have the features and services of the FSCs. Amongst the key findings was the absolute importance of price to the passengers on both models when purchasing the ticket. The analysis showed that LCC passengers are highly price sensitive and show loyalty to the lowest price (not airline model). It was apparent that frequent flyer programmes (FFP), or linkages to 3rd party loyalty programmes, for LCCs need to be reconsidered. Younger LCC passengers especially, indicated a need for a simple FFP to receive some form of 'reward', as well as benefits traditionally only offered by FSCs. FSC passengers show a greater degree of loyalty and less fare sensitivity. This provides the FSCs with a degree of fare flexibility and the opportunity to move their loyal, less price-sensitive consumers up the price curve to maximise revenue.

It was shown that, in distinguishing themselves from FSCs, it is important that LCCs are perceived as being more affordable than FSCs and are offering a value-for-money service. In essence, LCCs have to defend their positioning by (i) ensuring that their fares are not perceived to be as high as a FSCs and (ii) watching that the FSC fares are not declining to a level where FSCs are perceived as being as cheap as a LCC. For LCCs, brand building strategies around issues other than fare need to be devised, with attention paid to identifying determinant factors.

**Key terms:** Full-service carriers, Low-cost carriers, South African domestic air transport industry, airline business strategy, passenger behaviour, passenger profile, airline choice criteria, price sensitivity, model perceptions, predictors of model choice.

# DECLARATION

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I declare that the above dissertation/thesis is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

14 March 2018

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# FREQUENTLY USED ABBREVIATIONS

| | |
|---|---|
| ACSA | Airports Company South Africa |
| AFCAC | African Civil Aviation Commission |
| AFRAA | African Airlines Association |
| ASK | Available Seat Kilometres |
| ASM | Available Seat Miles (US figures) |
| ATK | Available Tonne Kilometre |
| CAGR | Compound Annual Growth Rate |
| CTIA | Cape Town International Airport |
| DOC | Direct Operating Costs |
| FFP | Frequent Flyer Programme |
| FSC | Full-Service Carrier |
| FY | Financial year |
| GDP | Gross Domestic Product |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organisation |
| IMF | International Monetary Fund |
| IOC | Indirect Operating Costs |
| KSIA | King Shaka International Airport |
| LCC | Low-Cost Carrier |
| OECD | Organisation for Economic Co-operation and Development |
| ORTIA | Oliver Reginald Tambo International Airport |
| Pax | Passengers |
| R | South African Rands (*see* ZAR) |
| ROIC | Return on Invested Capital |
| RPK | Revenue Passenger Kilometres |
| RTK | Revenue Tonne Kilometre |
| SA | South Africa |
| SAA | South African Airways |
| SCA | Sustainable Competitive Advantage |
| UNWTO | World Tourism Organisation |
| US $ | United States of America Dollars |
| WACC | Weighted Average Cost of Capital |
| WEF | World Economic Forum |
| WTTC | World Travel and Tourism Council |
| ZAR | South African Rand (*see* R) |

# GLOSSARY OF TERMS

The table that follows contains a list of air transport industry related terms used throughout the study. The definitions are quoted from Doganis (2010:326–328), Shaw (2011:327–341), and ICAO (2016).

| | |
|---|---|
| Available seat kilometre (ASK) | Calculated by multiplying the number of seats available for sale on each flight by the stage distance flown. |
| Code sharing | The process whereby an airline uses the two-letter code of another carrier to identify its flights. Often used by carriers to form co-operative, rather than competitive, relationships with other carriers. |
| Fleet commonality | A situation where an airline has only a small number of aircraft types in its fleet. Benefits arise from pilot training and spares inventories but can place restrictions on the routes flow or under-utilised aircraft. |
| Flight stage | A flight stage is the operation of an aircraft from take-off to its next landing. A flight stage is classified as either international or domestic based on the following definitions (ICAO):<br>• *International*. A flight stage with one or both terminals in the territory of a State, other than the State in which the air carrier has its principal place of business.<br>• *Domestic*. A flight stage not classifiable as international. Domestic flight stages include all flight stages flown between points within the domestic boundaries of a State by an air carrier whose principal place of business is in that State. Flight stages between a State and territories belonging to it, as well as any flight stages between two such territories, should be classified as domestic. |
| Full-service carrier | A carrier that uses differentiation as its main strategic thrust with a high level of service being included in the ticket price. They typically operate highly complex operations using a hub-and-spoke system to feed their main routes. |
| Hybrid carrier | An airline that is a blend of the FSC and LCC. To remain competitive in the market, some LCCs take on some of the characteristics of FSCs in order to grow their customer base. Some of the characteristics that these carriers have adopted include using a global distribution system, different classes of service, loyalty programmes, and interline agreements. All these characteristics add costs and complexity to the carrier's operations and thus those following this route are classified as hybrid carriers and not as LCCs. |

| | |
|---|---|
| IATA | A trade association of most of the world's airlines. IATA has a number of important functions including those of the settlement of inter-airline accounts through the clearinghouse, and providing a forum within which airlines can co-ordinate their schedules planning. |
| Interlining | The acceptance by one airline of travel documents issued by another airline for carriage on the services of the first airline. An interline passenger is one using a through fare for a journey involving two or more separate airlines. |
| Passenger load factor (PLF) | Passenger-kilometres performed expressed as a percentage of seat-kilometres available (RPK/ASK). |
| Low-cost carrier | Refers to an airline that has its focus on achieving a low-cost operating structure with the aim of offering low fares to the consumer. Their product is unbundled with many previously free services being dispensed with or offered at a fee. They typically offer simple fare structures, direct Internet distribution, and utilise a single aircraft type. |
| Narrow-bodied aircraft | Civil aircraft that have one passenger aisle. For example, the Boeing 737–800 or Airbus A320. |
| Passenger load factor | Passenger kilometres (RPK) expressed as a percentage of available seat kilometres (ASK). On a single sector this can be simplified to the number of passengers carried as a percentage of seats available for sale. |
| Revenue passenger kilometres (RPK) | Calculated by multiplying the number of fare paying passengers on each flight stage by flight stage distance. They are a measure of an airline's passenger traffic. |
| Stage or sector distance | The air route or flying distance between two airports. In practise many airlines use great circle distance, which is shorter. |
| Wide-bodied aircraft | Civil aircraft that have two passenger aisles. For example, the Boeing 747–800 or Airbus A380–800. |
| Yield | The average revenue collected per passenger-kilometre or tonne-km of freight carried. Passenger yield is calculated by dividing the total passenger revenue on a flight by the passenger-kilometres generated by that flight. It is a measure of the weighted average fare paid. |

# CHAPTER 1

# INTRODUCTION TO THE STUDY

*The worst sort of business is one that grows rapidly, requires significant capital to engender the growth, and then earns little or no money. Think airlines. Here a durable competitive advantage has proven elusive since the days of the Wright Brothers. Indeed, if a farsighted capitalist had been present at Kitty Hawk, he would have done his successors a huge favour by shooting Orville down.*

*— Warren Buffett, February 2008*

## 1.1 INTRODUCTION

Buffett's words in the above quote summarise the perennial problems of the air transport industry. In the quest to find a durable competitive advantage within the industry, the low-cost model emerged. Whilst the low-cost airline model has been in existence around the world for many decades, it is only since the late 1990s that it has sprung to prominence as a successful model. Airlines like Southwest in the USA, Easyjet and Ryanair in Europe, and Air Asia in Asia are generally considered the trailblazers of the modern day low-cost model. The development of the low-cost model has resulted in major changes in the way that people consume air travel products/services. These changes are particularly evident in terms of consumer behaviour and the value consumers place on the services required and received. The rapidly changing market requires that airline managers reconsider the way in which they manage their airlines and consequently the way in which they define and segment their markets.

The influence of these changes extends to the South African air transport industry as well, with the introduction of numerous low-cost carriers into the South African market over the past 15 years. This study will focus on analysing the current air transport market in South Africa for both low-cost carriers (LCCs) and full-service carriers (FSCs). Specific emphasis will be given to identifying the drivers of passenger decision-making, perceptions, and expectations associated with each type of airline model. A better understanding of the South African airline market and the rationale behind the passenger's behaviours, perceptions and price sensitivities, will put airline business managers in a better position to develop their business strategies. It will also put them in a position to refine their approach to market segmentation and focus their marketing efforts, especially in the context of the growing popularity of the LCC model.

## 1.2 BACKGROUND TO THE STUDY

The global economic environment from the end of 2008 to end 2016 has been characterised by a financial meltdown of some of the worlds' major banks followed by an extended recession and a gradual recovery – with numerous false starts. The recovery from the 2008-2009 recession has been a protracted one and most experts have been unable to reach a consensus on when economies will fully emerge from the effects of this recession. Speculation across a variety of news and information sources at the time reflected a diversity of opinions ranging from those predicting a recovery by the end of 2010, to those that predict global economies will experience a double-dip recession and not recover fully until 2017–2018. The *Global Economic Prospects report* by the World Bank in June 2016 highlights the point that it is now seven years since the financial crisis and the world's economy is still unable to regain momentum (World Bank, 2016:xi). The International Monetary Fund (IMF) in their *World Economic Outlook report* for June 2016 (sub-titled 'too slow for too long') supports this view by stating that the recovery is continuing but at an ever-slowing and fragile pace (IMF, 2016:xiii).

The effects of the global financial crisis and slow recovery from recession were widespread and had severe effects on most people around the globe. Some of the major impacts of this recession were increasing global unemployment and reduced consumer spending on many goods and services as people cut back to cope with the reality of the situation. Some industries were affected more than others by the negative economic conditions. The financial industry, the motor industry, the luxury goods industry, and the housing market all experienced significant downward trends followed by a slow recovery. The air transport industry was also negatively affected by the recession and in 2017 is still engaged in a shakeout period. The impact of this recession has radically reshaped the air transport industry and altered consumer behaviours.

### 1.2.1 Global air transport industry overview

The airline industry is an industry that is constantly experiencing turbulence in its business environment. It is an industry that has undergone rapid development and changes over the past decade, with the impact of the 2008/2009 recession radically reshaping the nature of the industry. Issues such as rising fuel costs, maintenance costs, natural disasters, disease outbreaks, terrorism, rising airport taxes, and environmental concerns to name but a few, all place severe downward pressure on the airlines. Given these pressures, it is quite easy to surmise that recovery, even growth, in this industry is always a long way off, and that there will be many more failures before a complete turnaround occurs or a substantial period of success is experienced.

#### 1.2.1.1 Progress of the industry since the 2008/2009 global recession

In 2009, during the global financial crisis, the International Air Transport Association (IATA) forecasts predicted that the global airline industry would lose US $4.7 billion for the 2009 financial year, with African carriers' losses being US $600 million (Kamhunga, 2009). Overall actual losses were put at closer to US $9.8 billion (Doganis, 2010a:1). Airline revenues dropped by US $85 billion from 2008-2009. In January 2008, just prior to the economic downturn taking full effect, IATA released industry statistics with the headline announcing that worldwide passenger demand had surged to an 18-month high with year on year traffic surging 9.3% and load factors reaching 75.4% with an industry profit of US $5.6 billion (IATA, 2008a). The effects of the economic downturn can thus clearly be seen in the dramatic swing from industry profit to industry loss in less than two years.

By early 2010, IATA noted that a cautious optimism was returning to the industry. It was however highlighted that the levels of losses experienced during the recession are a 'blunt case for big change' within the industry (IATA, 2010c:5). In June 2010, Bisignani (former Director General and CEO of IATA) stated at the IATA annual general meeting that the aviation industry was, at that stage, starting to emerge from the lowest point of the recession and global traffic was back to pre-crisis levels (IATA, 2010). The forecast from this being that at the end of 2010 there should be a significant improvement to the bottom line of the industry. Whilst there was an improvement, numerous occurrences in the global political environment (Middle-East tensions) and the natural environment (earthquakes and tsunamis) resulted in demand not growing as much as was predicted. Overall, in emerging from the recession in 2010, it was noted that airlines were a lot more efficient than they had been before the recession and that revenue had increased, but overall industry profitability was still low. A report by *Oxford Economics* (2010), a world leading global forecasting and research consultancy, in partnership with *Amadeus*, concurred with the forecasts of IATA and other forecasting bodies. The report highlights that whilst overall tourist numbers had grown during 2010 (post-recession), they were still below the levels experienced in early 2008 (Oxford Economics, 2010:7). In line with IATA forecasts, the report also forecasted that the air transport industry would return to profitability by the end of 2010. A key point from the Oxford Economics research is the relationship between air travel growth and GDP growth (*see* section 3.2.1 of the study). The research highlighted that air travel growth on average is faster than GDP growth, but during periods of decline, the decline for air travel is greater than the decline in GDP. Overall, the Oxford Economics report predicted that the recovery from the 2008/2009-decline phase would be lengthy but consumers would eventually return to their spending patterns exhibited before the recession started. Whilst the customers did return to air travel, there was a definite change in their spending patterns and the nature of the product/service being demanded.

The year 2011 was much the same as 2010, with the industry profit level being lower than the previous year even though overall revenues increased by 9.4% (IATA, 2012g:12). The high price of oil was a key concern for the industry as it significantly impacted on airline costs. Slow economic recovery in many zones had a dampening effect on demand growth. Industry profit in 2012 was similar to 2011 and showed a weak overall profit margin. High oil prices were still a major concern. The strongest economic and airline growth was seen in the developing economies. Whilst passenger traffic increased, it was at a slower rate than the previous year (5.9% vs. 5.3%) albeit at a rate 2.5 times as fast as global GDP (IATA, 2013:8). The trend of a difficult competitive environment continued in 2013 with a combined profit of US $12.9 billion being made on the back of US $708 billion in revenue (IATA, 2014:8). This is an improvement over the previous year. Once again, the key challenges facing the airline industry were high oil prices and slow global economic growth. Traffic growth was achieved in both the developed and developing economies. An encouraging sign from 2013 was that passenger load factors achieved a record high at 80%, which indicates both increasing passenger volumes and greater efficiencies at managing capacity. 2014 was even more encouraging for the industry. The industry saw increased profitability (US $16.4 billion) and increased traffic growth (6.1%), which was aided by a decrease in the price of oil during the year (IATA, 2015:11–12). The full effect of the oil price drop was not felt in 2014 due to many airlines having hedged their oil price at a higher rate. The Asian market was an exception to the industry growth due to a number of political incidents and air disasters involving Malaysian Airlines. Passenger load factors were similar to 2013.

The year 2015 was a fantastic year for the airline industry as a whole, with the end of 2015 seeing the first year of overall industry profitability, that is, airlines achieved a return on invested capital exceeding the cost of the capital (IATA, 2016:9). However, a review of the different regions shows that this success was not evenly distributed across the globe. The bulk of the profit was achieved in Northern America. Industry profit level stood at US $35.3 billion on revenues of US $718 billion (IATA, 2016:9). Passenger growth stood at 7.4% with more than 3.5 billion passengers being recorded. Global RPK growth at the end of 2015 was 6.8%, whilst global GDP growth was 2.6% for the year (Airbus, 2016:9), reinforcing the point in a previous paragraph that in growth periods RPK[1] growth outpaces GDP growth. The oil price fell significantly which drastically reduced the fuel bill for most airlines. Currency market fluctuations against the US Dollar negated the effect of the lower oil price for many airlines in developing economies. Globally, the first half of 2016 has showed solid growth but was impacted upon by disappointing economic growth, political shocks, and terrorism attacks. Passenger growth continued to grow at a steady pace but there were signs that this growth is slowing down. Nonetheless, forecasts by IATA predicted a record collective industry profit of US $39.4 billion based on revenues of US $709 billion (IATA, 2016a). 2016 was the second consecutive year of airline industry profitability for all regions - except Africa. Low oil prices are filtering through the industry and counter-acting the negative influences. The industry has made great strides since the global recession but a cautionary note is being sounded as the general GDP growth rate is still sluggish and will start to drag on air travel traffic growth

[1] Revenue passenger kilometres (RPK) are calculated by multiplying the number of fare paying passengers on each flight stage by flight stage distance. They are a measure of an airline's passenger traffic. *(see* glossary of terms)

(RPK) as the economic forces filter through the global economy. The state of the global air transport industry is explored in detail in section 5.2 of the study.

Table 1.1 shows the Airbus forecast for world and regional annual traffic growth to the year 2035 (Airbus, 2016). The figures are based on data obtained from numerous reputable sources including IATA, ICAO, Sabre, OAG, IHS, airlines, and airports. The table shows overall global RPK growth to be 4.5% annually with some inter-regional fluctuations. Africa as a continent, whilst showing good annual growth is still lagging behind the rest of the world. Overall, the global outlook is optimistic with expectations indicating that 2016 air traffic will double by the year 2030. Global RPK growth is addressed in detail in section 5.2.3.3 of the study.

**Table 1.1: Long-term world annual traffic growth forecast (2016-2035)**

| Region | % of 2015 world RPK | 20-year growth forecast | % of 2035 world RPK |
|---|---|---|---|
| Asia-pacific | 30% | 5.7% | 36% |
| Europe | 25% | 3.7% | 22% |
| North America | 24% | 2.9% | 19% |
| Middle East | 9% | 5.7% | 11% |
| Latin America | 5% | 4.8% | 5% |
| CIS | 4% | 4.1% | 4% |
| Africa | 3% | 4.8% | 3% |
| **World** | **-** | **4.5%** | **-** |

**Source:** Adapted from Airbus (2016: slide 16).

#### 1.2.1.2 Mixed impact of recession on airlines

A legacy of the global recession was the demise of a number of prominent airlines around the world, with many others experiencing severe financial strain. Examples of those that have declared bankruptcy since 2008/2009 include Denmark-based Sterling in 2008 (owned by Icelandic investors who were impacted by the collapse of the Icelandic financial system), Mexicana from Mexico (August 2010), XL Airways, Aloha Airlines in the US and many of the business-class only airlines like EOS, MAXjet and Silverjet (Sky News, 2008). Other examples include SAMA in 2010 (a LCC in Saudi Arabia), Malev (Hungary), Croatian Airlines, 1time, and Velvet Sky in 2012 (the last two being LCCs in South Africa). Included amongst those experiencing financial strain during the 2008/2009 recession was British Airways, who recorded a GBP 401 million loss in the 2009 financial year (Running on empty, 2009). The airline has since returned to profitability after a difficult restructuring process. Many of the large American airlines like American Airlines, Continental Airlines, Delta Airlines, Northwest Airlines, and United Airlines also experienced financial difficulty and bankruptcy protection. Most of these airlines have since engaged in mergers that occurred either as a direct or indirect result of the economic downturn. Key mergers of large airlines at this time included Air France-KLM, Delta Airlines-Northwest, LAN-TAM, British-Airways-Iberia, and United-Continental (Southgate, 2011:39). Others strugglers included Japanese Airlines (JAL), Austrian Airlines, and South African Airways. Many of these airlines are still experiencing problems in 2016. A significant low-cost airline that is struggling is Gol, a LCC in Brazil, which had positive results during the recession and period shortly after (2009 and 2010), but has since entered a period of loss-making resulting largely from the country's poor economic performance and currency exchange rate woes.

In contrast to this, Emirates Airlines achieved a US $964 million profit for the year ending March 2010. Given the state of the global economy at the time this is a particularly impressive result. This figure was achieved with a 21% increase in the number of passengers carried for the year as well as a 2.3% increase in the load factor (Centre for Aviation, 2010a). This trend has continued and they have been profitable each year since then and in 2015 have declared record profits of US $1.9 billion (Kerr, 2016). The success of their model is based on driving down costs whilst offering a quality product in order to achieve volumes and thus achieve higher yields. Other airlines that performed well during this period included Lufthansa (Germany), Southwest (USA), Singapore Airlines and Ryanair (Ireland). Ryanair, a LCC, in particular achieved excellent results during this period based on their aggressive marketing tactics and low fares. Profits after tax were announced at €108 million for 2009 on revenues of €2 942 million, which was a decrease over the previous year but unlike most airlines, was still profitable. During this period, they achieved a load factor of 81% with a 15% increase in terms of the number of passengers carried (Ryanair, 2009). Ryanair's good performance has also continued for the entire period and the results for the year ended March 2016 a profit after tax of €1 559.1 million on revenues of €6 535.8 million (Ryanair, 2016). This list of good performers includes both LCCs and FSCs.

#### 1.2.1.3 Influence of the price of oil on the air transport industry

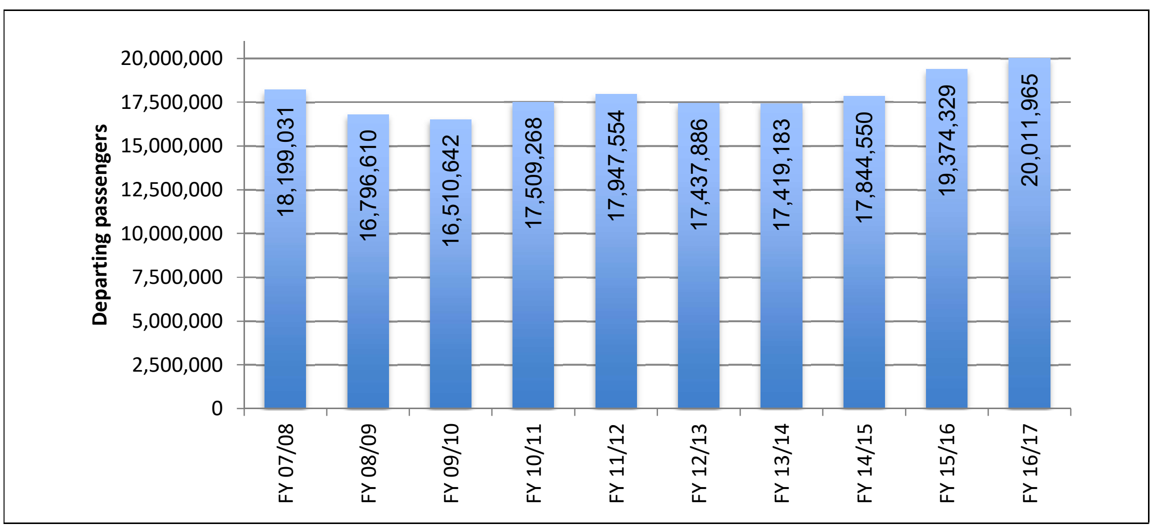
It is essential that the influence of the price of oil on the air transport industry be understood at this early stage. The rapid rise of the oil price in 2008 also had a significant impact on airlines, drastically reducing profits and affecting the price of tickets to the consumer. In 2001, the cost of oil was at US $25 per barrel. In 2007, this had risen to an average of US $73 per barrel. The oil price reached its peak on 4 July 2008 at US $145,29 per barrel (EIA, 2017). A Financial Mail report (Furlonger, 2008) on the state of the airline industry in June 2008 stated that for every US $1 extra it costs for a barrel of oil, costs in the global airline industry rise by US $1.6 billion. The price of oil started to significantly decline after 11 July 2008, reaching a low of US $36,51 on 16 January 2009 and then started easing again to a level of US $81,69 per barrel in October 2010. The situation deteriorated from there for 2011 and 2012 with the oil price ending the respective years at US $107,46 and US $109,45 a barrel. 2013 saw a negligible decline in the oil price to US $105,57 at year-end followed by a further small decline in 2014, which saw the oil price end the year at US $96,29 per barrel. The oil price at these levels was having a negative effect on growth in the industry and putting pressure on marginal carriers. 2015 was the year that saw the oil price collapse to US $49,49 at the end of the year. The oil price reached a low of US $27,88 per barrel on 21 January 2016 but it then climbed steadily to US $52,51 on 9 June, 2016. The price per barrel has since traded between a band of US $44 and US $50 (EIA, 2017). This has brought a level of relief to the air transport industry in the context of the difficult operating environment but is always a source of concern given that fuel costs make up a large portion of an airline's costs. The macro trend in the oil price is discussed in section 4.2.3 and jet fuel (a cost to airlines) is addressed in section 3.5.1.

### 1.2.2 The South African air transport industry

South Africa is a country that has immense potential. It is however a country with a number of limitations that affect the environment in which the airline industry operates. The country's location has a significant impact on the levels of short-haul growth that can be achieved in the airline industry. Being located on the southernmost tip of the African continent means that to the east, south and west of the country is the ocean. Apart from Madagascar and Mauritius, there are no opportunities in these directions for short-haul operators. To the immediate north are countries like Namibia, Botswana, Zimbabwe, and Mozambique. Many of these countries have a variety of social and economic problems that limit the available opportunities currently. Compared to the European, Asian, and American markets, the populations of these African countries are relatively small. Additionally, given the levels of poverty in these countries, the opportunities to pursue aggressive air service growth are currently limited. Looking further afield, politics, restrictive regulations, and the range of the aircraft currently being utilised affect further international opportunities into southern and central Africa.

Overall, the South African domestic air transport industry has seen growth interspersed with some declines resulting from the 2009 recession and other local circumstances. The general picture of the South African air transport industry described above can be seen from the Airports Company South Africa (ACSA) figures for departing passengers for the past ten years. This is illustrated in figure 1.1. The figure refers to ACSA operated airports only and thus excludes Lanseria airport.

**Figure 1.1: Departing passengers for all ACSA airports (consolidated total)**




**Source:** Compiled from: ACSA (2013a:143), ACSA (2015:175), ACSA (2016i:144), and ACSA (2017b), In terms of airports, OR Tambo International Airport (ORTIA) is the air transport hub of Southern Africa, handling 20 721 148 arriving and departing passengers in the 2016 calendar year. Cape Town International is the second-largest airport in South Africa and the third largest in Africa handling 10 090 418 arriving and departing passengers in the 2016 calendar year (ACSA, 2017c; ACSA, 2017d). The South African airports in the context of the study are addressed in section 2.5.2 of the study.

#### 1.2.2.1 Evolution of the South African domestic air transport industry

Over the years, journalists and experts have expressed opinions pronouncing the South African domestic airline market as being saturated and that growth is relatively stagnant on the domestic routes. This was especially in relation to the spate of LCCs entering the market. kulula.com (a brand of Comair) was the first true low-cost carrier to enter the South African market in 2001. Their success in an industry that was already viewed as being saturated led to the introduction of 1time in February 2004 and Mango (a South African Airways off-shoot) in November 2006. Both were LCCs. At this point it was expected that many airlines and routes would be closed due to the impending cutthroat competition that would ensue. The demise of Nationwide Airlines in 2008 was viewed as the beginning of a decline in the saturated South African air transport market. Velvet Sky entered the market in March 2011 and added further capacity to the domestic market. The market entered a period of 'irrational' competition with pricing being used as a key tactic (Centre for Aviation, 2015). This high level of over-capacity in the restricted South African passenger market saw 1time and Velvet Sky cease operations in 2012 leaving kulula.com and Mango as the sole surviving LCCs. The result was an immediate reduction in industry capacity and this allowed the remaining carriers to consolidate their positions, especially in terms of price competition. October 2014 saw the launch of FlySafair (a LCC) followed by Skywise in February 2015. Once again, capacity was added to the South African domestic market. Despite this additional capacity being added (8% approximately), the total domestic seat capacity in South Africa at the beginning of 2015 was still lower than the capacity levels of January 2012 (Centre for Aviation, 2015). Further concerns have been expressed that the South African domestic air travel market is too small to accommodate four LCCs and this would once again result in over-capacity and 'irrational competition'. This concern was further fuelled by FlySafair's planned introduction of additional capacity from October 2015 which would see South African domestic air travel capacity exceed 400 000 weekly seats for the first time ever (Centre for Aviation, 2015a). Fly Blue Crane entered the market in September of 2015. Whilst they are a regional hybrid operator using Embraer 145 regional jets to smaller regional destinations, they did add limited capacity on the JHB-CPT route. The carrier suspended operations in February 2017 (Traveller24:2017b). The suspension of Skywise's operations in November 2015 relieved some of these fears with a slight reduction in capacity being experienced.

In summary, seven main airlines were in operation in the South African domestic commercial air transport market in 2010. These included the full-service carriers British Airways (operated by Comair) and South African Airways, the low-cost carriers kulula.com, Mango and 1time, and the smaller regional carriers SA Express and Airlink. A number of smaller charter airline companies were also in operation but fall beyond the scope of this study. With the arrival and departure of a number of airlines since then, this number has fluctuated between six and nine. The number of domestic airlines at the end of 2016 is eight, which has since reduced to seven with the suspension of Fly Blue Crane's operations in February of 2017. At one stage, in September 2015, this figure was at a high of nine (SAA, Mango, Comair BA, kulula.com, FlySafair, SA Express, SA Airlink, Fly Blue Crane, and Skywise). This is considered by many to be an unsustainable number for such a limited and contained market like South Africa (Centre for Aviation, 2015a). A broader discussion on the South African air transport competitive environment is given in section 5.4.4 of the study, with the individual airlines outlined in section 2.4.2 of chapter 2.

#### 1.2.2.2 Hidden benefit of the recession for the South African air transport industry

The real impact of the 2008/2009 recession on the South African commercial air transport industry lagged slightly behind that of the rest of the world. Whilst the situation in 2009 might not have looked too bad, it was expected that the situation at the end of 2010 would tell the full story. An article in the Business Day in October 2009 (Baumann, 2009) identified the biggest threats to South African carriers as falling passenger volumes, the volatile price of fuel, increases in the airport charges imposed by ACSA, and high fee increases by Air Traffic and Navigation Services (ATNS). One of the reasons why the real impact of the recession on the South African air transport industry lagged behind the rest of the world was the effect of the 2010 FIFA soccer world cup which boosted passenger arrivals.

In 2010, SAA, Comair (British Airways & kulula.com), 1time (still operational at the time), and Mango all reported profits and increases in headline earnings for the year to June 30. The drastic reduction in the price of oil from 2008 levels (US $145,29 per barrel at its peak) to US $78,53 on October 16 2009 contributed significantly to this scenario. The 2008 economic downturn and the rise in the price of oil had a number of hidden benefits for airlines at the time. It forced the local airlines to re-evaluate their cost structures and become more cost efficient. Most of the airlines entered into a process of purchasing or leasing more fuel-efficient aircraft to further increase their efficiencies and reduce costs. SAA (SAA & Mango), Comair (British Airways & kulula.com) and 1time, which were all the main operators in the country at the time of the recession, were all engaged in this process. They (1time excluded) have since taken delivery of many of these orders and have benefited from the associated efficiency cost reductions.

#### 1.2.2.3 South African LCC market - entrance and impact on consumption patterns

A study by Luke and Walters (2013:10) states that the emergence of the LCC model has contributed significantly to the growth of the South African domestic market. They further state that the traffic stimulation in the country has been due to deregulation over time and that the traffic growth has been for the LCCs, as opposed to the FSCs. kulula.com's introduction to the market achieved immediate success by growing the South African market by as much as 8%. South African Airway's response to this was aggressive pricing tactics, which proved to be unsustainable and unsuccessful despite their dominant position in the South African air travel market. As stated in section 1.2.2.1, numerous LCCs have entered the South African domestic market since the entry of kulula.com in 2001. Of these LCCs; 1time, Velvet Sky, and Skywise have ceased operations. It is noted that in this period, no FSCs have entered the market. The only other notable entrant to the market was 'Fly Blue Crane' which is positioned as a hybrid regional operator (and has since suspended operations). Section 5.4.4 of the study covers the South African domestic competitive environment in detail.

In terms of the success of the low-cost model in South Africa, a newspaper report in the *Business Day* (van Wyk, 2009:1&3) in 2009 made the statement that despite being in the middle of the current economic crisis at the time, not only were South Africa's LCCs outperforming their FSC competitors; they were 'leading the field'. The demise of 1time and Velvet Sky in 2012 saw the South African airline market contract. This gave SAA and Comair the opportunity to consolidate their positions and an overall rise in the price of the average ticket price was experienced. The introduction of the new LCC operators in 2015 saw the duopoly broken and the average fares on many routes declined by between 16% and 39% (Maqutu, 2015). In addition to this, some routes experienced an increase in the number of bookings in response to the cheaper fares. Figures released in 2015 show that the penetration of the LCC model in South Africa sits at just under 50% of the total market (approximately 49%) (Centre for Aviation, 2015). As stated in section 1.2.2.1, concern has been expressed at the ability of the small South African domestic airline market to accommodate three or four LCCs over the long term.

In the early days of Mango's operations, Nico Bezuidenhout (former CEO of Mango), stated that there are three factors that travellers consider when making the decision to travel (van Wyk, 2009:1&3):

1. The price of the ticket. Is it affordable?
2. The airline's ability to get the passenger to the destination safely and on time.
3. Ticket flexibility. Can the ticket be changed and at a reasonable cost?

The nature of the South African market makes it difficult for South African LCCs to take advantage of all the opportunities to cut costs compared to the European and American markets. As explained in the introduction to section 1.2.2, the geographic location of the country, for instance, limits the number of markets that can be served, given the size of aircraft utilised (Boeing 737 variants, Airbus A319s and Airbus A320s, and MD82 by the defunct 1time) as the main aircraft type. Further to this, South Africa, because of the limited market and geographic location, does not have many large airports that are capable of handling the larger aircraft used by the commercial airlines. For the LCCs, not even some of the main airports are viable options due to the extremely limited markets (In 2011, East London was only served by 1time with a limited number of flights, for example). More noticeable, is that there are a severely limited number of secondary airports that can be utilised by the South African LCCs (secondary airports usually have lower service charges). Currently (end 2016), Lanseria to the west of Johannesburg and George in the Western Cape are the only viable secondary airports that are being used. Wonderboom airport, which is located just north of Pretoria, is a possible viable secondary airport being considered for the future.

### 1.2.3 The changing consumer market of the air transport industry

One particular area that needs to be reviewed are the trends in consumer behaviour regarding air travel – particularly with the continued development of the low-cost carrier model and its growth in the South African domestic air transport market.

#### 1.2.3.1 Broad trends and developments affecting consumer behaviour

Many of the current trends and changes in airline consumer behaviour are rooted in the 2008/2009 recessionary period. In this period, a number of airlines faced the situation where they increased the number of passengers they carried, but their overall yields decreased. This situation arose because passengers downscaled (business class passengers moved to economy class and many holiday travellers booked tickets in response to lower prices offered by the carriers in order to entice people back to flying) (Segran, 2009). Both situations clearly result in lower revenue being generated even though passenger numbers increased. Thomas (2010:12) states that experience has shown that, "during a recession there are permanent changes in peoples' travel patterns that ensure that the industry never returns (or takes an inordinate amount of time to return) to its pre-recession state". He further states that the consensus is that, given the seriousness of the 2009 recession, the permanency of the changes would be significant. These consumer changes are not only being experienced in the air travel industry.

The changes in airline consumer behaviour cover a broad spectrum. An important trend over the past 20 years is that the airline industry has become increasingly segmented. This trend became more prominent during the industry turbulence of the early 2000s and the growth of the LCC model. The nature of this trend required that airlines give more attention to their segmentation and market targeting efforts by establishing whether they have segmented their market appropriately and selected the most appropriate market segments to target. For privately owned airlines operating in a market that is dominated by a state-funded airline this is even more important. Globally, it has been long recognised that it is extremely important to properly segmenting the market. Thomas (2006:26) stated that the extreme turbulence in the industry and the appearance of the low-cost carrier has led to the point where the industry is in dire need of significant changes in applying market segmentation. Even earlier than this, Deimler, Koehler, Love, and Michael (2002:5) stated that "airlines need to adopt a more rigorous and far-reaching approach toward the segmentation of customers, products and networks". Thomas (2010:12) reinforced his point again in 2010 when he stated that, because of the changing nature of the consumer, the passenger base is becoming more segmented, which presents the airlines with a significant challenge to cater to these diverse and emerging segments. Two extensive research reports on changing consumer air travel needs published in 2015 by Amadeus, a leading technology supplier to the air travel industry, further reflect the recognition that airlines need to refine their understanding of the consumer and adapt their approach to segmenting their markets (Amadeus, 2015a:5; Amadeus, 2015b:4–5). This sentiment persists in 2016 and is extensively highlighted in a L.E.K. 2016 global transport industry trends report (L.E.K., 2016). Increasing market fragmentation and the resultant need for re-segmenting the market has important implications for competition between FSCs and LCCs and will form a key focal point in the proposed study.

Borgogna, Agarwalla, Stroh, and Jakovljevic (2017:30) state that over time it has become apparent that there are three broad trends that are severing the connection between the air passenger and the airlines. These are (i) the changing nature of consumer behaviour in terms of how products and services are purchased, (ii) changes in the use of direct and indirect channels, and (iii) developments in digital technology. An earlier report by Oxford Economics (2010) puts forward a number of important points that highlight the need to fully understand the consumer. The research uncovered the viewpoint from interviewees that they require a complete and seamless travel experience. In this context, they stated that airlines need to focus on the entire travel experience and understand what motivates people to travel, as opposed to only looking at the airline travel segment (Oxford Economics, 2010:25). This consumer need for a seamless travel experience is reinforced by Pilz and Dyerfox (2011), Oxford Economics (2014a:31–33), and The Economist Intelligence Unit (2014a:27–28). The two Amadeus research reports (2015a; 2015b) referred to in the previous paragraph came to similar conclusions and advocate that airlines focus on consumer purchasing behaviour and motivations when segmenting markets. They identified six 'traveller tribes' of future travellers that airlines need to consider (*see* section 6.4 of the study). Coupled with the passenger's growing desire for a completely personalised experience, it can be seen that providing the customer experience should be the main focus of the airlines. This in turn can only be done by thoroughly understanding the passenger segments and their perceptions, expectations, needs, and wants.

Further adding to the mix is the development of technology (*see* section 6.4 of the study). Consumers have more information available than in the past and they have a greater variety of sources that can be used to access this information and to make their travel purchases. Greater access to information and the resultant technological freedom has changed the way in which consumers make their decisions and the way in which they carry out their decisions. Social media is playing a particularly significant role in this regard; not only for the youth but increasingly in the 45–54 age group (Travelport, 2010:19).

Distinct differences are also emerging regarding the behaviours of males and females in this information rich environment. The result is that the market becomes even more fragmented as consumer requirements and behaviours become increasingly specific with greater levels of personalisation and customisation required from the airlines. These changes in consumer markets are significant and thus affect the current definition of customer segments and target markets. Again, the need to gain a thorough understanding of the consumer to properly define the market segments can be seen.

#### 1.2.3.2 The need to understand consumer behaviour in the South African context

The introduction of the low-cost model to South Africa in 2001 presented a number of unique challenges to the incumbent full-service carriers. Important decisions had to be made on how to respond to the low-cost carriers' way of doing business and their appeal to the broader South African flying population. The low-cost carriers also had a number of crucial issues to tackle if they were to succeed in a market dominated by South African Airways. Each operator had to identify an effective way to compete in the market without resorting to full-out price wars, which could have damaged them all. An additional problem area for the South African LCC sector is that the low-cost model is often misunderstood by consumers and many other groups not involved in the LCC sector. A review of what is written in the newspapers, complaint sites, and other media, shows that many people, including passengers specifically, still do not have an understanding of the airline industry, especially the mechanics of the low-cost model. However, consumers should not be expected to understand the mechanics of the model and it rests on the shoulders of the carriers to ensure that the passenger is fully aware of what to expect and what the service entails. The key misunderstanding is contained in the fact that the average consumer views the concepts of cost and price as interchangeable. In other words, to the consumer, a low-cost airline implies a low-fares airline. If the LCC fare is seen to be higher than a FSC fare, or not much of a differential, then the LCC is viewed in a negative light. The success of the airline requires that these barriers be overcome in order to deliver a clear message to the consumer that will instil greater confidence in the purchase of a travel product. It is essential that target markets be thoroughly understood and clearly defined so that the correct message is formulated.

From a marketing perspective, a logical option would be to identify specifically who the flying public is and what their needs are. To do this it will be prudent to firstly establish the consumers' understanding of the concept of a low-cost carrier and their perceptions and expectations linked to the model. Once the marketer has an understanding of these issues, they will be in a better position to identify how to compete in the market effectively. Numerous studies in this field have been conducted around the world. Each of these has approached the topic from a different angle but all have focussed on attempting to gain greater insights into passenger perceptions and motivations for travel. Specific examples can be identified in this regard. A study by O'Connell and Williams (2005) focussed on identifying passenger perceptions of low-cost carriers and full-service carriers in the European and Asian markets. Other authors including Mason (2000 & 2001), Turner and Foster (2003), Mason and Alamdari (2007), Huse and Evangelho (2007), Park, Robertson and Wu (2004), Park (2007), Chiun and Chen (2010), Ong and Tan (2010), Kuljanin and Kalic (2015), Christina, Milioti, Karlaftis, and Akkogiounoglou (2015), Kurtulmusoglu, Can and Tolon (2016), Rajaguru (2016), Buaphiban and Truong (2017), and Lu (2017) have all published work focussing on the identification of passenger perceptions and model choice in different markets around the world.

Whilst studies of this nature have been conducted in Europe, the USA and Asia, comprehensive work in this field is lacking in the South African context, thus opening up the research gap that will be surveyed in this study. A review of the available literature did however reveal a number of studies that addressed some similar issues in the South African market and serve as a source of valuable insights. Fourie and Lubbe (2006) conducted research in South Africa on the determinants of the selection of low-cost carriers and full-service carriers by business travellers. They found that South African business passengers view service attributes in a similar way to business travellers in other countries, except with regard to the importance attached to price. Mostert, De Meyer, and van Rensburg (2009) addressed the effects of service failure on passenger's levels of satisfaction and their relationships with airlines. In further research, Mostert and De Meyer (2010) considered the importance of building relationships as retention strategy in the South African domestic market. Campbell and Pratley (2010) explored the performance of South Africa's LCCs compared to international LCCs. At this early stage, it was seen that the South African LCCs needed to improve their cost reduction strategies if they are to achieve 'true LCC' status. An article published by Lambert and Luiz (2011) explored passenger expectations of service quality as perceived by long haul airline managers in the South African air transport industry. They found that airline managers rated the service dimension of reliability (trust and reliability in particular) as the most important element for passengers. Tangibles were the ranked by airline managers as the least important dimension for passengers in terms of service quality expectations. This study also considered how the perceptions of passenger expectations inform airline strategy. Campbell and Vigar-Ellis (2012) researched the importance of choice attributes and the positions of the airlines within the South African passenger domestic passenger airline industry at Durban International Airport. This study focused on the airlines in general and did not explore the differences between LCC and FSC passengers. Safety was identified as the most important attribute to domestic passengers in South Africa, with all airlines performing poorly on punctual/reliable flights. Mantey and Naidoo (2017) explore issues of customer expectations, service quality, satisfaction, and loyalty. Their study highlights the importance of service quality for the airline passenger. A study by Heyns and Carstens (2011) focused on the attributes considered important by passengers when selecting an airport with specific reference the greater Johannesburg area (ORTIA and Lanseria included). They identified four factors that are of importance to the passengers: airline efficiency, airport location and services, safety and security, and cost. A Doctoral thesis by Luke (2015) focused on the determinants of passenger choice in the domestic airline industry in South Africa. The study considered the topic of passenger preferences for airline selection from four perspectives: (i) the impact of demographic features on airline selection, (ii) the impact of travel behavior on airline selection, (iii) the impact of the purpose of travel on airline selection, and (iv) the impact of service attributes on airline selection. Kriel and Walters (2016) explored the passenger choice attributes in choosing a secondary airport (Lanseria). This is of particular relevance given the focus of South Africa's LCCs (kulula.com, Mango, and FlySafair) at this secondary airport. In their conclusions, they found that access time was an important attribute and confirm the choice attributes identified by the Heyns and Carstens (2011) study. On a slightly separate topic, Luke and Walters (2013) give an overview of the developments in the South African domestic market since deregulation, with reference to the impact it has had on traffic stimulation and the development of the low-cost model in South Africa (*see* section 5.4 for the discussion on the South African market).

An attempt to directly apply the findings of the foreign studies to the South African market will probably result in failure as there are a number of unique circumstances and conditions in this market that need to be accounted and adjusted for. As shall be seen in subsequent chapters, the South African low-cost model compared to the European or American low-cost model shows some significant differences. An understanding of these differences and the implications will indicate how the LCC model needs to be further adapted to meet the needs of the South African environment.

To gain this greater understanding of the domestic South African airline passenger market requires that they be surveyed on their levels of understanding, their perceptions of the services on offer, as well as the determinants and influences on their choice of airline or decision to travel. In order to do this, it is essential that the approach followed be grounded on the most appropriate theoretical foundation. The concept of perceived service quality and the model of total perceived service quality were introduced by Gronroos (who is considered a leader in the service and relationship marketing field) in 1982. This model measures the extent to which the customers experience meets their expectations and helps businesses understand how consumers perceive their product or services (Gronroos, 2007). This concept is integrated into the framework of the questionnaire for the study and serves as a key tool to establish how the consumer perceives the South African domestic airline services and the underlying influences on choice. The importance of these perceptions of the product and its features on the part of the consumer cannot be underestimated. It has been shown that the better the perceived product/service quality, the lower the propensity of the consumer to switch to another provider and the greater the chance of achieving customer loyalty and consumer willingness to accept a slightly higher price (Lovelock & Wirtz, 2011:338).

**1.3 PROBLEM STATEMENT**

The challenging economic environment that has prevailed for the past nine years (2008 to 2016) has presented the South African air transport industry with significant concerns and challenges. The emergence of the low-cost model in the South African market has also had clear impacts on the industry since its introduction (as explored in section 1.2.2). For airlines to operate in this volatile environment and maintain, or even grow, their passenger operations it is essential that they pay particular attention to the nature of their business markets and the strategies that they develop to serve those markets. The benefit of challenging business environment is that it forces the airlines to take a hard look at their current business structures, costs, and other operational activities, and identify where cuts or improvements can be made.

In the context of the country's location, the air transport industry in South Africa is an important industry that supports many sectors of the economy. It is a complex industry that is made up of many different support services that all need to work together for the industry to function. This entails a significant amount of long-term planning and commitment of financial resources by the airlines. Adding to the complexity for the airlines is that many of the changes in the business environment (consumer behaviour and technology for example) are occurring at a rate faster than the airlines can respond. Clearly, the need for accurate, timeous, and detailed information on the market is required to identify future trends and make predictions on the changes that could occur in order to make the best possible decisions.

The South African population was estimated to be 55.91 million people in mid-2016 (Statistics South Africa, 2016f:1). Whilst this population figure is larger than most of the country's immediate neighbours, it is still relatively small and presents a much smaller air travel market than most world markets. Coupled with the high level of low-income families, the market for domestic air travel in South Africa represents only a small percentage of the total population. Given this limited market size available to the airlines within the industry, it is crucial to understand the business environment in which they operate, and consequently, the air travel market (business and leisure) that they are seeking to attract. This involves monitoring changes in consumer behaviour and clearly identifying the various segments that exist. It is also extremely important in the South African context to identify those segments that do not fly but are technically in a position where they have the means to fly.

The development of new market segments is crucial for the competitiveness and survival of the airlines in the South African domestic market and needs to be explored intensely. This is particularly relevant to the low-cost carrier sector, where the nature of their business models dictates that they aggressively control and reduce costs and operate at the highest possible load factors. It is important that both the LCC and FSC models in the country evolve in a manner to serve the needs of the South African population. Additionally, these two sectors must facilitate access to the country for different segments in the international business market/investment community and accommodate a wide variety of different international tourist segments.

Before developing these new customer segments, it is important to understand the current business markets and consumer segments. At this stage, whilst some research has been conducted in the field, more needs to be known about LCCs and FSCs in the current changing environment. Consumer perceptions of traditional carriers (FSCs) and LCCs need to be established. More insights are required on consumer demographics, consumer travel patterns, pricing sensitivities, and purchasing behaviours. The consumer's understanding of the low-cost model and how it works needs to be understood as this has an important bearing on how the market in general responds to the business strategy development efforts of the low-cost carriers.

The main problem to be explored in the context of this study is to establish the business environment in which the South African domestic air transport industry currently operates and to establish the behaviour patterns and perceptions of passengers relating to travel on low-cost carriers and full-service carriers. This includes identifying the consumer's levels of understanding and perceptions of the two airline business models and price sensitivities. Efforts are made to understand the drivers influencing passenger choice with the aim of identifying key factors for airline managers to utilise when developing their business strategies. These efforts will include identifying variables that are statistical significant predictors of the odds that a passenger will select a LCC (as opposed to a FSC), which airline managers could consider when analysing their markets and selecting target markets to grow their operations.

**1.4 RESEARCH QUESTIONS**

Flowing from the problem statement is the need to identify specific research questions that need to be answered in the research (Berndt & Petzer, 2011:27). Research questions are defined in Saunders, Lewis, and Thornhill (2012:680) as key questions that the research process will address. They further state that research questions can be divided into three different types; (i) Descriptive, (ii) evaluative, and (iii) explanatory. Research questions are the precursors of the research objectives. The following research questions are identified for this study:

1. What is the current state of the business environment within which the South African domestic air transport industry operates and what are the main influences on the industry in the context of the LCC and FSC models?
2. Who are the passengers that are travelling on the LCCs and FSCs in the South African air travel market?
3. How does the South African consumer purchase air travel tickets for short-haul domestic travel in South Africa?
4. What are the key criteria used by the South African air travel consumer when deciding on which airline to fly for domestic travel?
5. How do LCC and FSC passengers in the South African air transport market differ with regard to their perceptions of the services and features offered by LCCs and FSCs?

6. What is the extent of price sensitivity for passengers travelling on LCCs and FSCs in the South African domestic market and how does this price switching behaviour differ across the two models?
7. What variables can be identified that are predictors of the odds that passengers will travel on a LCC, as opposed to a FSC, when selecting an airline?
8. Based on the results of the research, what additional areas of research can be identified that need to be explored in more detail in order to provide more insight into the topic in question?

## 1.5 RESEARCH OBJECTIVES

### 1.5.1 Primary objective:

The **primary research objective** identified for this study is to conduct a business analysis of the domestic commercial air transport industry in South Africa in order to gain greater insights into the business environment and the passengers that fly on the South African low-cost and full-service carriers.

In this case, the study will analyse behaviour patterns and perceptions regarding the low-cost and full-service models to establish the different behaviour patterns and thereby provide inputs that will assist in redefining the consumer segments that can be targeted by the low-cost and full-service providers. Building on this, the study will further seek to determine variables from the research results that are statistically significant predictors of the odds that passengers will select a LCC (as opposed to a FSC) when selecting an airline.

### 1.5.2 Secondary objectives

The following secondary objectives for the study have been identified:

1. Review the business environment in which the South African domestic air transport industry operates and determine the influences on the operation of this industry in terms of the low-cost and full-service carriers.
2. Establish the travel profile of the passengers travelling on the low-cost carriers and full-service carriers in the South African air travel market.
3. Establish behaviours of the market associated with the purchase of the air tickets for short-haul domestic travel in South Africa.
4. Uncover the key criteria used by the South African air travel market when deciding on which airline to fly for domestic travel.
5. Determine the perceptions of passengers in the South African air travel market with regard to the services and features offered by low-cost carriers and full-service carriers.

6. Determine the extent of price sensitivity for passengers travelling on low-cost and full-service carriers in the South African domestic market in order to identify the extent of price switching behaviour across the two models.
7. Identify additional areas of research that need to be addressed to improve the operation of the industry and its components.

## 1.6 RESEARCH METHODOLOGY

The overall philosophical approach to the study is one of *positivism*. Saunders, Lewis and Thornhill (2012:134 & 140), in their model 'the research onion', describe the philosophical approach of *positivism* as one where the researcher's view on acceptable knowledge is that "only observable phenomena can provide credible data, facts" and that the researcher searches for "regularities and causal relationships in the data to create law-like generalisations". Building on this, the research approach for the study is deductive in that data collection is used to test a number of hypotheses to draw a number of conclusions. The research methodology is described in detail in chapter 7 of the study.

### 1.6.1 General

The research is divided between secondary data analysis and primary data collection. The secondary sources will provide insights into the airline market in general as well as the concept of the low-cost strategy, low-cost carriers, full-service carriers, and the full-service strategy. Insights into previous research in this area will be gained from secondary research and forms the basis of the research being conducted. The key focus of the study is thus on the collection of primary data. The research is descriptive in nature and seeks to not only look at individual variables, but also identify bi-variate relationships between a number of variables and, in some cases, seeks to identify more complex relationships (Cooper & Schindler, 2011:151–152).

### 1.6.2 Secondary research

Research needs to be based on a theoretical framework to firstly establish the direction of the research and secondly to determine whether the research has been previously conducted. Webb (2002:30) states that one of the main uses of secondary data is to provide a backdrop to primary research. In this regard, he states that secondary data serves the important function of providing a context in which the primary research will take place. This is important because once context has been established the researcher is in a position to evaluate the primary data that is collected. Of particular importance in the use of secondary data is the need to firstly ensure that the data reviewed is of adequate quality and relevant to the purposes of the study (McGivern, 2013:129). (*see* section 7.3.4 of the study).

To ensure that a thorough context is established for this study, a wide variety of secondary sources and subject-related literature were reviewed to cover the broad range of topics that are addressed. The information and data needs for this study were loosely divided into three different groups. Firstly, those sources that are concerned with research methods, business strategy, and the relevant marketing theory. Secondly, sources that relate to the economic environment and the current state of the tourism industry. Thirdly, those sources that are concerned with the air transport industry (including information on the airline business models, airline passenger behaviours, and airline marketing). Besides highlighting the current situation, the secondary sources review also serves to reinforce the problem statement.

The list that follows outlines the broad types of secondary sources consulted for the literature review and business analysis components of the study:

- Academic textbooks on the subjects of marketing, airline marketing, airline management and operations, research, economics, and consumer behaviour.
- Academic journals relating to topics on marketing, airline marketing, airline management and operations, research, economics, and consumer behaviour.
- Airline industry organisations.
- Tourism industry organisations.
- Airline industry publications and websites.
- Airline websites (airline operators, airline suppliers, and airline manufacturers).
- Articles from specialist consultants that consult to the airline industry.
- Economic data sources.

### 1.6.3 Primary research

Primary research will be conducted to answer the research question and to obtain the data required to achieve the research objectives. It is at this stage where the process must be as scientific as possible. The research is a cross-sectional study focussing on the phenomena and situation at a particular point in time, that is, a once-off intervention (*see* section 7.3.5 of the study).

This research attempts to apply part of the methodology used in the study by O'Connell (2007) on the strategic response of full-service carriers to the low-cost carrier 'threat' and the perception of passengers to each type of carrier in Europe and Asia. The O'Connell (2007) research was selected as a guideline as it covered topics that were considered closely matching the requirements of this study, specifically with the focus on passenger perceptions and the differences between the two models. Additionally, the O'Connell study is a highly-regarded study that addressed a number of country markets. Permission was obtained from the author to apply his study to the South African environment. The questionnaire for this study is partly based on the questionnaire used by O'Connell (2007) with adjustments being made to accommodate the research specifics of this study and the South African market. A particular deviation from the research conducted by O'Connell (2007) is the addition of a section to rate the perceptions of the service delivered by the airline model being travelled on (low-cost or full-service) as well as the passenger perceptions of the service delivered by the airline model not being travelled on. These were added to provide a greater insight into consumer perceptions of the two models. Also added were two open-ended questions to identify respondent understanding of the two models and their reasons for switching/not switching airlines when faced with a price increase/decrease (Q29–Q32).

#### 1.6.3.1 Population of the study

The population of interest identified for this study included all air passengers, over the age of 16, flying on domestic flights within the South African borders on the low-cost and/or full-service domestic carriers operating in the South African market at the time of the study and utilising the two identified airports on the days of interview.

Excluded from the population of interest are passengers travelling on the regional carriers (for example SA Airlink and SA Express), as these airlines are small operators on routes to smaller towns not served by any of the low-cost or full-service carriers. They are not considered to form part of the LCC or FSC models and therefore fall beyond the scope of this study.

#### 1.6.3.2 Sampling method

Interviewing each of the passengers flying domestically to all routes is not feasible and therefore only a representative sample of the population can be studied. The lack of an available sample frame for this study, coupled with the nature of the research, suggested that a non-probability method should be the sampling approach followed. After considering the objectives of the research and the relevant characteristics of the various methods, the decision was made to primarily adopt the quota method for sampling in this project (*see* section 7.3.7.3 of the study). Quota sampling is the most used sampling method in business studies where there is no existing sample frame and can deliver results closest to those that would be delivered by a probability sample (McGivern, 2013:234; Bradley, 2010:163). For the purposes of this study, the interlocking quota control approach was selected with the key control characteristics being age grouping and airline model flown (LCC vs. FSC) sub-divided according to the two airports where the interviews would take place (*see* section 7.3.7.3 for the detailed discussion on selecting the control characteristics).

Regarding the routes flown, analysis shows that the largest domestic routes flown are Johannesburg to Cape Town, Johannesburg to Durban, and Cape Town to Durban. An analysis of statistics from the Airports Company South Africa (ACSA, 2012b; ACSA, 2017b) shows that Johannesburg and Cape

Town airports connect to all major destinations in the country and are serviced by both airline models identified for the study. In other words, passengers arriving and departing from these two airports give a strong representation of a large section of the entire country. With this in mind it was determined that quota-based samples will be selected at Johannesburg International airport and Cape Town International airport and that this will provide a broader representation of the South African flying population.

A key focal point of this study is the distinction between the low-cost carriers and the full-service carriers. Given the importance of this characteristic (model), a decision was made to follow a non-proportional approach towards establishing quotas per model to ensure sufficient sample units to be able to compare the two strata (LCC vs. FSC). In this case, it was decided that the quota be set at approximately 50/50 per model. In order to achieve the 50/50 quota, respondents were separated into the models using a screening question on the questionnaire. By splitting the respondents according to model flown in the ratio of 50/50, an attempt was made to ensure that the LCCs are not under-represented in the data collection process. Identifying the passengers of the different models was relatively easy as each airline has their own check-in desk where they check-in their own passengers.

The second characteristic that was set for determination of the sample quota was age. One of the objectives of the research is to establish the air travel behaviour and perceptions of the South African air travel passengers. In order to ensure that the opinions, perceptions, and behaviours of all age groups are surveyed, quotas were established across four broad age groups. One of the main reasons for selecting age as a control characteristic is because many of the segmentation approaches are based on age-related groupings (Millennials, Generation X, Baby-boomers, and Silver economy, for example). By using age as a control characteristic, it is possible to ensure that data is collected from each of these age groupings. The lower limit for participation was set at 16 years of age with no maximum age limit. The quotas for each identified age group were established after considering the heterogeneity of the population of interest and the requirements of the study to ensure that all age groups had sufficient representation to enable comparisons of substance.

The finer details of the sampling method and the identification of the sample size in terms of the interlocking quota grid is addressed in section 7.3.7.3 and 7.3.7.4 of the study.

#### 1.6.3.3 Data collection method

The research strategy followed for the study is the survey method. Saunders et al. (2012:176–177) highlight that the survey approach is commonly used in research with a deductive approach and that it is used for descriptive studies where quantitative data is analysed using descriptive and inferential statistics. Surveys were undertaken to determine respondent's choice behaviours when deciding between a LCC and a FSC and their perceptions of each model. The interviews were conducted at the domestic departure terminals of both O.R. Tambo International Airport (ORTIA) in Johannesburg and Cape Town International Airport (CTIA) in Cape Town. Interviews were conducted with respondents that were flying domestically on the LCCs and FSCs. Permission was obtained from the Airports Company South Africa (ACSA) to conduct the interviews at the airports in the domestic departure and arrival halls.

An initial 30 questionnaires were administered as part of a pilot study to ensure the questionnaire was correctly formulated and understandable to the respondents. Any problems that arose were reviewed and corrective measures taken where necessary.

A team of four fieldworkers at each airport was involved in collecting the data. The fieldworkers were briefed on how to approach the survey in the domestic departure halls. Additionally, they were briefed regarding the number and spread of surveys required across the various models and age groups as per the interlocking quota grid. The fieldworkers conducted the surveys across the full day to ensure an even spread of traveller types. This included the early morning business rush, the midday leisure traveller, and the early evening traveller. Data was collected throughout the week and once over the weekend to ensure that all relevant groups and types were included in the data collection process. The data was collected at the check-in areas and other areas demarcated for passengers awaiting flight departures (prior to security gate) (*see* section 7.3.8 of the study).

#### 1.6.3.4 Data processing

The data collected was firstly coded, edited, and cleaned to ensure the integrity of the questionnaires completed. The data collection agent then captured the data onto a server in preparation for statistical analysis. The packages used to analyse the data were Microsoft Excel and SPSS (versions 23 and 24). The findings of the descriptive analysis are presented using frequency tables, graphs, figures, and tables to represent the findings in the most appropriate format. Inferential analysis was conducted using significance tests to establish whether there are statistically significant differences or statistically significant associations (as the case may be) between the key variables.

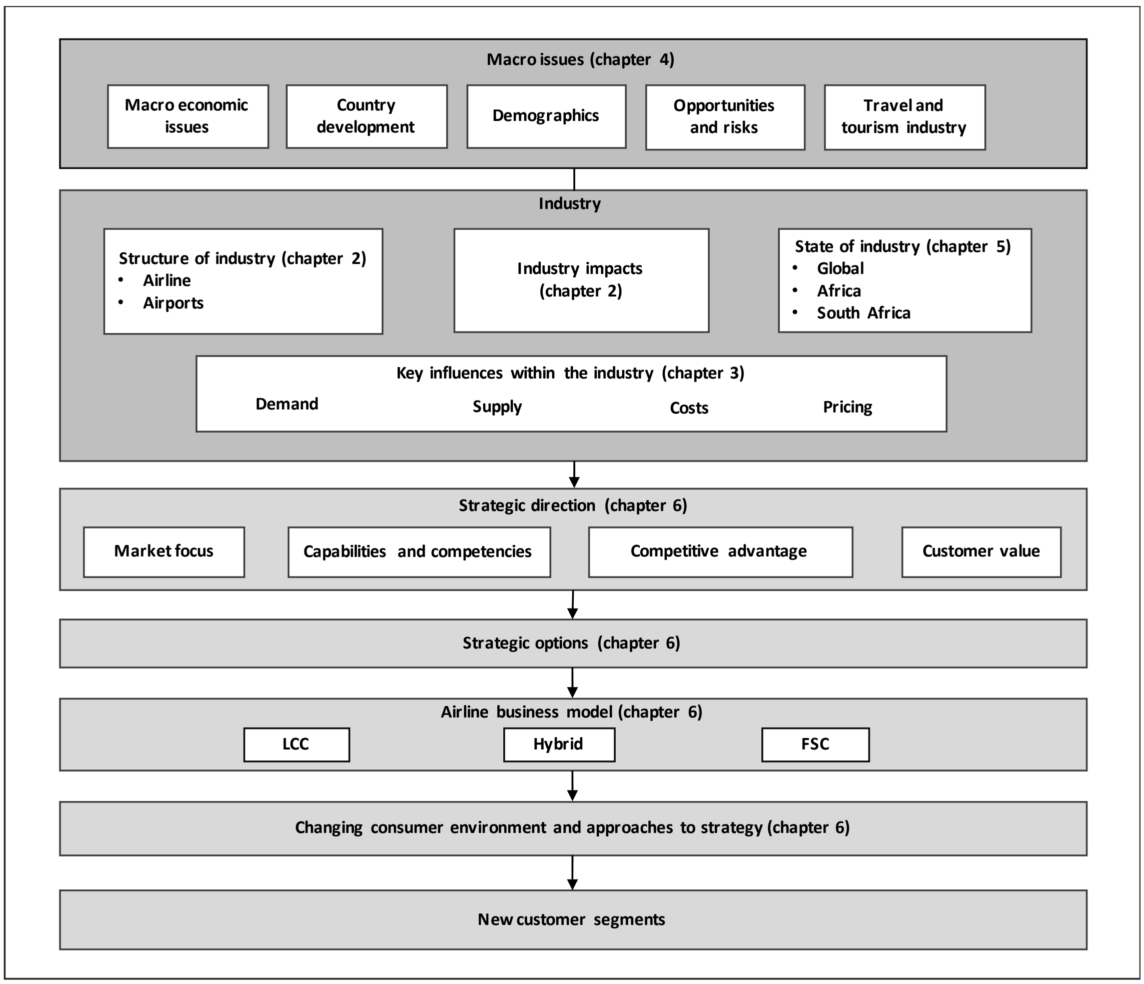
## 1.7 THEORETICAL ASPECTS UNDERPINNING THE STUDY

The purpose of this section is to outline the core theoretical aspects addressed in the study. First to be presented is an outline of the model followed for the structure of this study – specifically in reference to the theoretical aspects that are explored. As stated earlier in this chapter, a core topic underlying the focus of this study is the development of the low-cost carrier model and the resultant changes that have arisen in the air transport industry. In this light, this section also has a focus on the theoretical aspects relating to the development of the LCC model and the impacts within the air transport industry.

### 1.7.1 Conceptual model for the study

From the outset, it is acknowledged that the commercial air transport industry is massive, with an enormous number of factors influencing its operation and the strategies followed. This makes a complete discussion and analysis of the entire industry in a single study impractical. Given this limitation, this study focusses on the key components identified as being of particular significance to the South African commercial air transport industry. In line with the objectives identified in section 1.5.2, and the strategic approaches to achieving superior returns that are addressed in section 6.2.1.4 of the study, figure 1.2 illustrates the approach to this study and shows how the topics that are addressed fit together into a cohesive whole. This model will be included at the beginning of chapters 2–6 to serve as an indicator of which section of the model is being addressed in the relevant chapter.

**Figure 1.2: Model illustrating the approach to the thesis**



### 1.7.2 Core concepts arising from model

The model outlined in figure 1.2 is based on an 'outside-in' perspective in terms of the strategic approach to management and strategy selection. This 'outside-in' perspective is also referred to as a 'market-driven strategy' (*see* sections 6.2.1.1 and 6.2.1.4 of the study) or the 'industrial organisation model' (Louw & Venter, 2013:29; Hitt, Ireland, & Hoskisson, 2015:14–15). The core of this approach is that a business's strategies are based on the influence of the external environment on the business. In essence, this approach requires that the business gains a thorough understanding of its external environment (macro and market environment) and then uses this knowledge to guide the development of strategies to satisfy identified market needs. Hitt et al. (2015:16) provide evidence that this outside-in approach 'exemplifies' the air transport industry. The key components identified in figure 1.2 form the basis of the theoretical review (chapters 2–6), with the specific topics addressed in the theoretical review outlined in section 1.8 (chapter outline).

An external analysis of a business environment includes a review of the macro environmental factors and the market environment. Traditionally this includes an analysis of the economic, technological, political, natural, demographic and social environments in the macro environment, and consumers, suppliers, competitors and channels in the market environment (Grant, 2013:61 & 64; Hitt et al., 2015:38–40). From the macro environment perspective, this study (chapter 4) explores key economic issues, demographics, level of country development, opportunities and risks arising in the external environment, and the situation in the travel and tourism industry (which plays a large role in the success or failure of the air transport industry). Focussing on the air transport industry, consideration is given to the structure of the industry, the impact of the industry, and the state of the industry. Consideration is also given to the key influences of demand, supply, costs, and pricing within the industry.

Flowing from an external analysis of core issues and the identification of an attractive industry is the need to develop strategies that are in harmony with the internal and external environment of the business (Louw & Venter, 2013:23). This process begins with establishing the strategic direction of the business. Establishing the strategic direction of the business requires that the business adopt a market-focussed approach and focusses on offering superior customer value when developing their strategies (Cravens & Piercy, 2013:2). It also requires an understanding of the capabilities, core competencies, and competitive advantages of the business. These concepts are all explored in detail in section 6.2.1.1–6.2.1.4 of the study. The strategic direction of the business is captured in the vison and mission of the business and is used to guide decisions in terms of business model selection (LCC, FSC, or hybrid in the airline context for example) and the types of strategies that are developed. Numerous strategic options are identified in the literature that can be pursued by businesses in their pursuit of customer satisfaction and profitability. The core options addressed in this study are those categorised by Peter and Donnelly (2013:12–15) and include (i) strategies based on value principles, (ii) strategies based on products/markets, and (iii) strategies based on competitive advantage. These strategies are explored in detail in section 6.2.3 of the study.

### 1.7.3 Definition of airline business models addressed in the study

Throughout this chapter reference has been made to low-cost carriers and full-service carriers. Another model that has been emerging over the past decade is the hybrid carrier (Kretschmer, 2008:24). Numerous definitions are given in the literature for these three carrier types. The descriptions of each model that follow will be used as the basis for this study. These descriptions are based on the work of the following authors: Doganis (2010b: chapter 6), Holloway (2010:29–36 & 47–49), Shaw (2011:102, 111, & 141), Schlumberger and Weisskopf (2014:3), and Belobaba, Odoni, and Barnhart (2015:5t–5u).

**Low-cost carrier –** An airline that has its focus on achieving a low-cost operating structure with the aim of offering low fares to the consumer. Their product is unbundled with many previously free services (e.g. food and drink) being dispensed with or offered at a fee. They typically offer simple fare structures, direct Internet distribution, and utilise a single aircraft type (*see* section 6.3.5 of the study).

**Full-service carrier –** A carrier that uses differentiation as its main strategic thrust with a high level of service being included in the ticket price. They typically operate highly complex operations using a hub-and-spoke system to feed their main routes (*see* sections 2.2.2 and 6.3.4 of the study).

**Hybrid carrier –** An airline that is a blend of the full-service carrier and low-cost carrier. To remain competitive in the market, some carriers have taken on some of the characteristics of full-service carriers in order to grow their customer base. Some of the characteristics that these carriers have adopted include using a global distribution system (Amadeus for example), different classes of service, loyalty programmes, and interline agreements. All these characteristics add costs and complexity to the carrier's operations and thus those following this route are classified as hybrid carriers and not as LCCs (*see* section 6.3.6 of the study).

### 1.7.4 The low-cost strategy and the impact on the air transport industry

As stated at the start of section 1.7, a core topic underlying the focus of this study is the development of the low-cost carrier model and the resultant changes that have arisen in the industry. The nature of the strategies pursued by the airlines in the commercial air transport industry reflect a strong bias towards strategies based on Porter's generic strategy model, which are identified as strategies based on competitive advantage (*see* section 6.2.3.3). In the simplest terms, the LCCs are following a predominantly low-cost strategy, and the FSCs a differentiation strategy.

#### 1.7.4.1 The generic low-cost strategy clarified

In order to achieve a sustainable competitive advantage (SCA) in the marketplace, an organisation has to make use of its unique capabilities and combine them into a set of business strategies. The concept of a low-cost strategy was introduced into the business literature by Michael Porter in his generic strategy model in the early 1980s. Briefly, his model stated that companies, when deciding on strategies to follow, can choose from one of three generic strategies in order to generate a competitive advantage over their competitors (Baines & Fill, 2014:170). These are differentiation, focus, and low-cost strategies. Porter emphasised the need for organisations to select a generic strategy and pursue it consistently.

For the low-cost strategy, an organisation attempts to gain a cost leadership advantage over its competitors. Cost advantages can be derived from a number of sources (*see* section 6.2.3.3). These include economies of scale, capacity utilisation, experience and learning effects, a no-frills product, lower resource costs, and location advantages to name but a few sources (Hooley, Piercy, & Nicolaud, 2012:266; Gamble, Peteraf, & Thompson, 2015:95). The achievement of a low-cost operation offers the organisation the opportunity to either earn higher margins by maintaining its prices whilst lowering its costs, or to penetrate the market by lowering their price in line with the lower cost base and thus penetrate the market by increasing volumes (Jooste, Strydom, Berndt, & Du Plessis, 2012:239). The topic of the low-cost strategy is explored in detail in section 6.2.3.3. Specific tactics identified for the implementation of the low-cost strategy include the pursuit of cost reductions, strong control over overheads, and the minimisation of distribution costs (Obasi, Allen, Helms, and Spralls, 2006:43–53) (*see* section 6.2.3.4). Of interest to the air transport industry is the combined focus/low-cost strategy. This strategic option has been selected and utilised by many LCCs in recent times, particularly those moving in the direction of the hybrid model (*see* section 6.3.6 of the study).

#### 1.7.4.2 The low-cost carrier model in context

Schlumberger and Weisskopf (2014:xvii) identify the emergence of the LCC model as a key catalyst for the growth of the aviation industry over the past decade. LCCs base their business model on the low-cost option from Porter's model and strive to follow its principles. Michael O'Leary, CEO of Ryanair, was quoted in Calder (2002:18) saying that, in his opinion, low-cost airlines are offering a bus service. With low fares being widely available and the high number of competitors in European and American markets, it has long been recognised that air travel is evolving into a commodity product (Skeels, 2005:7). A key contributor to this commoditisation has been the use of indirect distribution channels like global distribution systems, online travel agents, and metasearch sites, which limit an airline's ability to differentiate their offerings, resulting in customers largely selecting flights based on price (Borgogna et al., 2017:31). For the airline passenger, whilst they might be looking for the lowest fare, there are still a number of factors that they consider before making the final choice of airline. These factors, based on research conducted over the years, are safety, punctuality, baggage delivery, seamless transfers (where required), and scheduling (can the aviation industry claw its way out of price wars and into profit, 2006:6–7).

The basic premise of the LCC model is that the airline cuts out all the unnecessary costs and frills from its product offering and supporting operations (Holloway, 2010:32). This minimises its cost of operations and offers the airline more scope to offer competitive fares. Some of the most common cost savings include using the internet as the main distribution and booking system, eliminating free food and drink on board, careful selection of the most appropriate airports and aircraft, no business class, and non-participation in alliances or other cost generating programmes (Vasigh et al., 2013:377–388). In a 2008 newspaper article, Nico Bezuidenhout, (former CEO of Mango airline), stated that a key difference between the two models is the assets and the utilisation of the assets, as well as the emphasis placed on service and process simplicity (Peacock, 2008:24). Lawton and Solomko (2005:356) adds extensive outsourcing and high-density seating to this list of distinguishing characteristics. Low-cost carriers also focus on identifying additional revenue generating opportunities (ancillary revenue) to add to the carrier's bottom-line. These carriers have over the years evolved to a point where they are unbundling their products and services and offering the passenger the option to purchase only those service components that they require. Table 1.2 gives a summarised outline of some of the original key advantages that LCCs have over the traditional FSCs (a detailed version of this condensed table is given in section 6.3.5.4). The characteristics and strategic approach of the LCC model are addressed in detail in sections 6.3.5.2, 6.3.5.3 and 6.3.5.4. The global, African, and South African LCC sectors are quantified in sections 5.2.3.10, 5.3.6, and 5.4.2.2 respectively.

**Table 1.2: Traditional advantages of the low-cost model over legacy carriers**

| LOW-COST CARRIERS | TRADITIONAL AIRLINES | | LOW-COST CARRIER ADVANTAGES |
|---|---|---|---|
| • Operate from mostly secondary, underutilised, regional airports | • Operate from mostly primary international hub airports | → | • Lower airport charges,<br>• Faster turnaround times,<br>• Less air traffic control-related delays |
| • Fast turnarounds (25 min.) | • Slow turnarounds due to use of congested hub airports | → | • Better fleet utilisation |
| • Direct point-to-point flights, no transfers, short-haul routes | • Mix of long, medium and short haul routes with transfers. | → | • Lower complexity,<br>• Higher capacity utilisation |
| • Standardised fleet (only one aircraft type), higher seating density | • Various aircraft types, low seating density | → | • Cheaper aircraft financing;<br>• Lower maintenance & training costs;<br>• Simpler swapping around of flight and maintenance staff;<br>• Higher capacity utilisation |
| • Distribution primarily through direct channels | • Most tickets sold via travel agencies | → | • Lower distribution costs, lower complexity |
| • No "frills", extras must be paid for | • Entertainment programmes, express check-in, VIP lounges, paper tickets, business class, "free" catering | → | • Lower ancillary costs, less complexity;<br>• Additional revenues |
| • Highly incentivised work force | • High basic salaries | → | • High employee productivity |

**Source:** adapted from ELFAA (2004:5).

As alluded to in section 1.7.4.1, as the LCC model has evolved some LCCs have added the option of a number of frills, like frequent flyer programmes, in order to generate additional loyalty and revenue. A large number of the so-called LCCs began evolving into this new hybrid model in order to remain competitive in the market (Kretschmar, 2008:24). Thomas and Catlin (2014:2) take this a step further by stating that in order to remain competitive, the traditional LCCs and FSCs need to either 'reinvent' themselves as hybrid carriers or make significant strategic changes to distinguish themselves as 'Ultra LCCs' or 'premium FSCs' respectively. Hybrid carriers are explored in more detail in section 6.3.6.

#### 1.7.4.3 Impact of LCCs on the air transport industry

There is no question that the impact of LCCs on the air transport industry has been significant. Numerous studies (Dresner, Lin, & Windle, 1996; Deimler & Koehler, 2006:2-3; Hofer, Windle & Dresner, 2007:9; Choo & Oum, 2013; Schlumberger & Weisskopf, 2014:23–32; Yang, 2016; Bachwich & Wittman, 2017) have shown that the presence of LCCs on a route have resulted in large fare reductions, passenger defections to LCCs from FSCs, and reduced passenger yields. The presence of LCCs has also had the positive effect of increasing traffic levels because travel have become more affordable. The LCC strategy was one that was initially underestimated by the FSCs. The standard response from the FSCs to a threat from the LCCs was to match the low fares and tackle them head on. Due to the intricacies of the low-cost model this did not prove successful for most FSCs and had a negative effect on all involved. Successfully implementing the low-cost model requires strict discipline and focus by the LCC operators. Many airlines have been tempted by the promise of short-term gains and strayed from the model by including elements that look like good opportunities but are disharmonious with the low-cost model and thus simply add costs (Kachaner et al., 2010:4). (section 6.3.5.5 explores this topic in more detail).

The influence of LCCs will extend to airports (Gillen & Lall, 2004:50). Traditional FSCs operate the hub-and-spoke system whereas LCCs mainly operate on a point-to-point system. In the global context, secondary and regional airports have shown good growth as LCCs utilise their airports. The use of these secondary and regional airports offers the airlines the opportunity to turn their aircraft around in a shorter timeframe due to lower levels of congestion compared with the major airports. This increased aircraft utilisation means more passengers can be carried in a day, thus generating more revenue for the airlines to cover the fixed costs (Singapore Airline's winning formula, 2004:4–7). (section 6.3.5.5 explores this topic in more detail).

The impact of the LCC model on the consumer was outlined in section 1.2.3 and is explored further in section 6.4 of the study. The resultant changing consumer needs and expectations, coupled with the rapid growth of information technology, has irreversibly changed the way in which airlines approach and target the consumer and the way in which products and services are formulated.

## 1.8 CHAPTER OUTLINE

There are a number of key aspects that are of importance in the scope of the study. Each of these topics are addressed throughout the study as follows:

| CHAPTER | CONTENTS |
| --- | --- |
| **Chapter 1:** Introduction to the study | This chapter introduces the study. A background is given on the issues leading to the research problem and research questions to be answered. The research objectives are given and the research methodology to be followed is established. A conceptual model for the study is presented. |
| **Chapter 2:** The structure of the global and domestic air transport industry | The focus of this chapter is on the nature of the airline industry. The industry is put into context of the air transport system and the impacts of the industry are discussed. Attention is given to the relevant airline operators in the South African market as well as the key airports. |
| **Chapter 3:** Demand, supply, costs, and pricing in the commercial air transport industry | In this chapter, attention is drawn to selected micro-economic issues relating to the airline industry. In this regard consideration is given to air travel and GDP, demand in the industry, supply in the industry, airline costs, and the issues of pricing and discrimination. |
| **Chapter 4:** Macro issues affecting the business environment in which the air transport industry operates | This chapter looks at the global economic environment in which the industry operates. Consideration is also given to the South African economic classification and demographics as well as global growth opportunities and global risks. This is followed by an outline of the state of travel and tourism, which underlies air travel demand. |
| **Chapter 5:** The business environment of the air transport industry | Attention is given to outlining the state of the air transport industry with a focus on the global situation, the African situation, and finally on the South African situation. |
| **Chapter 6:** The full-service and low-cost carrier business strategy | This chapter focuses on the importance of strategic direction and the selection of the appropriate business strategy. The chapter then addresses the FSC and LCC models in more detail, with brief attention given to the emerging hybrid model. The chapter concludes with a review of a number of consumer–related issues to be managed by airlines. |

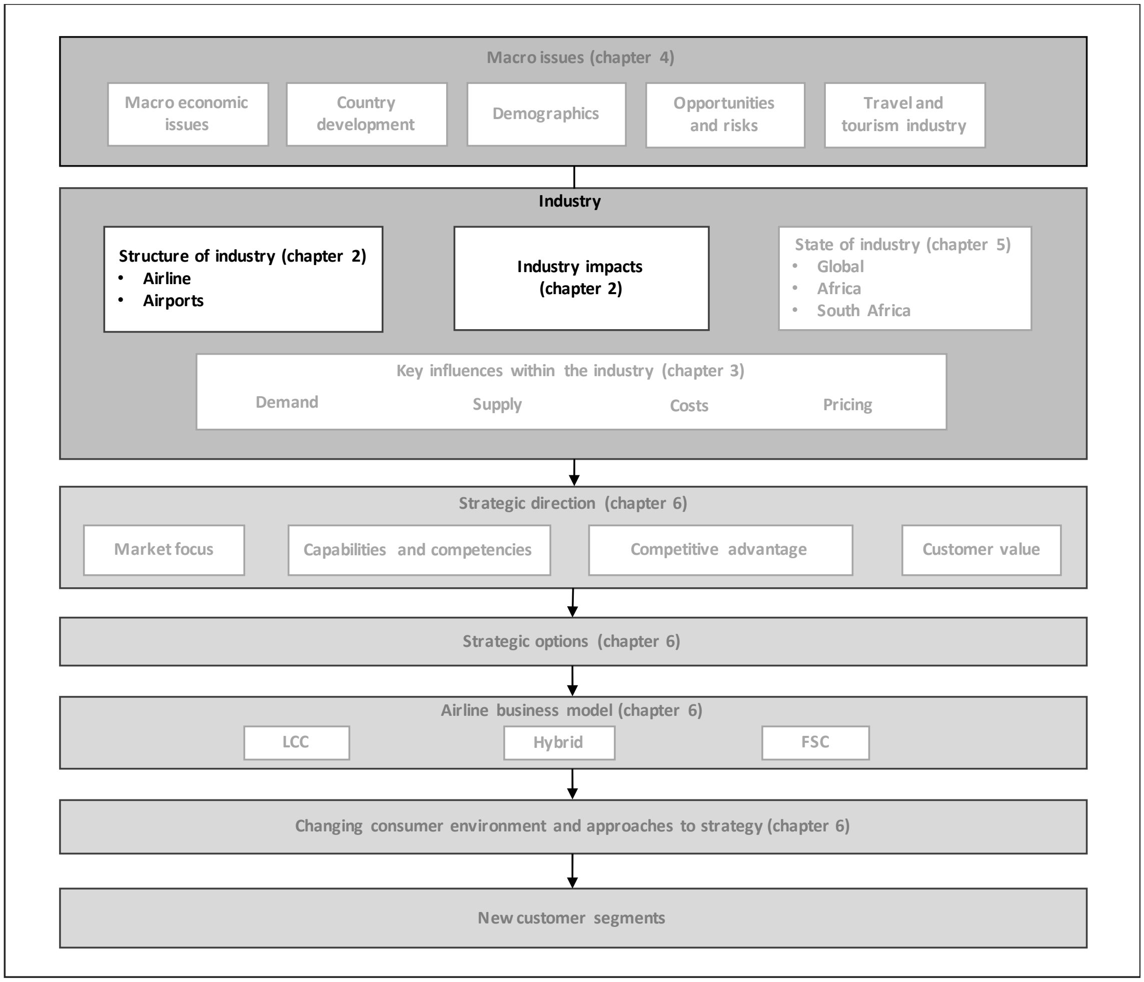
| | |
|---|---|
| **Chapter 7:** Research methodology | The research process that is followed for the study is described in this chapter. The methodological choice and research strategies are outlined. This is followed by the identification of the techniques and procedures to be utilised for data collection and analysis. |
| **Chapter 8:** Analysis of survey findings | This chapter presents the results of the quantitative research. The analysis is structured according to the primary and secondary objectives established for the study. The chapter is divided into descriptive analysis and inferential analysis. |
| **Chapter 9:** Conclusions and recommendations | The key findings are summarised and conclusions drawn. Recommendations are made based on the conclusions drawn. |

## 1.9 SUMMARY

This chapter introduces the nature and scope of the research that forms part of this thesis. The chapter started by giving a broad background to the external environment in which the air transport industry operates and then focused in on an overview of the global air transport industry. Attention was given to outlining how the industry has recovered since the 2008 recession to the beginning of 2017. The discussion then shifted specifically to the South African air transport industry where it was highlighted how the industry has evolved over the past decade, with specific reference to the impact of the emergence of the LCC sector. Broad trends and developments affecting consumer behaviour were then explored. In this case, specific reference was given to consumers becoming more cost conscious and the increasing fragmentation of the air transport market. Reference was given to the impact of technology and how it has affected the way in which products are purchased and consumed. Based on the review of numerous studied, including South African studies, it was seen that research has been done in this field but that there are still many more areas that need to be explored. This study will serve to contribute to the growing body of knowledge in this discipline.

The second half of the chapter focused on outlining the research problem, research questions, research objectives, and the methodology followed in order to conduct the primary research for the project. Following this, a number of key theoretical aspects underpinning the study were discussed. These points were addressed based on a model developed for the study to outline the approach followed for the structure of the thesis. This was further supported with a tabular representation of the topics addressed in the chapters of the study.

# Chapter two in the context of the thesis model



# CHAPTER 2

# THE STRUCTURE OF THE GLOBAL AND DOMESTIC AIR TRANSPORT INDUSTRY

> *"First Europe, and then the globe, will be linked by flight, and nations so knit together that they will grow to be next-door neighbours. . . What railways have done for nations, airways will do for the world."*
>
> *— Claude Grahame-White, 1914.*

## 2.1 INTRODUCTION

Claude Grahame-White's 1914 quote was indeed prophetic as can be seen from the global air transport network that exists in 2017. The operation of an airline service involves more than just an aircraft and some passengers. For its successful operation, global airlines rely on a combination of a large number of inter-related products and services to ensure that the passenger arrives at their chosen destination and is satisfied with the experience.

The purpose of this chapter is to place the airline industry into context and establish the framework within which the airlines that form part of this study operate. The chapter starts with a look at the overall structure of the air transport industry, specifically looking at the air transport system and its main components. Importantly, attention is given to classifying the types of operations and carrier types that form the foundation of this study. A look is also taken at the impacts of the commercial air transport industry in terms its economic, social, and environmental contribution. Various global operators in the industry are briefly described and then put into context with the operators in the South African air transport market. A distinction is made between low-cost carriers (LCCs), hybrid carriers, and the full-service carriers (FSCs). The chapter concludes with a discussion on airports in the global and South African context. In this section, the bulk of the discussion focuses on highlighting the size of airport operations in terms of annual passengers and the overall growth trend.

## 2.2 INDUSTRY STRUCTURE OVERVIEW

In terms of human development, the air transport industry is extremely young. Developments in this area have only really taken off over the past 65 years. From the very first flight by the Wright brothers in December 1903, air travel has rapidly evolved into an industry that supports not only people working in the air transport industry, but many other secondary industries, or support industries, that serve to add value to the overall air transport product and its related industries (Hirst, 2008:3). In effect, the industry needs to be viewed as a system – an air transport system.

This air transport system needs to be considered in the appropriate context. The air transport industry delivers a service to the consumer as part of a greater purpose. In other words, air transport exists to serve or facilitate other needs of the consumer. As an example, air transport serves as transport to a holiday destination or transport to a business meeting. In this case, the demand for air transport is considered to be a derived demand (Doganis, 2010b:23). This point highlights the susceptibility of the industry to changes in the business environment. A decrease in the demand for international leisure travel will result in a drop in the demand for international air travel. To use a South African example, the hosting of the 2010 FIFA Soccer World Cup in South Africa attracted many visitors to the country. Demand for flights to South Africa increased because of this event and therefore it can be said that the demand for international air services was derived from the hosting of the event in the country. Without the event, the additional demand would not have existed.

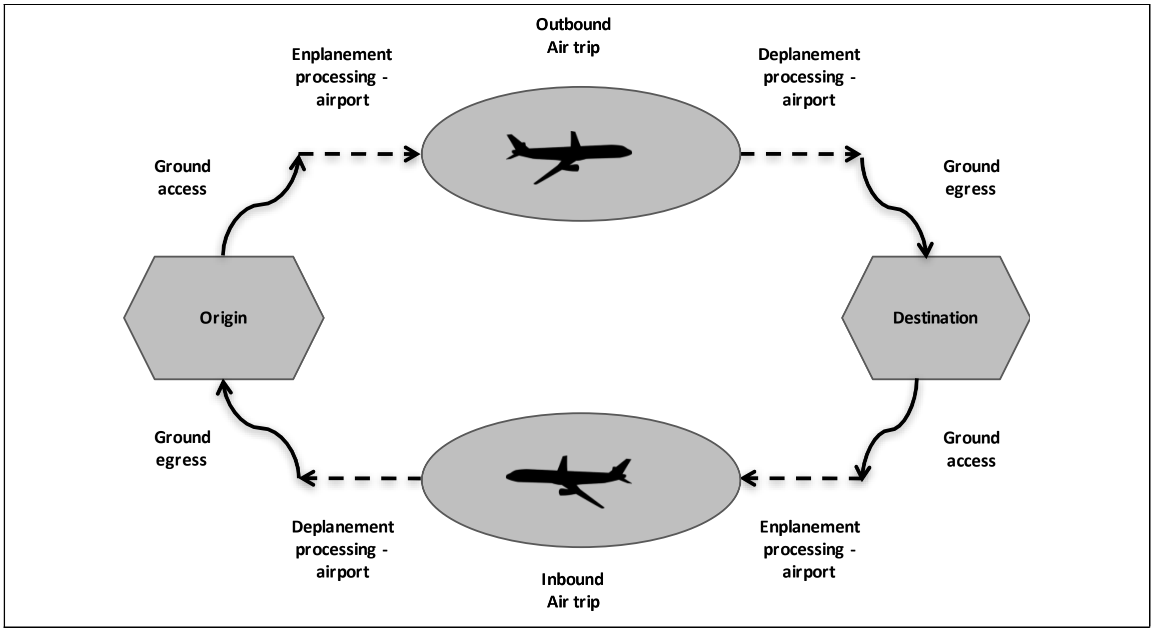
### 2.2.1 The air transport system

A number of authors (Hirst, 2008:18; Wensveen, 2011:18–36 & 127–156) have offered a basic outline of the air transport system to graphically represent the industry. Each one of these authors takes a slightly different approach to do this, but each ultimately arrive at the same basic structure and components that is applicable to the modern air transport industry.

Before addressing this air transport system, it is prudent to firstly consider the basic model representing a typical passenger air travel trip. With this model in mind it will be easier to understand where the components of the air transport system fit in and what services are required and supplied at each stage of the trip. This basic model, as refined and set out by Belobaba, Odoni and Barnhart (2015:397v) is represented in figure 2.1.

An important part of this model is that the trip does not begin and end at the airport but from a specific point of origin like a home and ends at the final destination, which could be a hotel, a home, or a place of business (Belobaba et al., 2015:397v). Specifically stated, the trip to and from the airport is also a key component of the passenger trip. In terms of time and ease of access, this has significant implications for the airlines as it has an impact on the level of demand from the regions that they serve. If the airports are difficult to get to, or take a long time to get to, this adds to the total journey time. If this time (coupled with the time spent at the other stages of the trip) is too long, the passenger might consider other options like a train, car, or bus for example where it is physically viable.

**Figure 2.1: Flow of the air travel passenger trip**



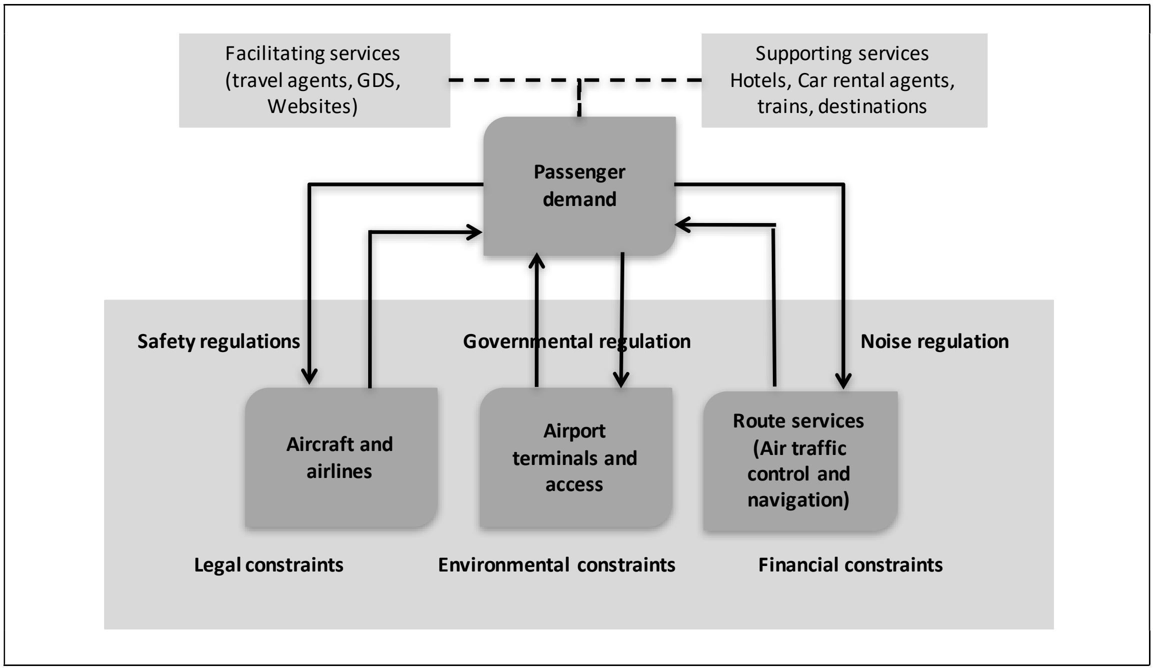

**Source:** Adapted from Belobaba, Odoni, and Barnhart (2015:397v).

From figure 2.1, the typical trip involves the passenger travelling to the airport and then undergoing a number of enplanement processes at the airport like checking-in, passing through security control, passing through customs, waiting, and then boarding. The flight then takes place before landing at the destination airport. Deplanement processes then take place, which include disembarking the plane, walking to the customs areas (international flights), collecting baggage, and any other tasks that need to be finalised at the airport – currency exchange or transfer arrangement for example. The next phase involves the egress from the airport to the final destination. As can be seen from the figure 2.1, this description represents one leg of the trip. The process is generally repeated at a later stage for the return trip back to the point of origin.

From this brief description of a typical passenger trip it can be seen that the passenger calls upon and utilises a large number of services in this process and relies on a large number of supporting services to ensure that the flight is successful and safe. These services can be grouped into a number of categories and form part of the air transport system. Figure 2.2 illustrates a combined model of the air transport system.

From figure 2.2 it can be seen that the air transport system in this context consists of four key elements; all of which operate in the business environment and are influenced, positively or negatively, by this operating environment. The key components of this system include aircraft and airlines, airports, airspace (route services), and passengers (demand). It can also be seen from figure 2.2 that the industry is influenced by a number of constraints as well as the impacts of decisions made in the regulatory environment. A few brief comments on each of the key components are given below figure 2.2. This is followed by a few points on the constraints that are identified.

**Figure 2.2: The air transport system**




**Source:** Adapted from Hirst (2008:18) and Wensveen (2011:18–36 & 127–156).

- **Demand.** Air travel demand is complex and highly variable due to developments and events in the external environment (Vasigh et al., 2010:49). As will be outlined later in the chapter, the demand for air travel has grown rapidly over the past two decades due to key technological developments, economic changes, and innovations such as the arrival and growth of the low-cost carriers. Clearly demand has implications for airlines in that it affects the size of aircraft required, the frequencies required on a route, and the number of planes for a route. These in turn influence the number of staff required to serve the routes. Demand also influences the size and number of airports at a destination. Logically, more popular destinations need bigger airport capacity than those that are less popular. The corollary of this is that a destination without sufficient airports and related infrastructure will detract demand. The level of demand is also influenced by the destination itself. A destination that is a thriving economic city with lot of supporting infrastructure (hotels, car rental, road linkages) will generate a higher level of demand than a small town that does not have the factors of economic or tourism attraction. Air travel demand is dealt with in more detail in section 3.3 of the study.

- **Airlines and aircraft.** Airlines refer to those businesses that operate aircraft in order to generate income by transporting passengers to identified destinations. The competitive environment for airlines is highly competitive with each airline seeking some point of differentiation to attract the wallet of the consumer. The competitiveness of this industry has intensified significantly with the growth of the low-cost carriers over the past 25 years, with numerous airlines collapsing or requiring restructuring as a result (Wensveen, 2011:12). Aircraft are logically the core of an airline's existence as they are the resource used to perform the required service. Airline operators need to optimally configure their aircraft and carefully consider routing issues to ensure the most efficient asset utilisation (Belobaba et al., 2015:597t–598a). As technology has evolved, more efficient and cost-effective aircraft have been developed. What makes the selection and purchase of aircraft more difficult is the lead-time between order placement and delivery. Depending on the production backlogs, this could run into a number of years, which has implications for the airline when making route decisions. Aircraft are manufactured in a variety of sizes to meet the requirements of the routes served by the airlines. Seating capacities on commercial jets range from 37 seats on the Embraer ERJ135 up to a maximum of 853 seats on the Airbus A380-800 (Airbus, 2016a). These aircraft represent a significant investment to the airline should they purchase them or a significant cost to lease (Wensveen, 2011:395). Environmental concerns, and the contribution of aviation to these environmental concerns, are placing significant pressure on airlines and aircraft manufacturers to develop and use more efficient and less-polluting aircraft like the Airbus A320 Neo.

- **Airports.** Airports play a crucial role in the air transport system (Belobaba, 2015:9100x). It is at the airport where passengers and their luggage are processed and directed to their flights. This task is accomplished with a complex and work-intensive infrastructure and workforce to route all the required items and people to the correct aircraft. The function of an airport goes beyond the managing of passenger movements and includes cargo management as another core function. The facilities at an airport are fixed and have a fixed capacity. Capacity expansion is time-consuming, money consuming, and requires significant long-term planning. In times when there is shrinking air travel demand, the excess airport capacity cannot be stored or removed but remains in place and unutilised and therefore loss making. Airports, specifically the main hubs or those located in major destinations, have evolved over time to become more than just a place to get on to an aircraft. They have evolved into mini-cities, complete with hotels, shopping centres, police services, hospitals services, and conference facilities to name but a few. A growing trend is for large multi-national companies in major cities to locate themselves near the airport itself with the airport providing rapid links to global partners. In effect the airport is becoming the city and their business hub. The issue of airport charges, taxes, surcharges, and fees is one that is receiving a lot of attention from bodies like the International Air Transport Association (IATA). This is particularly relevant for South African airports when as far back as the 5th of May 2011, Giovanni Bisignani, the then director general of IATA, expressed his and IATA's clear concern at the increases in airport charges at South African airports (IATA, 2011b). In particular, it was highlighted that the increases requested by Airports Company South Africa (ACSA) would make Johannesburg's OR Tambo international airport one of the most expensive airports in the world. This remained a concern for IATA with

South Africa once again being identified in 2014 as an area of concern in this regard (IATA, 2014). It was noted by IATA that in 2015 that progress is being made (IATA, 2015a). The topic of airport taxes and tariffs in South Africa is explored in detail in section 5.4.5 of the study.

- **Airspace and route services.** In simple terms, this component of the system is charged with the task of ensuring the safe and timely departure and arrival of the aircraft to and from the airport as well as the safe passage and navigation of the aircraft from the point of departure to the destination (Belobaba et al., 2015:14t). Given the growth in air traffic over the past few decades, this task has become more complex and difficult. Managing the increasing number of departures and arrivals at the main airports requires a balancing act to be found between ensuring timeous departures and managing the flow of planes on the apron and runways safely. Increased pressure is also being experienced in managing the crowded skies to ensure that traffic is correctly directed and landing patterns managed. Added pressure comes in the form of environmental pressures to get the planes off the ground and back on the ground in the quickest time to minimise the environmental impacts of carbon emissions from the aircraft (Hirst, 2008:22). Air Traffic and Navigation Systems (ATNS) handle this task in South Africa and, like ACSA, they have received heavy criticism in the past for operational deficiencies and extreme price increases (IATA, 2011b).

Figure 2.2 also identifies that the system is influenced by a number of constraints and regulations. These constraints and regulations affect the entire system and its components. Constraints include financial, legal, and environmental constraints. Financial constraints include access to finance to improve airport infrastructure or buy aeroplanes for example. It could also simply be a lack of funds on the part of the passenger who will therefore be unable to travel, thus overall reducing demand. All businesses and organisations are subject to the laws of a particular country and the countries in which they operate. They have to comply with the various company acts, financial acts, and consumer protections acts. Environmental constraints in the context of the airline industry are becoming increasingly pronounced and these environmental concerns need to be addressed to ensure the various stakeholder groups are satisfied (*see* section 2.3.3). The nature of the air transport industry means that it is highly regulated with numerous regulations needing to be adhered to for it to be allowed to operate. The legislation of relevance to the South African airline operators is contained in the Aviation Act (74 of 1962), the Carriage by Air Act (17 of 1946), The Air Services Act (51 of 1949), The Air Services Licensing Act (115 of 1990), The Civil Aviation Act (13 of 2009), and The Civil Aviation Offences Act (10 of 1972) (South Africa Civil Aviation Authority, 2016) to name but a few. Broader acts of relevance include the Airports Company Act (44 of 1993) and the Consumer Protection Act (68 of 2008) (Veitch, 2016:26). Issues of noise, safety, aircraft certification, pilot licensing, cabin crew accreditation, landing rights, and maintenance are some of the many areas that are regulated and require the strictest of attention from the relevant parties.

### 2.2.2 Concept definition in the context of the study

In the greater context of this study, it is necessary to provide clarity on some of the key terminology that will be used throughout this study to avoid any confusion.

***Scheduled versus non-scheduled services***

The first distinction is made between a scheduled and a non-scheduled service. Airports Council International (ACI) and Eurocontrol define the two concepts as follows:

- **Scheduled Service.** "An air service open to use by the general public and operated according to a published timetable or with such a regular frequency that it constitutes an easily recognizable systematic series of flights" (Eurocontrol, 2016). The 5 daily scheduled flights between Lanseria and Cape Town offered by kulula.com are a simple example of a scheduled service.
- **Non-Scheduled service.** "Any revenue flight and charter, other than 'scheduled service' flights, with the exception of positioning flights." (Airports Council International, 2011a:14)

***International versus domestic services***

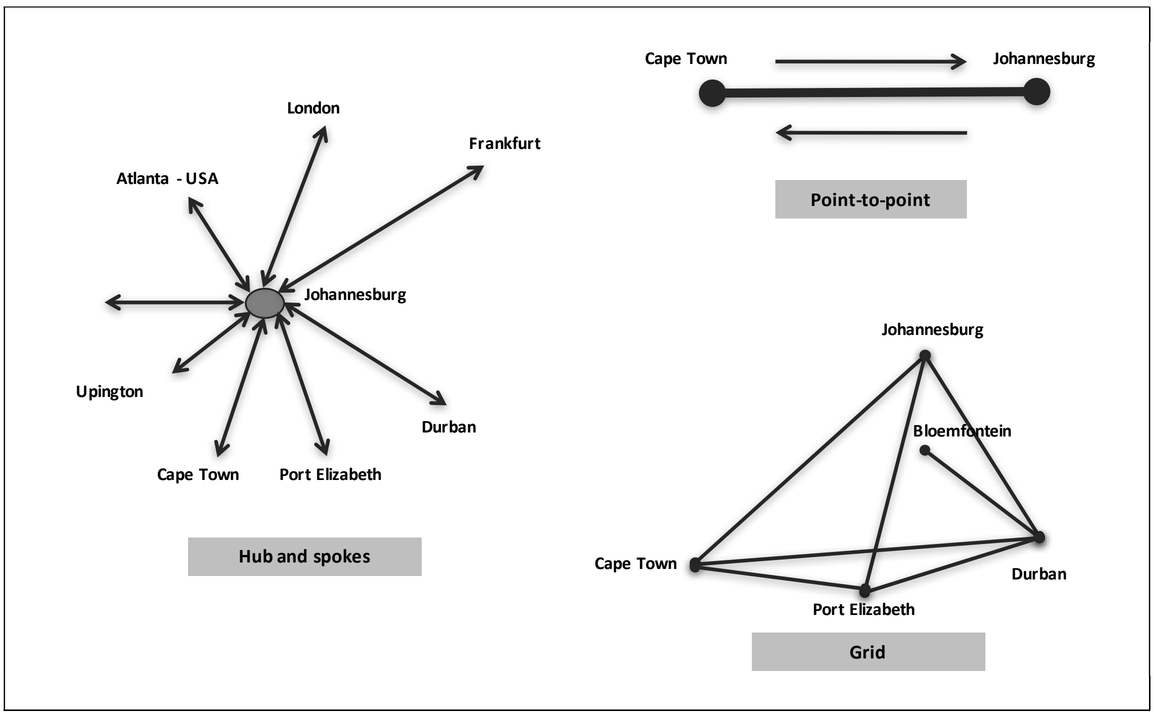
Secondly, a distinction is made between an international air service and a domestic air service. The various air transport acts promulgated in the different countries throughout the world all provide a distinction between these two concepts. In South Africa, the Air Service Licensing (Act 115 of 1990) defines an international air service as, "an air service which passes through the air space over the territory of the Republic and at least one other country, provided that an air service which passes through the air space over the territory of another country without operating an air service in the territory of that other country, and the route or journey of which started and ended within the territory of the Republic, shall not be an international air service" (South Africa Civil Aviation Authority, 2016). This means an air service that crosses national borders – South African Airways flying from OR Tambo International Airport (Johannesburg) to Luanda (Angola) for example. A domestic air service is defined in the Act as an air service excluding an international air service. In this case, a flight from Johannesburg to Cape Town is a domestic air service, as it does not cross an international boundary. The International Civil Aviation Organisation (ICAO) defines international and domestic travel in less complicated terms. They refer to air travel in terms of flight stages where a flight stage refers to the operation of an aircraft from its take-off to its next place of landing (ICAO, 2016:5). In this case, an international flight has an international flight stage whereas a domestic flight has domestic flight stages only.

The term 'regional service' does appear in the context of the air industry. They generally refer to small-scale domestic services that act as feeder airlines for the larger operators on their domestic or international routes. In the case of South Africa, due to its geographic constraints and limited market size, these regional services serve both domestic (Richards Bay, Hoedspruit and Kimberley) and short-haul international destinations like Manzini (Lesotho), Beira (Mozambique) and Livingston (Zambia) from the main airport hubs. The destinations served are smaller destinations and thus the aircraft used have a lower seating capacity (50-70 passengers on average) compared to the larger aircraft used by the main operators which range from approximately 120 seats for short haul flights to 320 seats on the long-haul flights.

*Network and point-to-point carriers*

In terms of routes operated by the various airlines, three main patterns can be identified. Each of these are briefly discussed in the paragraphs that follow and illustrated in figure 2.3.

**Figure 2.3: Airline network patterns**




**Source:** Adapted from Hanlon (2002:83) and Hanlon (2007:124).

- **Point-to-point.** In this structure, the airlines operate routes that simply fly from one airport to another and back. Their operations do not focus on establishing hubs and connecting passengers through interline or intra-line connections (Holloway, 2010:49). The focus is on serving the two destinations and focuses on the local markets only (Abdelghany & Abdelghany, 2010:12). All marketing is focussed on building these direct routes. The flights operated by kulula.com between Cape Town and Johannesburg are an example of this pattern (see figure 2.3). This pattern is a characteristic of the low-cost carrier model.

- **Hub-and-spoke.** In this pattern, the airline has a number of hubs from which it operates its services. The hub serves as a starting or ending point for the airline's services. Naturally, this means that there are a large number of flights in and out of the hub with the spokes being much less traffic dense. Flights between the hub and spoke serve to feed the hub with passengers to feed out to the various spokes. The feed from the spokes allows the network carrier to serve a large number of destinations more frequently as they are effectively 'bussing' in people from a variety of places to fill their aircraft and then "bussing" them out to their spokes (Abdelghany & Abdelghany, 2010:8). Arrivals and departures are specifically timed to maximise the destination options for the passenger with the minimal of waiting between connecting flights.
- **Grid.** Routes are planned according to a grid in order to maximise aircraft and staff utilisation (Hanlon, 2007:125). This is primarily used in a domestic market where the distances between the various airports are variable and valuable time would be wasted waiting for connecting passengers from longer haul destinations. Routes are structured to ensure maximum flying time whilst efficiently serving the relevant destinations served.

In terms of the characteristics of the airline models addressed in this study, the full-service carriers operate the hub-and-spoke (for international operations where domestic flights feed traffic into the hub for international routes) and grid patterns (internal domestic operations), whilst the low-cost carriers mostly operate on a point-to-point basis (although some do utilise a grid pattern).

***Low-Cost Carriers (LCCs), Full-Service Carriers (FSCs), and hybrid carriers***

There are many terms in the industry used to describe the various business models utilised by the airlines. Low-cost carriers are also referred to as low-fare airlines or no-frills airlines. Full-service carriers are also referred to as premium carriers, traditional carriers, or legacy carriers. Each term roughly refers to the same model but there are subtle variations that cause some airlines to be classified as low-cost airlines but not as low-fare airlines. Some authors, like Holloway (2010:47) for example, view the concepts as too imprecise or vague to sufficiently categorise the models. Organisations like ICAO and IATA on the other hand do offer formal recognition and definitions for LCCs and FSCs to facilitate reporting and statistical calculations. Each of the models were introduced in section 1.7.3.

The following descriptions apply for this body of work:

- **Low-cost carriers** are defined by ICAO (in Airports Council International, 2011a:19) as, "an air carrier that has a relatively low-cost structure in comparison with other comparable carriers and offers low fares and rates". The focus of their definition is on the unit operating costs of the carrier and the fares that they charge. In achieving this low-cost structure, the frills are removed from the product offering and from the underlying operations to make lower fares possible. In most cases, some frills are offered to the passenger at an additional charge. Point-to-point routes are operated and these are short-haul destinations. (Model explored in detail in section 6.3.5).

- **Full-service carriers** are viewed as airlines that offer a full range of services to the passenger and operate across a network of destinations, traditionally through a hub and spoke pattern (O'Connell, 2007:33). They offer the standard economy class of service but also offer business and first class services to cater for their various markets. These services come with a cost to the airlines, which are passed on to the customer through the fares charged. Passengers in each cabin essentially receive the same level of service or frills and thus the cost is incurred per passenger – regardless of whether the passenger consumes a particular 'frill' or not. (Model explored in detail in section 6.3.4)
- **Hybrid carriers** have emerged over time to form a model that is a mixture of the traditional FSC and the modern LCC model. This model has emerged as the low-cost model has matured and FSCs have adapted their model to compete more effectively with the LCCs. A report by Sabre Airline Solutions at the early stages of the model's evolution states that the hybrid model "combines the cost-saving methodologies of a pure low-cost airline with the service, flexibility and route structure of a full-service carrier" (Sabre Airline Solutions, 2011). (Model explored in detail in section 6.3.6).

The focus for this study is on scheduled domestic air services offered by LCCs and FSCs in the South African domestic air transport market. Although most of the South African carriers are evolving towards the hybrid model, this evolution is not the focus of the study. It will, however, be reported on where it impacts on the research topic.

## 2.3 GLOBAL IMPACTS OF THE AIR TRANSPORTATION INDUSTRY

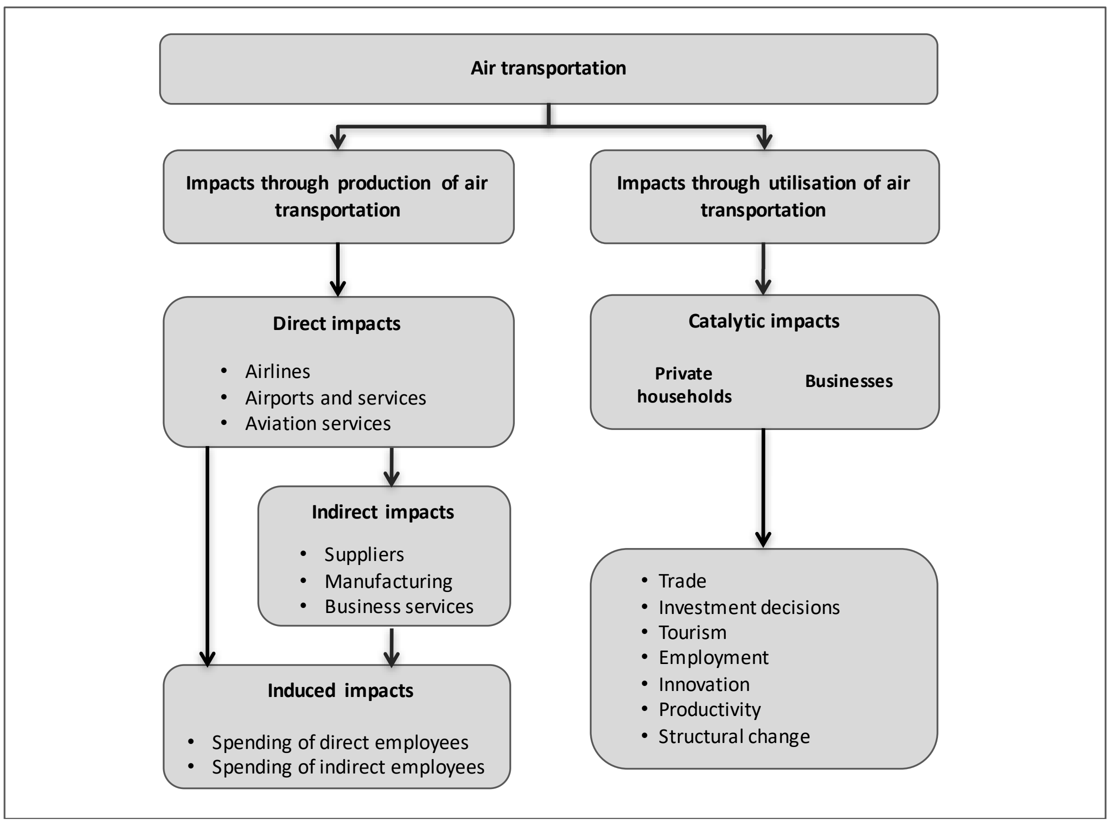
Before looking at issues of demand and supply in the air travel industry, a brief review will be given on the global impacts of the commercial air transport industry. This will highlight the importance of the industry and the need to properly understand the consumer in order to manage supply and demand. The impacts of the air transport industry can be considered from the economic, social, and environmental perspectives.

### 2.3.1 Economic impacts

Given an aircraft's ability to transport people and freight over vast distances in a relatively short period of time it is logical that that the air transport industry plays a significant role in the operation of the global economy and global trade. Brian Pearce, the chief economist at IATA (in O'Connell & Williams, 2011:9), in 2009 went as far as to state that, "globalisation as we know it today could not exist without the timely connectivity between nations provided by air transport networks". The Air Transport Action Group (ATAG) 2016 report on the benefits of aviation to the global economy further highlights the importance of aviation in the global context when they state "Aviation provides the only rapid worldwide transportation network, which makes it essential for global business and tourism. It plays a vital role in facilitating economic growth, particularly in developing countries" (ATAG, 2016:5).

Research by the European Centre for Aviation Development (ECAD) found that the economic impacts of air transport could be broken into two main categories; impacts arising from the production of air transportation and impacts arising from the utilisation of air transportation (ECAD, 2011). The benefits arising from the utilisation of air transportation are generally referred to as catalytic benefits. The Air Transport Action Group (ATAG) notes that the economic catalytic impacts generated by air transport, whilst difficult to quantify, are greater than the combined direct/indirect/induced benefits" (ATAG, 2016). The classification of economic benefits, as outlined by ECAD (2011) and Oxford Economics (2009:118), is represented in figure 2.4.

**Figure 2.4: The economic impacts of air transportation**




**Source:** Adapted from ECAD (2011) and Oxford Economics (2009:118).

From figure 2.4 it can be seen that the economic impacts arising from the production of air transport can be sub-divided into:

- **Direct impacts.** The impacts resulting from direct activities of the airlines and activities at airports that result in income being generated. Specific impacts arise from the operation of the airlines and serving the passengers themselves as well as the activities at the airports like checking-in and moving baggage from check-in to the aircraft. Job creation at airlines, airports, and aircraft manufacturers are major direct benefits (ATAG, 2016:12). Additional examples include the sale of last minute tickets, payment for excess baggage, spend at restaurants at the terminals, and even the vendor offering porter services (ECAD, 2011).

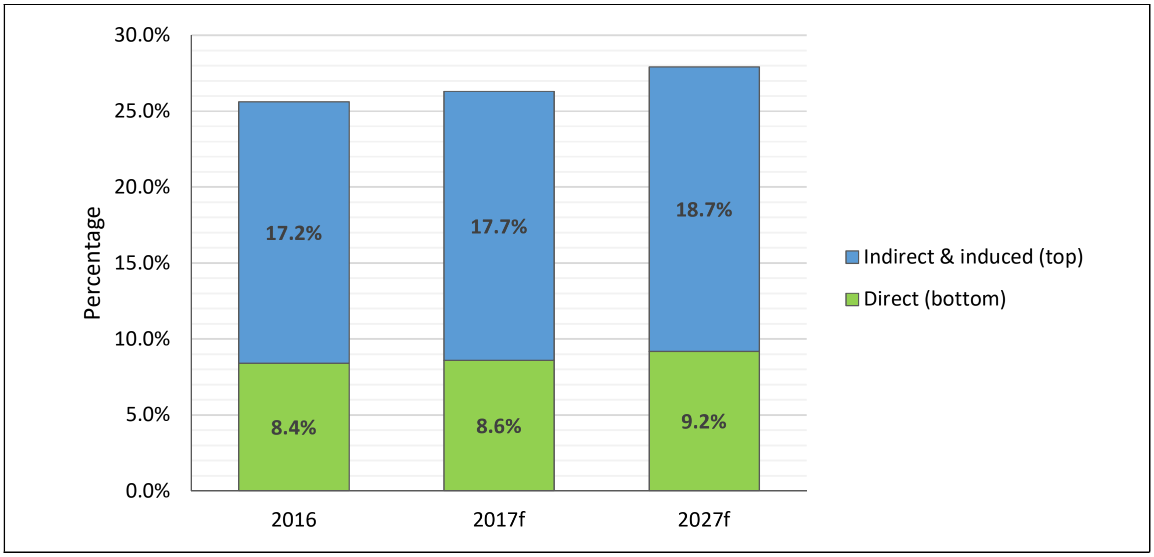
- **Indirect impacts.** These indirect impacts refer to off-airport activities and impacts that arise because of people being moved from one place to another (Vasigh, Fleming, & Tacker, 2013:20). In the context of commercial air transport, this includes money spent at the destination on hotels, car rentals, souvenirs from local vendors, travel agents selling tickets, and luggage stores selling suitcases. (section 4.4.1 addresses the global travel and tourism economic impact).

- **Induced impacts.** This impact refers to the multiplier effect of income generation from the direct and indirect impacts. The injection of economic activity into an economy filters down through to other sectors of the economy to the benefit of the economy as a whole. Induced impacts arise from the spending of those people who benefit directly or indirectly from their employment in the air travel industry (ATAG, 2016:14). For example; the check-in agent who is paid by the airline is able to buy groceries thereby supporting the local retailers who will be able to pay their employees.

ATAG quantifies the global economic impact of the air transport industry by highlighting the fact that if aviation was a country on its own, it would rank 21st in the world in terms of GDP, contributing US $664 billion in direct GDP benefits to the global economy (ATAG, 2016a:4). The organisation further highlights that by 2034 it is expected that this figure will rise to an annual contribution of US $1.5 trillion of direct GDP benefits to the global economy (Aviationbenefits.org, 2016). In terms of total contribution to global GDP (direct, indirect, induced and catalytic benefits) aviation made a total contribution of US $2.7 trillion in 2014(ATAG, 2016:4) (section 4.2.1 explores the trend in global GDP). Another key point to illustrate the size of the industry, and thus the impact it can have, is the fact that airlines transported 3.57 passengers in 2015 and carried roughly 51.2 million tonnes of freight (IATA, 2016b). This passenger number is expected to rise to six billion in 2026. From an African perspective, air transport contributed US $9.9 billion in direct benefits to GDP in Africa and US $72.5 billion in total GDP contribution (ATAG, 2016:40). In a 2011 speech to the Airlines Association of Southern Africa (AASA), Tony Tyler (a former director general of IATA, 2011-2016) stated that from the South African perspective, aviation contributes 2.1% to the South African GDP, a Rand value of R51 billion (IATA, 2011c). In this speech, he further identified that this generates over ZAR 6 billion in tax for the country. Figures for 2014/2015 put this at a US $2.97 billion direct GDP contribution and a US $12.47 billion total GDP contribution (ATAG, 2016:62). The contribution of the air transport industry to the South African economy is discussed in detail in section 5.4.3 of the study.

Many cities and even countries owe their growth and continued existence to air travel (ATAG, 2016:5). The accessibility that an air service provides ensures that people can reach the destination in a short period of time. Without this connection, there would be less incentive for people to travel to the destination. The island of Mauritius can be given as an example in this case. According to the WTTC country report on Mauritius (WTTC, 2017e:1) the direct contribution of travel and tourism to the Mauritian economy in 2016 was 8.4% of total GDP. The total contribution (direct contribution + indirect contributions + induced contribution) was 25.6% of GDP. This translates into 45 500 direct jobs and a total employment contribution of 135 000 jobs which represents 24.3% of all employment in the country. The contribution of travel and tourism to Mauritian GDP for 2016, 2017(f), and 2026(f) is illustrated in figure 2.5.

**Figure 2.5: Total contribution of travel and tourism to Mauritian GDP**




**Source:** Adapted from WTTC (2017e:1, 3 & 11).

Given the fact that Mauritius is an isolated island in the middle of the Indian Ocean and has such a high dependence on travel and tourism, it can be easily understood that without air travel these figures would change drastically. The only other viable option of reaching the island is by ship, which would make the trip too time consuming and cost inefficient for most consumers.

In terms of global employment, the air travel industry employs millions of people around the globe. 'Aviation: benefits beyond borders', a website established by the Air Transport Action Group (ATAG), shows that in 2014 the aviation industry supported 62.7 million jobs globally (Aviationbenefits.org, 2016a). This included 9.9 million direct jobs, 11.2 million indirect jobs, 5.2 million induced jobs, and 36.3 million catalytic jobs. From an African perspective, these employment figures were 381 000 direct jobs, 417 000 indirect jobs, 219 000 induced jobs, and 5.8 million tourism catalytic jobs for a total of 6.8 million jobs (ATAG, 2016:40) In terms of direct employment, examples include people working for the airlines, at airports, at shops at the airports, and all support staff at the airport. When referring to indirect employment, these are the people that gain employment because of the arrival of visitors at the destination. This includes people working for the hotels and car rental agencies, tour companies, and other related travel support roles for example. The example of Dubai highlights the importance of the aviation industry to employment in an economy. The aviation sector in Dubai supports 120 300 direct jobs, 76 100 indirect jobs, 63 000 induced jobs, and 157 100 jobs in the tourism sector (Oxford Economics, 2014:3). This represents a contribution of US $26.7 billion to Dubai's GDP. The Oxford Economics report on the impact of aviation in Dubai goes even further to state that the success of their model has played a significant role in the development of the global tourism economy. From an economic perspective, South Africa benefits substantially from the presence of Emirates. Based on 2014/2015 figures, the Dubai link through Emirates Airlines made a total contribution of US $417 (ZAR 41.5 billion) to the South African economy (Emirates, 2016:32). In terms of contribution to employment, Emirates supports a total of 12 989 jobs (direct, indirect, and induced) in South Africa. The ATAG 'benefits beyond borders' report published in 2016 shows that in 2014/5, air transport supported 260 000 direct, indirect, and induced jobs for South Africans, with 234 000 further jobs arising in the tourism sector as a result of air transport connectivity (ATAG, 2016:62). Refer to sections 4.4.3.2 and 5.4.3 for the full discussions on the contribution of travel and tourism and air transport respectively to South African employment.

It has long been established that commercial air transport provides speedy access to foreign markets for businesses and thus serves as a stimulant for international business (Oxford Economics, 2009:2). A study commissioned by the World Travel and Tourism Council (WTTC) in 2011, found that if business travel was cut by 25% over a two-year period, after five years the global GDP would be 5% lower than if the decline had not taken place (WTTC, 2011:20). Air transport allows companies to maintain their supply chains and facilitate the free flow of people and skills to match their organisation's requirements. The increased speed of facilitating contact between people significantly adds to the productivity within in an organisation and society as a whole (ATAG, 2016:20). The previously identified WTTC study quantified this level of increased productivity by showing that business travel alone contributes to business productivity in a ratio of 10:1 (WTTC, 2011:20). This benefit arises largely from the improved connectivity. In this case, businesses are better able to meet and service their customers in the global environment. The ATAG report further states that just a 10% improvement in connectivity (relative to GDP) would result in a 0.5% increase in global long-term GDP per capita (ATAG 2016:21). Finally, in the broader context, aviation increases competition which leads to greater innovation and improved economies of scale, which ultimately results in greater benefits to the consumer and society as a whole (Oxford Economics, 2009:2; ATAG, 2016:20).

### 2.3.2 Social impacts

The airline industry impacts on society in many ways. At a very basic, yet important level, air travel facilitates social and cultural mobility between the continents so that people can maintain contact with friends and family located throughout the world (AEA, 2010:6; ATAG, 2016:22). It also serves to link remote communities to the rest of their country and remote countries to the rest of the world (IATA, 2016b:2).

Another social impact is speed and convenience. People are transported around the globe in hours instead of days or weeks. A trip from Johannesburg to London takes 11 hours whereas the same trip by boat could take weeks. In effect, air travel buys the consumer a precious commodity - time. This speed also reduces fatigue and enables people to engage in their desired activities quicker than any other form of transport. The issue of speed is also of benefit in cases where emergency disaster relief or medical supplies need to be delivered to an area in need (Aviationbenefits.org, 2016b).

Some of the other broader social benefits of the industry include allowing people easier access to destinations for the participation in religious festivals and pilgrimages, the attendance of global sporting events, global cultural events (music etc.), and the opportunity to be educated at foreign institutions and thus facilitate knowledge transfer and enrichment (Daley & Thomas in O'Connell & Williams, 2011:269). At the generic level, travel promotes intercultural communication and cultural exchange, which ultimately serves to improve international relations between countries (WTTC, 2011:5).

The development of air travel drastically changed the way in which people spent their leisure time and the destinations they visited when going on holiday (Wensveen, 2015:39). With improvements in the wealth of people, coupled with the relative low cost of travel, many people have travelled to destinations that are more remote and exotic for their holidays. This broadening of exposure to different parts of one's own country and other countries has facilitated exchanges of culture, which has led to the evolution of the multicultural societies (ATAG, 2008:11). Whilst this also happened in the days when slower forms of travel prevailed (ship or rail), the development of air travel significantly sped up this phenomenon and resulted in more people from all classes travelling more frequently, further, and being exposed to different societies and cultures.

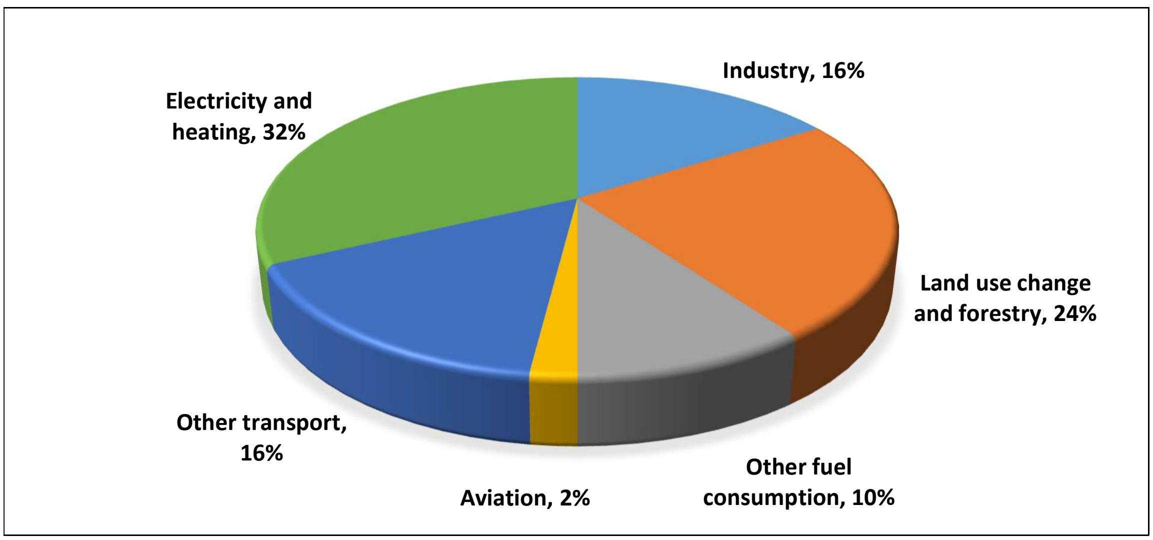
The ATAG report on the economic and social benefits of tourism (ATAG, 2016:6) highlights the point that aviation aids in sustainable development by facilitating tourism and trade, facilitating economic growth, generating jobs, and providing a source of tax revenues. Air travel also plays a role in the conservation of protected areas through societal awareness creation of preservation programmes and supporting sustainable ecotourism in sensitive environments (Oxford Economics, 2009:1).

### 2.3.3 Environmental impacts

The impact of air travel is one that is receiving more attention given the current concerns of global warming and carbon emissions. As the number of people travelling each year increases so do the concerns expressed over the impacts of air travel increase. In the context of air travel, the impacts refer to impacts from the aircraft themselves as well as the development and impacts of airports. At the basic level, the impacts include the following:

- **Aircraft emissions.** These contribute to climate change and add to the levels of pollution in the air. Analysis has shown that one tonne of jet kerosene generates 3.05 tons of carbon dioxide (AEA, 2016:1). This translates into 781 million tonnes of carbon dioxide being emitted by the aviation industry in 2015 (ATAG, 2016:7). According to the United Nations Intergovernmental panel on climate change, aviation produces approximately 2% of the world's carbon dioxide emissions (Enviro.aero, 2016a[1]). This figure is expected to rise to 3% by 2050. Carbon dioxide is the gas that is referred to in the concept of 'greenhouse gas'. In effect, carbon dioxide is released into the atmosphere and causes radiation from the sun to become trapped in the atmosphere. This then has a heating effect, hence the term 'global warming'. Figure 2.6 summarises the global contributors of carbon dioxide emissions in 2010.

**Figure 2.6: Carbon dioxide emissions per sector - global**




**Source:** Adapted from: European Commission (2010:60).

This issue is receiving lots of attention with the goal of reducing the levels of $CO_2$ emissions. Emission standards are being developed for aircraft and a number of economic instruments (like

[1] Enviro.aero was established by the Air Transport Action Group (ATAG) to promote aviation's sustainable growth for the benefit of society. Its function is to provide information to the industry on the efforts being made and the measures implemented to limit the environmental impact of aviation.

emissions trading and taxes) introduced in an attempt to reduce the impact (Lyle, 2011:36). A framework of three goals has been developed by the industry members in order to manage and reduce the carbon emissions by the industry. These include (i) a 1.5% average annual fuel efficiency improvement from 2009 to 2020, (ii) stabilising net CO2 emissions from 2020 through carbon-neutral growth, and (iii) reducing the industry's net emissions to 50% of 2005's figures by 2050 (IATA, 2016:36). Efforts to significantly reduce the industry's emissions impact include the development of more energy efficient fuels, engines, and aircraft in general. New aircraft developments aimed at greater fuel efficiency and reduced carbon emissions include the Airbus A320neo, the Boeing 737max, and the Airbus A350XWB.

- **Noise pollution.** This refers to the noise made by aircraft when flying and specifically the concentration of aircraft noise around airports. Different aircraft make different levels of noise with the older aircraft making significantly more noise than the newer generation of aircraft being developed. The major aircraft manufacturers estimate that each advancement of aircraft they develop is about 15% quieter than their predecessor (Enviro.aero, 2016b). An interesting fact in this regard is that the vuvuzela blown at full blast measures 127 decibels whilst the new Airbus A380-800 only generates 82 decibels on take-off (ATAG, 2016a). Daley and Thomas (in O'Connell & Williams, 2011:276) discuss the psychological perception of noise by highlighting that the extent of the level of noise perceived by a person is linked to their current levels of stress and general emotional state. They also highlight that the level of noise nuisance is influenced by socio-economic status, cultural differences, and lifestyle. They go further to say that it is important to distinguish between, 'noise exposure' and 'noise intolerance'. This issue is also addressed by Paul Hooper of the Manchester Metropolitan University (Hooper, 2010:26), where he states that the disturbance caused by noise is an issue of perception where a number of socio-economic issues determine the level of the perceived disturbance. He also states that at rapid levels of economic growth people are less tolerant of noise and in democratised societies this leads to increasing levels of opposition. A prime example of this effect was seen in the levels of opposition to the third proposed runway at London's Heathrow airport. The prime tool being used in guiding the reduction of noise in the industry is ICAO's 'balanced approach to aircraft noise management' (ICAO, 2016c)

- **Airport impacts.** Concerns in this case are raised concerning the environmental impacts associated with the building and running of airports as well as the infrastructure that needs to be developed around the airports. In most case this includes the building of additional high-density roads, storage facilities, rail tracks and depots, and hotels. Airports cover a large area and consume a large amount of resources. Particular concerns include the levels of water usage, the high levels of waste generation, pollution resulting from fuel spills or other toxic emissions, and the changes that are made to the ecological systems in the vicinity of the airport to accommodate its operation (Daley & Thomas in O'Connell & Williams, 2011:269). Even though numerous studies and environmental impact assessments are undertaken, there are still impacts and these impacts will grow as airports reach capacity and need to grow even further.

## 2.4 OVERVIEW OF GLOBAL AND SOUTH AFRICAN AIRLINES

To further set the scene it is important to give an overview of the key global and South African domestic airline operators. This will serve to provide an insight into the size and significance of the South African commercial air transport operators compared to other global operators. An overview is also given of the main airports in South Africa to give insight into the scale of operations in the country and the passenger volumes handled. This will be put into context of other airports around the globe to provide a point of comparison. The focus in this section is on the specific airlines and airports within the industry. Building on this, section 5.2.3 quantifies the entire industry in terms of key industry metrics.

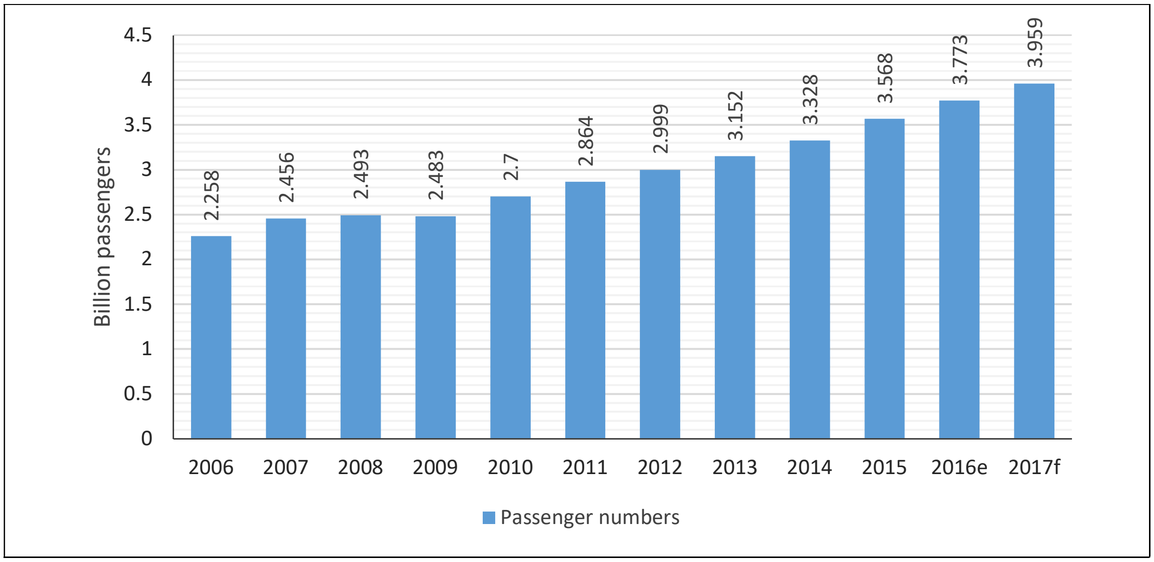
### 2.4.1 The global context

The global airline industry has many commercial airlines offering essentially the same product – air transport from point A to point B. According to figures from ATAG there were 1 402 commercial airlines in operation in 2015 (ATAG, 2016:6). These airlines operate in many different markets across the globe, flying many different networks and routes, using different aircraft types, offering different capacities, and seeking alliances with operators in different markets in order to obtain an advantage over the other competing operators.

The difficult and uncertain economic circumstances that characterised the industry from 2008-2016 have made the task of managing an airline even more difficult. From the lows of 2009, the industry has shown a consistent level of annual passenger and capacity growth to the current period – mid 2016. In 2015, despite the existence of both economic and political uncertainty in many regions across the globe, the air transport industry showed that it was continuing to grow and recorded passenger growth (in RPKs) of 7.4% for the year which is above the long-term average of 5.5% (IATA, 2016:11). This is coupled with an overall increase in capacity (ASK) at a rate of 6.1% for the year (ICAO, 2016a:1). At the end of July 2016, the year-to-date RPK growth for the year was at 6.0% and ASK (*see* glossary) year-to-date growth stood at 6.2% (IATA, 2016c:1). Whilst these figures seem encouraging it was noted in August 2016 that passenger demand was starting to 'lose momentum' due to uncertainty in the economic environment, political shocks, and a string of terror related attacks that were experienced in the early part of the year (IATA, 2016d). For the year 2015, airlines in the industry achieved an overall passenger record load factor of 80.4% (IATA, 2016:12). As of end July 2016, this overall industry load factor has dropped slightly to 79.9% for the year-to-date but it is within a narrow band of fluctuation and is expected to be over 80% by year end (IATA, 2016c:1). In absolute values, in 2015 just under

3.57 billion passengers were carried by airlines to their destinations. The overall trend in year-on-year passenger number growth is seen in figure 2.7.

**Figure 2.7: Global passenger number growth trend (2006 – 2017f)**




**Source:** Adapted from IATA (2016f:1).

From figure 2.7 it can be seen that the overall trend is an increase in the number of passengers carried by airlines. The exception was 2009, which showed a slight dip in numbers. This was at the height of the banking crisis and global recession. IATA is currently forecasting that airlines will carry 3.96 billion passengers for the 2017 calendar year (IATA, 2016f:1). To further establish the size of the airline industry it is useful to consider the size of carrier traffic in terms of RPK. Table 2.1 highlights the RPKs for the top 150 airlines divided across the regions for the 2015 calendar year.

**Table 2.1: Carrier traffic per region for 2015 - RPK and numbers (top 150 airlines)**

| Region | Pax traffic (RPK) | | Passenger numbers | |
|---|---|---|---|---|
| | Million | Change (%) | Million | Change (%) |
| Africa | 92 818 | 2.7% | 34.3 | 3.5% |
| Asia-pacific | 1 954 254 | 8.9% | 1 035.1 | 8.4% |
| Europe | 1 714 827 | 4.9% | 867.6 | 6.2% |
| Latin America | 273 305 | 7.8% | 180.9 | 4.3% |
| Middle East | 598 380 | 10.9% | 173.3 | 9.9% |
| North America | 1 669 165 | 4.8% | 923.8 | 4.7% |
| **Total** | **6 302 749** | **6.7%** | **3 215** | **6.5%** |

**Source:** Adapted from Dunn (2016:44).

Interpreting this, it can be seen that the top 150 passenger airlines flew 6 302.7 billion revenue passenger kilometres (RPK) globally in 2015. This was done with a global airline fleet of 26 065 aircraft (ATAG, 2016:6). Looking at the individual regions, all showed an increase in RPK meaning that they used their capacity to fly more people to more destinations. All regions showed an increase in passenger numbers with the Middle East and the Asia-Pacific showing the largest growth. The point is clear; the commercial air travel industry is a massive industry involving the movement of 3.57 billion people in 2015. The enormity of this can further be seen when considering that the total human population in 2015 was put at 7.35 billion people (World Bank, 2016a).

#### 2.4.1.1 Passenger airline rankings

Moving attention from an overall global perspective, a breakdown of individual carriers operating across the globe highlights the vast difference between the carriers operating in different continents and markets. Table 2.2 is broken into two sections. Firstly, it sets out the top 15 ranked airlines for 2015 in terms of passenger operations. Secondly, it identifies numerous other carriers of note that appear further down the list that are either low-cost carriers or relate to Africa and Southern Africa (section 2.4.2 addresses the South African operators). A number of key observations can be made from this table:

- The USA dominates passenger numbers in the top 10 with the four main US carriers showing a combined total of 1 220 872 million RPK and 665.6 million passengers carried.
- The growing importance of the Chinese carriers and Chinese market can be seen with the three Chinese carriers making it into the top 15 carriers and all showing good growth.
- The highest ranked low-cost carrier is Southwest Airlines (5) with an RPK of 189 057 million with 144.6 million passengers carried. Ryanair (11) is the next LCC with an RPK of 130 588 million, which translated into 106.4 million passengers carried.
- The highest ranked 'hybrid' carriers are JetBlue Airways (25) and Air Berlin (33). EasyJet is ranked 21 and are a LCC/hybrid combination.
- The three main Middle East carriers, Emirates, Qatar, and Etihad have shown extraordinary growth, with each of them recording high percentage growth in both RPK and passenger numbers.
- The highest ranked African airline is Ethiopian Airlines ranked in position 69 for a total of 25 085 million RPK and 6.4 million passengers. They overtook South African Airways in 2015 as the leading African airline in terms of fleet size and passenger numbers. South African Airways, which features at position 78 for a total of 21 170 million RPK and 6.6 million passengers, has gradually been falling down the list over the years. Egyptair is in position 88 with an RPK of 17 857 million and 8.8 million passengers.
- Kulula.com, which appears on a separate LCC ranking list but added to table 2.2 for illustrative purposes, is estimated to have carried 3.3 million passengers for 2015 which reflects a 2.4% increase on the previous year. On the 2015 LCC rankings list they rank at position 70.
- Mango, which also appears on a separate LCC ranking list is estimated to have carried 2.3 million passengers reflecting a 9.1% increase on the previous year. On the 2015 LCC rankings list they rank at position 81.

**Table 2.2: Flight Airline Business 2015 airline rankings for selected airlines**

| | | | | Passenger traffic (RPK) | | Seat capacity (ASK) | | Load factor | | Passenger numbers | | Fleet size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rank | Airline | Country | Type | Million | % Change | Million | % Change | Percent | % Change | Million | Change | |
| 1 | American Airlines | USA | FSC | 358 823 | 2.4 | 432 396 | 1.2 | 83.0 | 1.0 | 201.2 | 2.0 | 1 269 |
| 2 | Delta Airlines | USA | FSC | 337 264 | 3.3 | 397 034 | 3.0 | 84.9 | 0.3 | 179.4 | 4.7 | 950 |
| 3 | United Airlines | USA | FSC | 335 728 | 1.5 | 402 342 | 1.6 | 83.4 | -0.2 | 140.4 | 1.7 | 719 |
| 4 | Emirates | UAE | FSC | 255 176 | 8.4 | 333 726 | 12.8 | 76.5 | -3.2 | 51.9 | 7.7 | 251 |
| 5 | SouthWest Airlines | USA | LCC | 189 057 | 8.8 | 226 067 | 7.2 | 83.6 | 1.2 | 144.6 | 6.5 | 702 |
| 6 | Lufthansa | Germany | FSC | 162 173 | 3.4 | 202 314 | 2.4 | 80.2 | 0.7 | 79.3 | 2.3 | 338 |
| 7 | China Southern Airlines | China | FSC | 153 749 | 13.4 | 188 740 | 12.0 | 81.5 | 1.0 | 84.0 | 7.8 | 505 |
| 8 | China Eastern Airlines | China | FSC | 146 291 | 14.6 | 181 792 | 13.2 | 80.5 | 1.0 | 93.8 | 11.9 | 411 |
| 9 | British Airways | UK | FSC | 142 016 | 2.6 | 174 274 | 2.0 | 81.5 | 0.5 | 43.3 | 4.4 | 269 |
| 10 | Air France | France | FSC | 141 207 | 3.5 | 167 969 | 2.6 | 84.1 | 0.7 | 49.5 | 1.3 | 226 |
| 11 | Ryanair | Ireland | LCC | 130 588 | 15.4 | 140 739 | 9.7 | 92.9 | 4.6 | 106.4 | 17.4 | 357 |
| 12 | Air China | China | FSC | 124 805 | 10.9 | 156 300 | 7.1 | 79.8 | 2.8 | 58.8 | 7.6 | 366 |
| 13 | Turkish Airlines | Turkey | FSC | 119 372 | 11.7 | 153 209 | 13.6 | 77.9 | -1.4 | 61.2 | 11.8 | 293 |
| 14 | Qatar Airways | Qatar | FSC | 114 464 | 19.3 | 151 980 | 19.9 | 75.3 | -0.4 | 26.7 | 19.7 | 187 |
| 15 | Cathay Pacific | Hong Kong | FSC | 108 894 | 8.8 | 125 674 | 6.1 | 86.6 | 2.2 | 24.0 | 7.6 | 143 |
| | | | | | | | | | | | | |
| 18 | KLM | Netherlands | FSC | 93 228 | 1.9 | 107 850 | 2.0 | 86.4 | -0.1 | 28.6 | 3.0 | 113 |
| 19 | Etihad Airways | UAE | FSC | 83 200 | 21.9 | 104 800 | 21.0 | 79.4 | 0.2 | 17.6 | 18.9 | 122 |
| 21 | Easyjet | UK | Hybrid | 77 619 | 6.4 | 83 846 | 5.4 | 92.6 | 0.9 | 68.6 | 6.0 | 253 |
| 22 | QANTAS | Australia | FSC | 75 479 | 0.9 | 95 901 | -1.1 | 78.7 | 1.6 | 27.3 | -1.2 | 140 |
| 25 | JetBlue Airways | USA | Hybrid | 67 112 | 10.3 | 79 256 | 9.5 | 84.7 | 0.6 | 35.1 | 9.4 | 219 |
| 33 | Air Berlin | Germany | Hybrid | 47 010 | -4.6 | 55 844 | -5.4 | 84.2 | 0.7 | 30.2 | -4.6 | 93 |
| 39 | Gol Transportes Aeros | Brazil | LCC | 38 411 | 0.9 | 49 744 | 0.5 | 77.2 | 0.3 | 38.9 | -3.1 | 132 |
| 41 | Virgin Atlantic Airways | UK | FSC | 37 157 | -3.8 | 48 385 | -0.7 | 76.8 | -2.5 | 5.9 | 9.1 | 39 |
| 47 | Westjet | Canada | LCC | 34 635 | 3.3 | 43 285 | 5.2 | 80.0 | -1.4 | 20.3 | 3.2 | 117 |
| 49 | IndiGo | India | LCC | 34 186 | 31.2 | 40 984 | 22.2 | 83.4 | 5.7 | 31.4 | 37.1 | 109 |
| 52 | Lion Air | Indonesia | LCC | 33 000 | 0.1 | 37 400 | 0.2 | 88.2 | | 32.0 | -1.8 | 114 |
| 53 | Virgin Australia | Australia | Hybrid | 32 827 | -0.8 | 42 496 | 0.7 | 77.2 | | | | |
| 56 | Wizz Air | Hungary | LCC | 30 786 | 21.4 | 34 844 | 19.1 | 88.2 | 1.5 | 20.0 | 21.2 | 67 |
| 57 | Jetstar | Australia | LCC | 30 503 | 6.5 | 37 955 | 3.1 | 80.4 | 2.6 | 17.9 | 4.3 | 70 |
| 58 | AirAsia | Malaysia | LCC/Hybrid | 30 006 | 10.0 | 37 408 | 8.1 | 80.2 | 1.4 | 24.3 | 9.6 | 80 |
| 61 | Spirit Airlines | USA | LCC | 28 954 | 27.1 | 34 185 | 30.0 | 84.7 | -2.0 | 17.9 | 25.4 | 84 |
| 69 | Ethiopian Airlines | Ethiopia | FSC | 25 085 | 12.7 | 37 509 | 18.7 | 66.9 | | 6.4 | | 78 |
| 70 | Vueling Airlines | Spain | LCC | 24 775 | 15.5 | 30 476 | 14.2 | 81.3 | 0.9 | 24.8 | 15.4 | 102 |
| 74 | Spring Airlines | China | LCC | 22 176 | 21.4 | 23 885 | 21.7 | 92.8 | -0.2 | 13.0 | 13.5 | 53 |
| 75 | Frontier Airlines | USA | LCC | 21 822 | 21.8 | 25 240 | 25.1 | 86.5 | -2.5 | 13.3 | 9.1 | 57 |
| 78 | South African Airways | South Africa | FSC | 21 170 | -3.0 | 28 576 | -5.4 | 74.1 | | | | |
| 84 | Azul | Brazil | LCC | 18 636 | 18.6 | 23 423 | 18.9 | 79.6 | -0.2 | 20.6 | 2.7 | 140 |
| 88 | Egyptair | Egypt | FSC | 17 857 | -2.7 | 27 104 | -5.1 | 65.9 | | 8.8 | 6/2015 | 65 |
| 90 | AirAsiaX | Malaysia | LH LCC | 17 553 | -15.7 | 23 388 | -7.8 | 75.1 | | | | |
| 92 | Virgin America | USA | Hybrid | 16 792 | 3.6 | 20 419 | 3.7 | 82.2 | -0.1 | 7.0 | 8.1 | 61 |
| 96 | Air Arabia | UAE | LCC | 15 100 | 8.9 | 18 800 | 10.4 | 79.0 | -2.4 | 7.6 | 12.1 | 34 |
| | | | | | | | | | | | | |
| - | kulula | South Africa | LCC | | | | | | | 3.3 | 2.4 | 10 |
| - | Mango | South Africa | LCC | | | | | | | 2.3 | 9.1 | 11 |

**Source**: Adapted from Flight Airline business (2016:46–47) and Flight Airline business (2016a:37).

#### 2.4.1.2 Global operators of note

A closer look at some of the main operators in the industry will provide a point of comparison and scale when describing the main South African operators that form part of this study.

- **Delta Airlines**

Delta Airline group was ranked second in the 2015 world rankings in terms of revenue, RPKs, and passengers carried. As of January 2017, the airline serves 322 destinations in 58 countries with a fleet of 822 aircraft. It has approximately 5 621 daily departures with 10 USA based hubs including Atlanta, Boston, Cincinnati, Detroit, Minneapolis, Los Angeles, New York, and Salt Lake City. Key international hubs/markets include Amsterdam, Paris-Charles De Gaulle, and Tokyo Narita. When combined with its alliance partners, Delta Airlines are able to offer in excess of 15 000 daily flights covering over 800 destinations in over 170 countries. Globally, at the end of 2016, Delta Airlines had workforce of over 83 756 employees to run their operation and had 966 aircraft in their fleet. For the year 2016, the airline recorded a pre-tax income of US $6.6 billion and a net income of US $4.4 billion (Compiled from Delta Airlines, 2017; Delta Airlines, 2017a; Skyteam, 2016). Delta is the leading US carrier to Africa, serving four countries. They currently offer numerous weekly departures between the continents, which includes direct and indirect flights. South Africa's ORTIA is one of the African airports served by the airline (Ghana, Nigeria, and Senegal being the other countries served).

- **Emirates**

Emirates is recognized and feared as one of the fastest growing airlines in the world. The airline's base in Dubai offers it an ideal location to connect the west with the east. They currently (Mid 2016) operate a fleet of 251 aircraft with an average age of 74 months, all of which are wide-bodied long haul aircraft. As of 31 March 2016, the airline has 254 aircraft on order with options on a further 70 aircraft. The airline serves 153 destinations in 80 countries and in 2015 transported 51.9 million passengers. Worldwide, in 2015, the airline had 61 205 people employed to run their operations. In 2015, they generated US $23.2 billion in revenue with a net profit of US $1.9 billion (Emirates, 2016a; Flight Airline Business, 2016:40 & 46).

As of beginning 2017, Emirates serves 22 African cities including Cairo, Dakar, Lagos, Port Louis (Mauritius), Luanda, Accra, Casablanca, Nairobi, and Harare. Also served is South Africa with flights to Cape Town (three times daily) Durban (daily), and Johannesburg (four times daily) totalling 56 weekly flights. A report by Genesis on the economic contribution of Emirates to South Africa estimates that Emirates operations to South Africa added USD 417 million to South Africa's total GDP (direct, indirect, and induced) in 2014/5 (Emirates, 2016:IX).

- **Southwest Airlines**

Southwest Airlines is the most successful low-cost carrier in the airline market. It is regarded as the 'granddaddy' of low-cost airlines and is still used as the model for most of the LCC airlines in the market. Figures at the end of September 2016 show that the airline operates 714 Boeing 737 aircraft each of which on average flies six flights a day which equates to about 11 hours a day. The airline serves 98 cities in the United States and seven additional countries (mainly Mexico and the Caribbean). On a daily basis, approximately 3 900 flights are operated. For 2016 Southwest's load factor was 84.0% with an ASM of 148.5 billion. The operations of the airline are high frequency, point-to-point services at a low fare. The number of employees at the end of 2016 totalled just over 53 000. Revenue for 2016 was US $20.4 billion with an operating profit of US $3.8 billion and a US $2.2 billion net profit. The 2016 profit means that the airline has been profitable for 44 consecutive years – despite the financial turmoil in the global and US markets. With the acquisition of AirTran in 2010, Southwest expanded their reach and frequencies to a number of destinations ensuring that they were able to obtain their growth targets (compiled from Southwest 2016a; Flight Airline Business, 2016a:24, 36–38; Southwest Airlines, 2017; Karp, 2017).

- **Ryanair**

Ryanair was Europe's leading low-cost carrier in terms of passengers carried (106.4 million) and RPK traffic (130 588 million) in 2015. They operate a fleet of approximately 360 Boeing 737-800 aircraft (average aircraft age 5.5 years), which are used to service over 200 destinations in 33 countries. The fleet will grow to 546 by 2024. Approximately 1800 scheduled flights per day are offered. Their model is based on extremely low costs and low fares, which has seen them establishing 86 bases throughout Europe and North Africa. The countries served are located throughout mainland Europe, Eastern Europe, Scandinavia, and Northern Africa. Ryanair generated US$ 7 202 million in revenue in 2015 which resulted in a record US $1 718 million net result. The 2015 figures 2015 show that Ryanair's ASK increased by 9.7% for the year. For the year 2015 is that the airline obtained a 92.9% load factor and showed an 18% increase in passenger numbers. Preliminary figures for FY 2016 indicated that the airline carried 119.8 million passengers in 2016 at an average load factor of 94.2%. The airline had a staff compliment of 11 458 people at the end of 2015 (12 000+ end 2016) (compiled from Centre for Aviation, 2016; Ryanair, 2016:2–3; Ryanair, 2017; Ryanair, 2017a).

### 2.4.2 Main operators in the South African domestic market

As explained in section 1.2.2, compared to the other main air markets in the world, the South African market is relatively small, with a limited number of airports. Given the geographic and market restrictions, there are only a small number of commercial operators serving the South African domestic market. This section focusses on describing the key operators in the South African air transport market (*see* section 5.4 for the analysis of the South African air transport industry and the competitive interactions between them). On 1 January 2017, the number of active operators stood at eight. These include full-service carriers, low-cost carriers, and regional operators:

#### 2.4.2.1 Full-service carriers

Two FSCs operate in the South African domestic air transport market, SAA and Comair's British Airways brand.

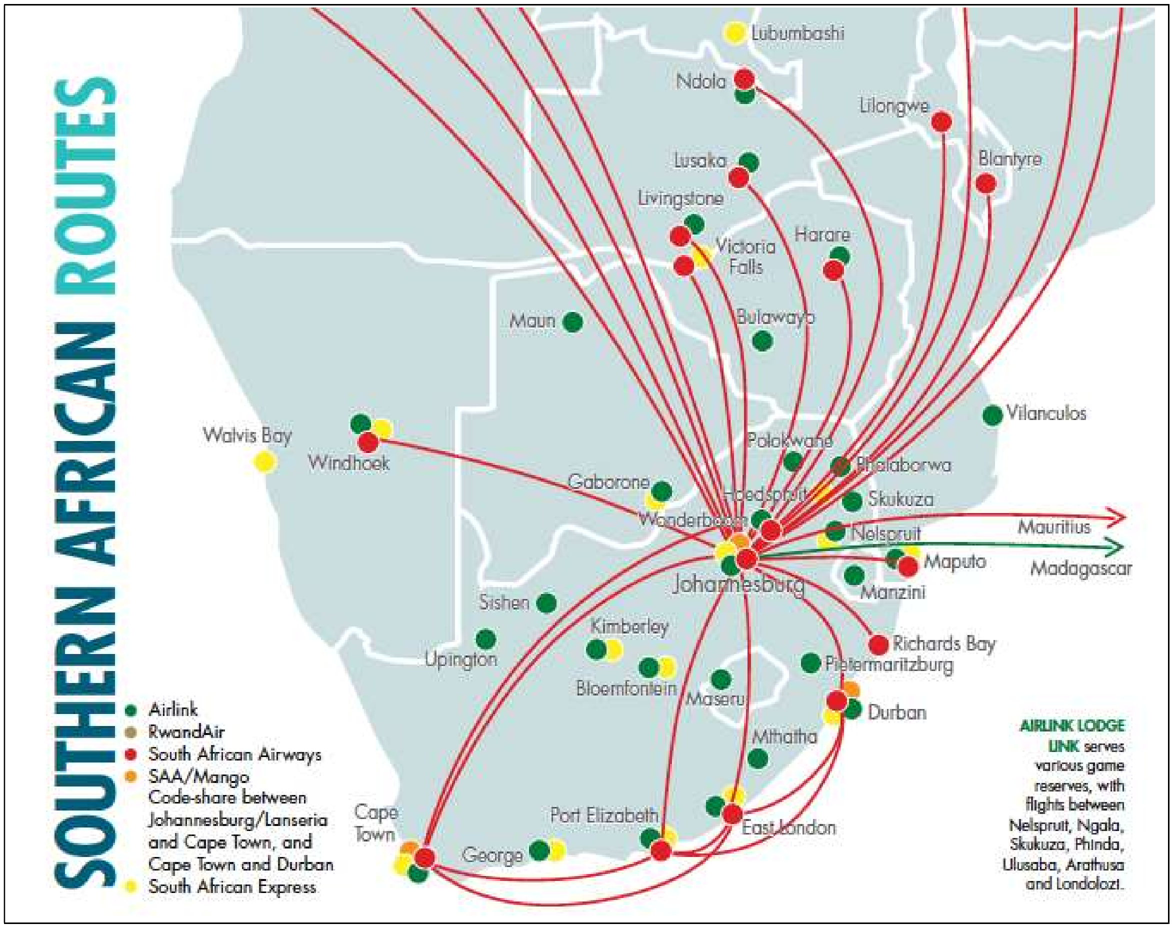
- **South African Airways (SAA)**

South Africa Airways is generally regarded as the South African national carrier. It started operations in 1934 making the airline almost 80 years old. It is by far the largest of the South African carriers operating in the South African market and is the only one utilising wide- and narrowed-bodied aircraft. At the end of March 2017, the SAA FSC brand had a fleet of 57 aircraft. Of these 57 aircraft, 27 are wide-body aircraft and 30 are narrow-body aircraft of which four are freighters (Sawubona, 2017:162). The airline took delivery of two new A330–300s in the final quarter of 2016 with three more in 2017.

The airline operates internationally, regionally, and domestically. The core domestic and regional route map for as of March 2017 is highlighted in figure 2.8. Overall, six continents are served, with flights to 24 destinations on the African continent and 10 direct routes and code-share flights linking the main continents (Sawubona, 2017:150). In conjunction with its regional operators (SA Express and SA Airlink) and its membership of the Star Alliance, the airline is able to connect passengers to 1 330 alliance destinations in 193 countries with 18 500 daily flights (South African Airways, 2016a:12; Sawubona, 2017:150). Two routes to the USA are offered where SAA has a strategic alliance with JetBlue – an American hybrid carrier. Three cities are served directly by SAA in Europe; namely Frankfurt, Munich, and London. Two routes are operated to the Asian Pacific (Hong Kong and Perth) and one to South America (Sao Paolo) (Centre for Aviation, 2016a).

On the 31st of January 2012, a direct route to Beijing in China was introduced by the airline for the first time but was dropped in March 2015 as it was highly unprofitable. The Mumbai route was dropped at the same time as part of a 90-day turnaround strategy. SAA's focus in 2016 is on intra-continental expansion where it currently has 73% of their seat capacity. The airline has a large domestic flight schedule offering a total of 554 flights a week within the South African borders (Sawubona, 2017:150). Its biggest route, with 18 daily flights, is the link between Cape Town and Johannesburg, which is heavily contested by all domestic operators in the country. Other cities directly served in the domestic market are Durban, East London, Port Elizabeth, and Richards Bay. November 2016 figures identify that the airline operates an average of 153 departures per day (Star Alliance, 2017).

**Figure 2.8: South African Airways route map (domestic and regional) - March 2017**




**Source:** Sawubona (2017:154).

The 2015 world airline rankings in terms of passengers saw SAA ranked at number 78, which is a notable decline from position 57 in 2010 (*see* section 2.4.1.1, table 2.2). The airline had an ASK of 28 576 million with an RPK of 21 170 million and a load factor of 74.1% for the year in review (Flight Airline Business, 2016:47). The SAA 2016 integrated annual report shows that for FY 2016, the SAA group had 32 282 million ASKs with an overall load factor of 75%. The SAA FSC brand recorded 21 079 million RPKs with actual passengers carried recorded at 6.70 million passengers in FY 2015 and 6.69 million in FY 2016 (South African Airways, 2016a:81).

In terms of financial rankings, SAA ranked 63 in the world in terms of revenue for 2015. The world airline rankings estimated USD 2 150 million in revenues, which is a decline of 18.9% from 2014 (Centre for Aviation, 2016a:41). The airline's 2016 annual report states that group revenue was stagnant at ZAR 30.38 billion and that operating costs fell to ZAR 30.03 billion. For the 2015/2016 financial year, a group operating loss of ZAR 538 million was recorded, with the total loss being ZAR 1.49 billion

(Ensor, 2016). Revenue specific to the SAA FSC brand for the 2015/2016 financial year was recorded at ZAR 28.05 billion, with a ZAR 452 million operating loss and a total final loss of ZAR 1.35 billion (South African Airways, 2016a:94). Whilst these figures reflect a reduction in losses over the previous financial year, the airline is still in extreme financial difficulty.

At the end of the 2016 financial year the airline group had a global workforce of 10 706 after a headcount rationalisation process during the year. (South African Airways, 2016a:4). It is acknowledged that the airline operates in an extremely challenging political environment and is experiencing many board-level challenges. Processes are currently underway to merge SAA, Mango, and SA Express. The airline is further being hampered by legal challenges against it for anti-competitive behaviour. The latest outcome being that on 8 August 2016 they were ordered by the high court to pay the liquidated Nationwide Airlines the sum of ZAR104 million plus interest. The same claim has since been lodged by Comair for an amount of over ZAR1 billion (Burger-Smidt, 2016).

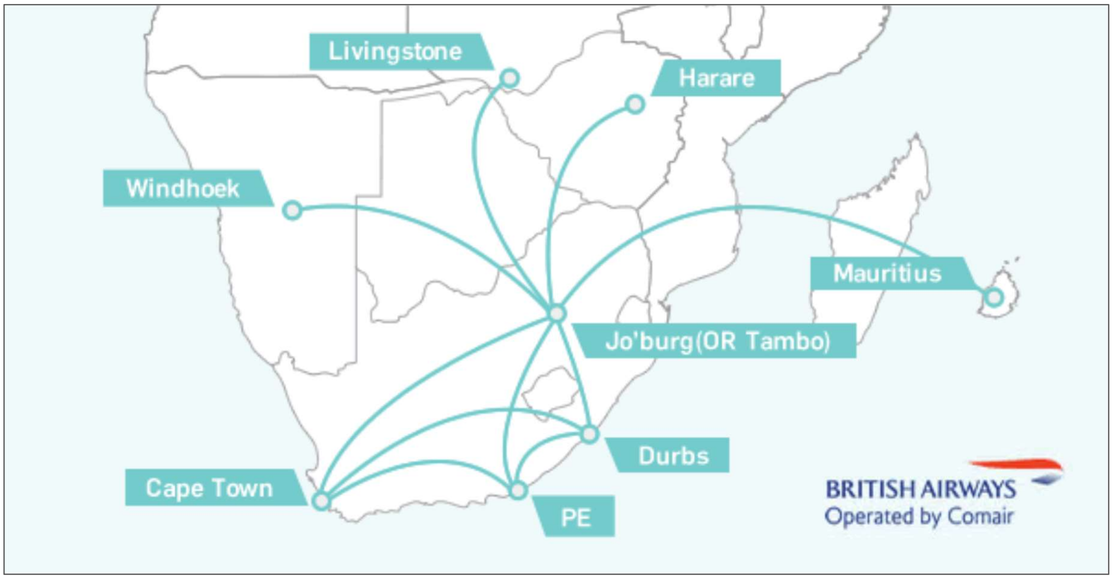
- **British Airways (operated by Comair)**

The Comair group operates the British Airways (FSC) and the kulula.com (LCC) brands in South Africa. Financial results and statistics are reported in their annual report incorporating both brands with no distinction between the brands and their contribution to the group results.

Comair began operations in 1946 as a charter airline. The airline grew steadily over the year and then in 1996 it became a franchise partner with British Airways. It took the name Comair British Airways and adopted the livery of British Airways and all their other brand components. A full-service product is offered with a large emphasis on the business product offering. The group's second brand, kulula.com, was added to the mix in 2001 (Comair, 2016a).

The airline introduced the Boeing 737-800 into its fleet in 2011 after years of only operating the -200, -300, and -400 variants. As a group (British Airways & kulula.com), the airline operates 27 Boeing 737s, 16 of which operate under the British Airways branding (Flight Airline Business 2016a:37). The airline owns 20 of the aircraft and seven are leased. The airline is upgrading its entire fleet to the 737-800 model in order to increase capacity, lower operating costs, and extend potential daily utilisation (Comair, 2017). December 2015 saw the airline become the first African customer for the Boeing 737-800 max variant with eight of the aircraft due for delivery from 2019 – 2021. The key destinations serviced by the Comair British Airways brand include Johannesburg, Cape Town, Durban, Port Elizabeth, Mauritius, Windhoek, Livingston, Victoria Falls, and Harare. Figure 2.9 graphically illustrates the routes flown by the Comair British Airways brand within South Africa and its regional destinations.

**Figure 2.9: Comair British Airways route map – March 2017**




**Source:** Comair (2017a).

Figures from the airline's 2016 integrated annual report (end June 2016) show that the Comair group operated 43 499 sectors (one-way flights) carrying a total of 5 428 678 passengers (Comair, 2016:11). Comair, as noted earlier, combines the British Airways and kulula.com brand results into a single group figure. As an approximate indicator of the British Airways brand's individual performance, figures calculated from the Comair 2016 integrated annual report (Comair, 2016:19) and the Flight Airline Business (2017:35) annual *Low Cost and Leisure Traffic* rankings suggest that the Comair British Airways brand carried approximately 2 128 678 passengers for the 2016 financial year. Financially, 2016 was a tough trading year for the airline. The main influences in this regard were exchange rate fluctuations, oil price hedges, new market entries, and competing against a state-subsidised SAA. Company revenue for the year ended June 2016 was marginally up from the previous year at ZAR 5.93 billion. Currency exchange fluctuations resulted in after tax group profits declining by 12% from the previous year to ZAR 192.7 million (ZAR 169.3 million for the company) (Comair, 2016b). These declines were however turned around after a strong performance by the Rand against the US Dollar towards the end of 2016 (Gernetzky, 2017b). The airline owns the record for being profitable for 70 consecutive years; a record no other airline in the global industry can currently claim to have achieved. The Comair group employs 2085 people (Comair, 2016:3). This figure includes staff figures for both the British Airways and kulula.com brands.

#### 2.4.2.2 Low-cost carriers

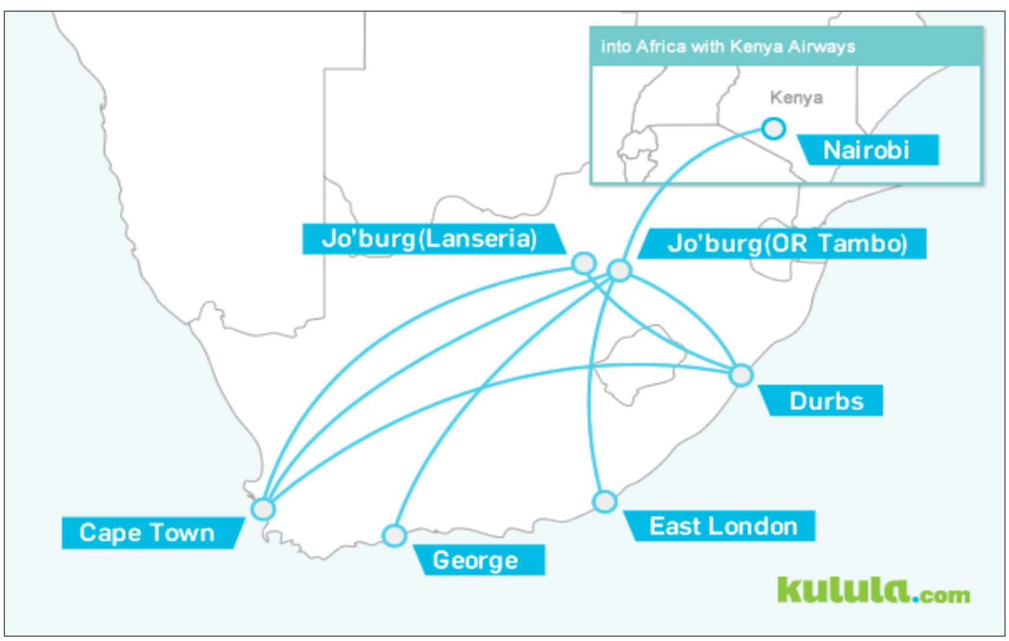
For the LCCs, not all of the main airports are viable options due to limited markets at some destinations. As a result of this, South African LCCs, unlike most LCCs around the globe, primarily fly the main domestic routes simply because there are insufficient secondary routes available. This section outlines the three current LCC operators and the three notable LCCs that have failed in the South African market.

- **kulula.com (a Comair brand)**

In 2001, kulula.com was the first low-cost airline to enter the South African market. They achieved immediate success and grew the market by as much as 8%. The airline has grown to be the leader in the category and through its quirky (and award-winning) advertising has become one of the most recognised brands in South Africa. The airline is regularly voted as the best LCC in South Africa and was voted the best LCC in Africa for the 2016 Skytrax World Airline awards (kulula.com, 2018).

With its current fleet the airline currently operates 14 routes to six cities (*see* figure 2.10). The route to Nairobi is offered in conjunction with its codeshare agreement with Kenyan Airways. Flights are operated mainly to and from Johannesburg. kulula.com also has a codeshare agreement with Air France which connects Air France passengers to destinations served by kulula.com (Traveller24:2014). Routes are operated between the following cities/airports in Cape Town, Durban, George, East London, Johannesburg, and Lanseria in South Africa. kulula.com were the first of the carriers to operate out of Lanseria airport to the west of Johannesburg (News24, 2013), thus establishing a low-cost secondary airport, which is in line with the principles of the global low-cost model.

**Figure 2.10: kulula.com route map – March 2017**




**Source:** Comair (2017a).

The airline operates a fleet of 11 Boeing 737-800s which have a capacity of 189 passengers. kulula.com received the first of their Boeing 737-800 next generation aircraft at the end of 2015. The aircraft carries 189 passengers and has split Scimitar wings which reduces fuel consumption by 1.4% per aircraft, which translates into a ZAR 1.3 million cost saving per aircraft per year (kulula.com, 2015).

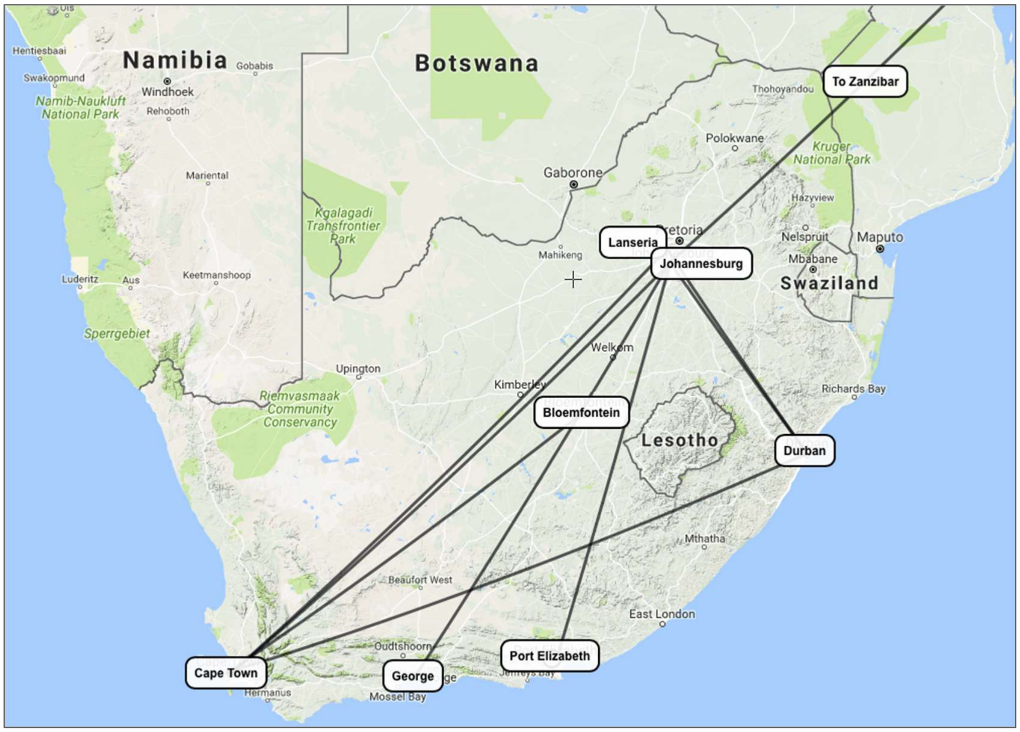
As stated under the discussion of Comair's *British Airways* brand, the Comair group reports the two brands financial results combined. For some perspective on kulula.com's individual performance regarding passenger growth, the annual airline report for global airlines by *Flight Airline Busines*s (2016a:37) estimated kulula.com's passenger figures for 2015 at 3.3 million, which represents growth of 2.4% from the previous year. The *Flight Airline Business* figures for 2016 show zero percent growth from 2015, with passenger figures again estimated at 3.3 million (Flight Airline Business, 2017:35). Annual capacity for the airline has grown by just over 90% between 2007 and 2014. Annual seats for 2015, on OAG's schedules analyser, showed a slight decline (-0.5%) from 2014 to end at 3.84 million available seats (Anna.aero, 2015). In terms of weekly departures, the airline offered approximately 206 weekly departures to its various destinations towards the end of 2015. The airline ranked 70$^{th}$ on the 2015 LCC airline rankings list (*see* table 2.2 in section 2.4.1.1 of this chapter).

- **Mango**

Mango was launched by the in November 2006 as the second LCC in the South African air transport market. The airline is a wholly-owned subsidiary of the South African Airways group. It initially followed the principles of a low-cost carrier but has since introduced a business offering (Mango plus) and gradually evolving into a hybrid carrier. The airline currently (mid-2016) operates 10 aircraft with 186 seats (South African Airways, 2016a:42), serving Johannesburg (ORT), Bloemfontein, Cape Town, Durban, Port Elizabeth, George and Lanseria. Eight domestic routes are operated and are outlined in figure 2.11. A twice weekly flight between Johannesburg and Zanzibar is also in operation. Mango was the second LCC to operate from Lanseria with flights starting 1 June 2011 (Mango to fly from Lanseria, 2011). The routes operated from this airport are Lanseria - Cape Town and Lanseria - Durban. In terms of weekly departures, the airline offered approximately 170 weekly departures to its various destinations towards the end of 2015. With the addition of the Lanseria – Durban route and frequency additions to other routes, this total will increase to about 211 in 2016. (Anna.aero, 2015a).

The airline makes the most of its aircraft and has the distinction of having the greatest aircraft utilisation ratio in the South African domestic market (South African Airways, 2011:27; Anna.aero, 2016a). Mango has been one of the best 'on-time-departure' airlines in South Africa for the past six years. The airline is highly innovative in its approach to development. They were the first to offer payment via their app, first to offer on-board Wi-Fi, first to accept store charge cards for payment, and the first to sell flights through a grocery retailer – Shoprite checkers (Flymango, 2016). August 2016 saw the addition of selected Pick 'n Pay stores as an outlet to purchase flight tickets.

**Figure 2.11: Mango route map – March 2017**




**Source:** Author compilation.

Figures from the *Flight Airline Business* annual low-cost carrier rankings (*see* section 2.4.1.1, table 2.2) suggest that Mango carried approximately 2.3 million passengers in the 2015 which represents a 9.1% increase from the previous year (Flight Airline Business, 2016a:37). OAG data schedule information shows that Mango grew its capacity by 30% between 2008 and 2012 but increased this to 70% capacity growth between 2012 and 2015 (Anna.aero, 2015a). The data for the end of 2015 further suggests that the airline had 3.64 million seats available and grew capacity at 21.2% for the year. From the SAA FY 2016 financial statements, it is seen that for the FY 2016, Mango recorded 3 155 million RPKs and a passenger count of 3.02 million passengers (South African Airways, 2016a:81). This compares to 2 709 million RPKs and 2.48 million passengers in FY 2015. It is calculated that in FY 2016 Mango accounted for approximately 30.9% of the SAA group's passengers. Financially, Mango recorded a ZAR 37 million loss for FY 2016 compared to a ZAR 38 profit in FY 2015 (Ensor, 2016d). This was based on revenue of ZAR 2.3 billion (compared to ZAR 2.2 billion in FY 2015).

- **FlySafair**

FlySafair began scheduled operations on 16 October 2014 with a Boeing 737-400 (165 seats). The airline initially intended to launch in October 2013 but were halted by an application by Comair to block the launch based on FlySafair not meeting the requirement of 25% local South African ownership (Smith, 2013). An operating licence was eventually granted in April 2014 and the launch planned for October later that year.

The airline launched with the Cape Town – Johannesburg route, with the George and Port Elizabeth routes being added soon after. By January 2015 the fleet stood at three Boeing 737s with the airline having captured 6% of the South African domestic market offering 21 120 seats at the time. (Centre for Aviation, 2015). After one year of operation FlySafair had built a network of nine domestic routes and captured 9% of the market (Centre for Aviation, 2015a). A big development in 2016 was the introduction of flights from Lanseria starting 1 August meaning that the airline is the LCC operating from the most airports (FlySafair, 2016a). With the introduction of the Lanseria flights, it is estimated that FlySafair's share of the LCC market in South Africa is 28%. The airline's route network at the end of September 2016 included the following routes: Cape Town and Johannesburg, Cape Town and Lanseria, Johannesburg and Durban, Johannesburg and Port Elizabeth, Johannesburg and George, Johannesburg and East London, Durban and Cape Town, Cape Town and East London, Cape Town and Port Elizabeth, and Lanseria and George (FlySafair, 2016). The airline connects seven airports and operates 46 daily flights (1230 monthly).

The airline's fleet at the end of December 2016 comprises six Boeing 737-400 and 3 737-800. In July 2016, the airline was recognised as having the best on-time performance record of all the South African operators with a 96.7% rating (FlySafair, 2016a). A press release by the airline at the beginning of 2017 shows that the airline made a profit for the year 2016 (in its second year of operation) and that they have flown just over 2.6 million passengers since their launch (FlySafair, 2017). Additionally, the airline was awarded the 'Best low-cost carrier award' in 2016 by ACSA for every airport that they serve. The airline has 677 employees.

- **1 time (ceased operations)**

1time was the second LCC to enter the South African air travel market when they began operations in February 2004 shortly after kulula.com. The airline ceased operations on 2 November 2012. At the time of cessation, the airline operated a fleet of 11 old and fuel inefficient MD-8 aircraft, which they were looking at replacing over the next few years to accommodate expansion plans. These expansion plans included adding approximately 50 additional domestic sectors per week as well as other opportunities in Southern Africa (1time airline, 2011:9).

Flights were operated on domestic routes as well as two regional routes to destinations in neighbouring countries. The traditional routes between Johannesburg, Durban, and Cape Town were operated domestically. Other routes included services to Port Elizabeth, East London, and George. Plans were being made to operate from Lanseria airport at the end of 2011 but these never came to fruition. Regionally, services were operated from Johannesburg to Zanzibar (Tanzania) and Livingston (Zambia).

In the first year of operation (2004) the airline carried approximately 384 000 passengers. For the 2010 financial year, the airline carried approximately 1.92 million passengers, which represented an increase of 6.7% from the previous year. This growth rate made them the fastest growing carrier in South Africa at the time. For 2010, there were 2.35 million seats available and they achieved a load factor of 82%. In terms of sectors flown, the airline flew 15 852 sectors in 2010 which was a 7.7% increase from the previous year. This translated into 1 321 sectors per month or approximately 43 sectors per day (1time holdings, 2010).

The 2010 financial year saw mixed results with headline earnings of ZAR 66.9 million for the year. This was lower than the previous year but in more difficult market conditions. Gross revenue was put at ZAR 1 040 million for the year, which was a 10.3% increase from the previous year. The airline had the lowest seat per kilometre cost in the South African domestic market at the time. 1time employed 650 people to run their operations. Interim results for 2011 showed that the financial performance for the year was poor with a ZAR 34.7 loss arising. This was attributed to passenger volume declines, airport charge increases, and fuel price increases (1time holdings, 2011). The situation deteriorated and on 22 August 2012 the airline filed for business rescue. Operations ceased on 2 November 2012 and 1time filed for liquidation. Key issues leading to the airlines final demise included high fuel prices, strong competition, airport fee increases, and poor management (Smith, 2012b). Numerous attempts were made to save the airline but none came to fruition.

- **Velvet Sky (ceased operations)**

Velvet Sky began operating in the South African market in March 2011 with flights between Johannesburg and Durban, with the Johannesburg to Cape Town route starting shortly after that using a single 737-300 aircraft with 144 seats per flight. Numerous additional routes, albeit at low frequency routes, were added, including Johannesburg to Polokwane, Cape Town to Durban, Cape Town to Port Elizabeth, and Durban to Port Elizabeth. Shortly before they ceased operations, the airline was operating four aircraft with plans for two more to be added by early 2012 and further plans to increase this to a total of seven by the end of 2012. In the early stages of its life the airline operated 12 flights per week. This increased to 49 flights per week just before operations ceased (Velvet Sky, 2011). The airline had plans to launch flights beyond South Africa's borders to SADC countries in 2012.

On the 5th March 2012, the airline was grounded due to high levels of debt and unpaid bills. The liquidation of the airline was finalised on 21 June 2012. The CAA also suspended their operating licence (Naidoo, 2012). No financial figures and other relevant statistics are available due to the airline only having been in operation for a limited period of time.

- **Skywise (ceased operations)**

Skywise launched its scheduled flight operations on 5 March 2015 and ceased operations on 2 December 2015. At first the airline only operated two daily flights between Cape Town and Johannesburg using a Boeing 737. At the time of the airlines demise it operated a Boeing 737-300 (142 passengers) and a Boeing 737-500 (126 passengers). The airline had ambitious plans to grow their domestic market and expand into regional markets. By June 2015 the airline was announcing fleet and frequency expansions to meet market demand (Traveller24, 2015). By June 2015 the airline was offering 8 daily flights between Cape Town and Johannesburg. Troubles surfaced on October 13 2015 when a number of flights were grounded by ACSA for outstanding fees relating to airport services. The airline was grounded once again on 10 November 2015 due to technical issues. ACSA suspended the airline 'indefinitely' on 2 December 2016 due to non-payment of airport charges amounting to just over ZAR 8 million (Traveller24, 2015a). The airline employed approximately 200 people at the time of its demise. On 14 September 2016, there were media reports on efforts to save the airline, but to date (July 2017) nothing further has materialised.

#### 2.4.2.3 Regional carriers

The three regional carriers do not form part of the study but will be briefly outlined to provide context in the South African commercial air transport market.

- **SA Express**

SA Express is a regional operator in South Africa and has an alliance partnership with South African Airways. The 2014/2015 financial year saw the airline generate ZAR 2.59 billion in revenue for an operating profit of ZAR 15 million. Ultimately, the had a net loss of ZAR 132 million for the year. According to the airline's 2014/2015 annual report, the airline carried 1.451 million passengers and achieved a 64% load factor for the period under review (SA Express, 2016a:11). All results show a decline from the previous financial year. At end 2016, the airline was under severe financial distress with the airline unable to satisfy the auditor-general that the it could continue to operate as a going concern as required by the Companies Act (Ensor, 2016c). The airline has been unable to table its 2015/2016 annual financial statements. The airline is supported by a government guarantee of ZAR 19 billion and in February 2017 required government intervention when it was unable to repay ZAR 150 million to the banks (Ensor, 2017).

The fleet is made up of 24 Bombardier regional aircraft (3 variants), which seat between 50 and 74 passengers. SA Express serve the smaller destinations from the main airports in South Africa and act as a feeder airline for South African Airlines. Flights from ORTIA to East London and Port Elizabeth, as well as between Cape Town and Durban were suspended in October 2016 (Business Day, 2016c). In addition to the main airports as the destination airport, the cities served include Kimberley, Mahikeng, Hoedspruit, Pilanesburg, and Richards Bay. Routes also include five cities located in the Southern African region – Walvis bay, Gaborone, Harare, Lusaka, and Lubumbashi (SA Express, 2016). The airline operated 37 287 flights for the 2014/2015 financial year and had 1127 people in its employ for 2015 (SA Express, 2016a:ii).

- **Airlink**

Airlink is a second regional operator in the South African commercial air travel market serving as a feeder airline for the major carriers. They serve many smaller cities and towns that the larger airlines cannot serve with their larger aircraft. The airline operates just over 44 800 flights per year, carrying just over 1.3 million passengers. This translates into approximately 4000 flights per month, reaching 37 destinations in 9 African countries (Airlink, 2017). Approximately 70% of their passengers are business travellers (Airlink, 2016a). Destinations served include Upington, Mthtatha, Polokwane, Pietermaritzburg, Skukuza, Sishen, and Phalaborwa in South Africa. Regional destinations include Maseru (Lesotho), Antananarivo (Madagascar), Maputo, Maun, Vilanculos, Pemba, Ndola, Bulawayo and Beira (Airlink, 2016b).

In total, the airline utilises 45 regional jet aircraft to offer their services. This includes 20 ERJ 135-LR with a seating capacity of 37, 9 Jetstream 4100s with a seating capacity of 29, 4 Cessna 208B Grand Caravan EX with a seating capacity of 12, and 12 British Aerospace AVRO RJ85 with a capacity of 83 seats (Airlink, 2016a).

- **Fly Blue Crane (in business rescue at time of submission)**

Fly Blue Crane entered the South African skies on 1 September 2015, positioning itself as a hybrid regional carrier. The airline is based at OR Tambo airport and operates point-to-point routes to various business and leisure destinations. A key aim of the airline is not to focus on the golden triangle of destinations but to rather try obtain a regional presence. At its launch the operated flight from Johannesburg to Bloemfontein, Kimberley, and Nelspruit. Flights from Kimberley and Bloemfontein were offered to Cape Town during the December 2015 holiday period and extended due to high demand. The Nelspruit route was cancelled in January 2016 due to capacity constraints but would be reconsidered when the fleet was expanded. May 2016 saw the airline launch flights between Cape Town and Windhoek with a route between Johannesburg and Mthatha launching in October 2016 (Fly Blue Crane, 2016).

On the 16th November 2016, less than a year after its launch, the airline announced it was considering entering business rescue but would continue to operate whilst it restructured its operations (Gernetzky, 2016). The 3rd February 2017 saw the airline announce that it would be suspending flights ‘temporarily’ whilst it finalised its restructuring and reached critical financing agreements (Traveller24, 2017b). As of end-March 2017 the airline has been grounded for two months with the airline’s business rescue practitioner stating that the airline is still in negotiations with investors and it is hoped that the airline will re-launch (Gernetzky, 2017a). The airline operates Embraer regional jets (ERJ145) in a single class configuration which have a capacity of 50 passengers. At the beginning of 2017, the airline had 104 employees.

## 2.5 MAIN AIRPORTS

Airports are identified as one of the main components of the air transport system. In the context of this study, the research will be conducted at the two main airports in South Africa, namely Oliver Tambo International Airport (ORTIA) in Johannesburg and at Cape Town International Airport (CTIA) in Cape Town. Between them, the two airports handle the most passenger numbers in the country and service all key destinations in the country providing exposure to the broader South African flying population.

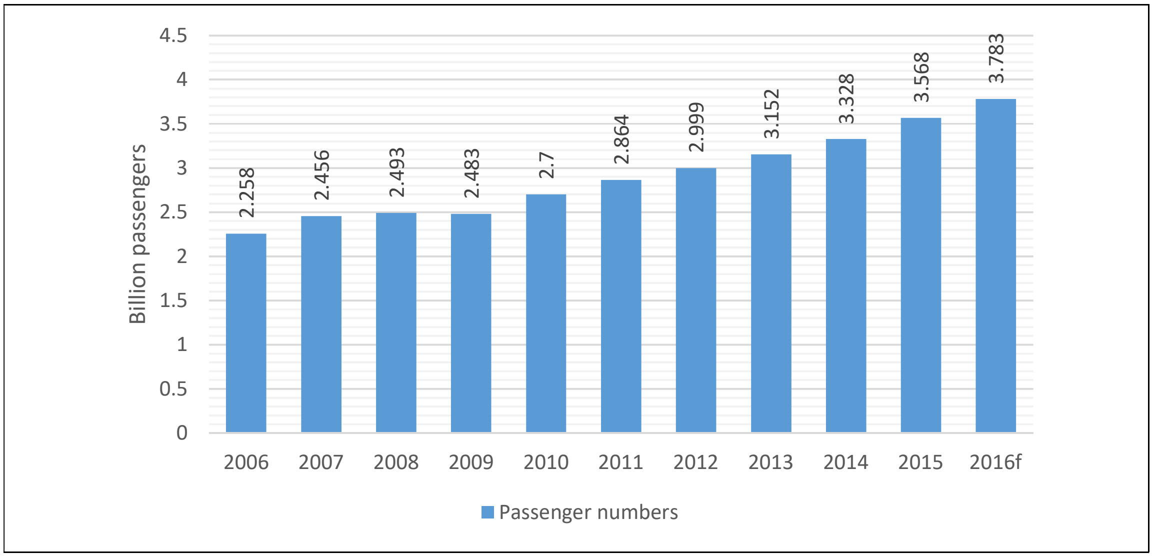
To provide further insight into the scale of the commercial air transport industry globally and in South Africa, this section gives attention to the scale of airport operations (i) around the globe and (ii) at the major South African airports. This will give greater insight into the number of people engaging in air travel, specifically in South Africa, and thus further highlight the need to understand the nature of consumer preferences and demand patterns. A distinction is made between domestic travel and international travel when addressing the South African airports to outline the size of the market available to the domestic air carriers.

### 2.5.1 Global airports snapshot

From a global perspective, 2015 saw airport traffic climb to new highs in line with the growth in passenger numbers carried by airlines. This despite political and economic uncertainties.

The growth trend of the top 100 airports ranked in terms of airport traffic for the past 11 years is shown in figure 2.12. A look at this figure clearly shows the downturn of passenger numbers during the 2008/2009 recession. The strength of the recovery can also be seen. Overall, there was a 6.4% increase in passenger traffic at airports for the year 2015 (Airports Council International, 2016:25).

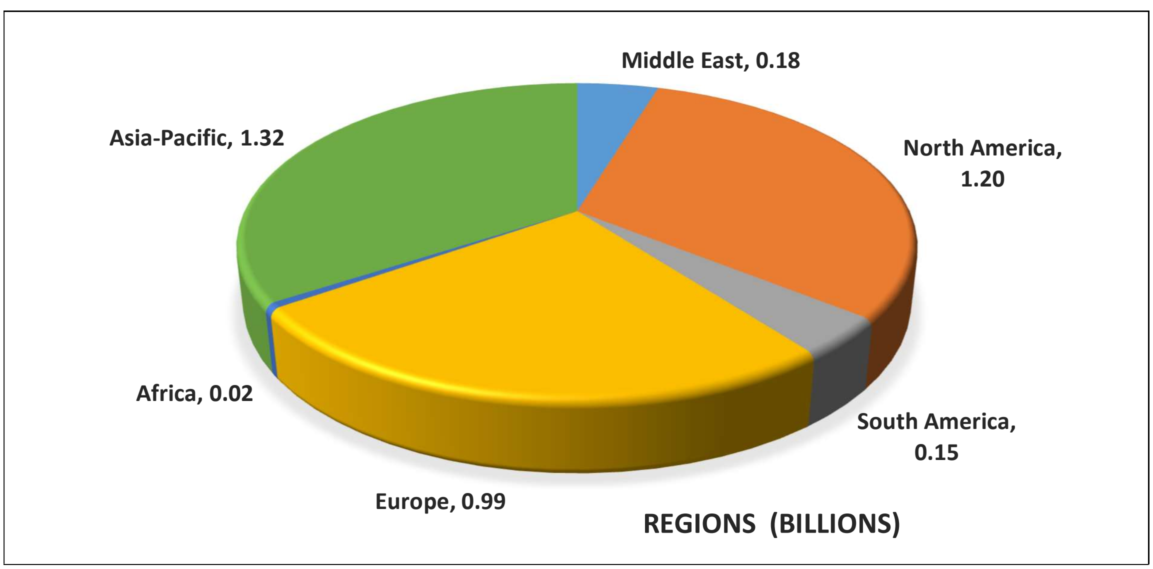
**Figure 2.12: Eleven-year passenger growth trend – top 100 airports (2006-2016f)**




**Source:** Flight Airline Business (2016b:25).

In terms of specific regions, figure 2.13 shows airport passenger numbers for the top 100 global airports for 2015 divided across the identified regions. The disparity between the regions is clear, with African airports handling the fewest number of passengers of all regions by a substantial margin. The global trade representative of the world's airports, Airports Council International (ACI), puts this disparity into further context in their 2015 world report (Airports Council International, 2016:25). In this report, it is shown that the annual growth rates in passenger traffic for 2015 for the various regions was: 8.6% for the Asia-Pacific, 5.2% for Europe, 5.3% for South America, 9.6% for the Middle East, and 5.3% for North America. For Africa, the growth rate was only 0.6% for the year.

**Figure 2.13: Regional dispersion of airport passenger numbers - 2015**




**Source:** Adapted from Flight Global (2016:10).

Table 2.3 highlights the top ranked global airports for 2015 in terms of passenger numbers. The table firstly lists the top 15 ranked airports and then lists a number of selected airports further down the top 100 rankings to highlight the vast differences in size and operations around the globe.

**Table 2.3: Airport rankings in terms of passenger numbers - 2015**

| | | | | Passengers | | Seat share by destination | |
|---|---|---|---|---|---|---|---|
| **Rank** | **City** | **Airport** | **Country** | **(000)** | **% Change** | **Inter-continental** | **Regional** |
| | | | | | | | |
| 1 | Atlanta | Hartsfield International | USA | 101 491 | 5.5 | 8.8 | 91.2 |
| 2 | Beijing | Capital | China | 89 939 | 4.4 | 17.0 | 83.0 |
| 3 | Dubai | International | Dubai | 78 010 | 10.7 | 75.0 | 25.0 |
| 4 | Chicago | O' Hare International | USA | 76 950 | 9.9 | 12.6 | 87.4 |
| 5 | Tokyo | Haneda International | Japan | 75 317 | 3.4 | 8.4 | 91.6 |
| 6 | London | Heathrow | UK | 74 990 | 2.2 | 57.2 | 43.8 |
| 7 | Los Angeles | International | USA | 74 937 | 6.0 | 22.1 | 77.9 |
| 8 | Hong Kong | International | Hong Kong | 68 283 | 8.2 | 49.9 | 50.1 |
| 9 | Paris | Charles De Gaulle | France | 65 767 | 3.1 | 51.8 | 48.2 |
| 10 | Dallas/Fort Worth | International | USA | 64 072 | 0.8 | 7.7 | 92.3 |
| 11 | Istanbul | Ataturk | Turkey | 61 837 | 9.2 | 45.4 | 54.6 |
| 12 | Frankfurt | International | Germany | 61 032 | 2.5 | 47.1 | 52.9 |
| 13 | Shanghai | Pudong | China | 60 053 | 16.2 | 25.6 | 74.4 |
| 14 | Amsterdam | Schiphol | Netherlands | 58 285 | 6.0 | 37.1 | 62.9 |
| 15 | New York | JFK | USA | 56 827 | 6.7 | 51.5 | 48.5 |
| | | | | | | | |
| 17 | Guangzhou | Baiyun International | China | 55 202 | 0.8 | 17.9 | 82.1 |
| 18 | Jakarta | Soekarno Hatta | Indonesia | 54 054 | -5.5 | 10.7 | 89.3 |
| 20 | Bangkok | Suvamabhumi | Thailand | 52 902 | 14.0 | 64.4 | 35.6 |
| 22 | Seoul | Incheon International | South Korea | 49 413 | 8.2 | 48.6 | 51.4 |
| 25 | New Delhi | Indira Ghandi International | India | 45 982 | 15.7 | 22.3 | 77.7 |
| 32 | Chengdu | Shuangliu International | China | 42 245 | 12.0 | 6.5 | 93.5 |
| 35 | Mumbai | International | India | 40 637 | 16.1 | 25.3 | 74.7 |
| 38 | Sydney | Kingsford Smith | Australia | 39 914 | 2.7 | 30.3 | 69.7 |
| 39 | Shenzhen | Baoan International | China | 39 722 | 9.5 | 3.6 | 99.4 |
| 41 | Sao Paulo | Guarulhos International | Brazil | 39 214 | -1.4 | 24.0 | 76.0 |
| 42 | Shanghai | Hongqiao International | China | 39 091 | 2.9 | 0.0 | 100.00 |
| 45 | Mexico City | Benito Juarez International | Mexico | 38 433 | 12.2 | 15.1 | 84.9 |
| 49 | Manila | Ninoy Aquino International | Philippines | 36 583 | 7.3 | 39.4 | 60.6 |
| 56 | Moscow | Sheremetyevo International | Russia | 31 612 | 0.1 | 61.7 | 38.3 |
| 58 | Doha | International | Qatar | 31 009 | 17.1 | 65.8 | 34.20 |
| 59 | Moscow | Domodedovo International | Russia | 30 505 | -7.9 | 55.2 | 44.8 |
| 72 | Dublin | International | Ireland | 25 052 | 15.4 | 21.7 | 78.3 |
| 77 | Abu Dhabi | International | Abu Dhabi | 23 293 | 17.3 | 79.8 | 20.2 |
| 98 | Johannesburg | OR Tambo International | South Africa | 20 076 | 4.8 | 42.2 | 57.8 |
| 100 | Brasilia | International | Brazil | 19 504 | 7.5 | 3.1 | 96.9 |

**Source:** Adapted from Flight Airline business (2016b:28–29).

Atlanta Hartsfield International in the USA is ranked as the biggest airport in the world in terms of passengers handled in 2015 (101 491 000 passengers). They became the first airport to pass the 100 million passengers per year mark. Beijing came in 2$^{nd}$ and whilst it showed growth, it has slowed down from previous years. London Heathrow, despite showing some growth for the year, has slid a few positions down the rankings; partly due to space restrictions and partly due to economic circumstances. From the table, it can be seen that the North American and Chinese airports occupy a large number of positions in the top 100 rankings. It is noticeable that many of these airports showed solid growth in passenger numbers for the year. Note is also made of the solid performance of the Indian airports (positons 25 and 35 for the main airports) showing over 15% growth in annual passenger numbers. Dubai airport once again performed very well and is ranked at number one in terms of international passengers handled in a year. The other Middle Eastern airports (Doha & Abu Dhabi) both grew by over 17% for the year and made big jumps up the rankings. ORTIA in South Africa is the highest ranked African airport at position 98 with 20 076 000 passengers handled for the year. ORTIA ranked at positon 74 in 2010. Africa's second biggest airport in terms of passengers handled, Cairo, did not make the top 100. The other main South African airports, namely CTIA and KSIA (Durban), fell well outside the top 100. In terms of BRICs countries, Brazil's main airports ranked in positions 41 and 100 (39.2 million and 19.5 million passengers respectively) and Russia's two biggest airports were ranked in positions 56 and 59 (31.6 million and 30.5 million passengers respectively). Overall, according to Airports Council International (2016a), the BRICS countries represented 21.4% of airport traffic in 2015.

Table 2.4 highlights the airport passenger numbers for 21 of the larger African airports in 2015/2016. Apart from the top two airports, the rest of the African airports all handled less than 10 million passengers for the year. Notable from this table is that airports in Northern Africa and South Africa dominate the continent in terms of passenger numbers. African airports carried 179.8 million passengers in 2015/2016 with international passengers accounting for the 63% of the passengers handled by African airports (AFRAA, 2017:21). Whilst some African airports did show good growth in passenger numbers for the year, it was growth from a relatively low base or based on a recovery from political upheaval or a terror-related incident. Other African airports have been affected by the low oil price which is closely linked to the activities in their city economies (e.g. Nigeria). AFRAA identify poor connectivity and insufficient progress on aviation liberalisation as restrictions to growth (AFRAA, 2015:27).

**Table 2.4: Africa's airport rankings in terms of passenger numbers - 2015/16**

| | | | Passengers | | | |
|---|---|---|---|---|---|---|
| **Country** | **Airport** | **City** | **Domestic** | **International** | **Total** | **% change** |
| South Africa | OR Tambo International Airport (ORTIA) | Johannesburg | 10 384 653 | 9 583 760 | 19 968 413 | 4.94% |
| Egypt | Cairo International Airport | Cairo | 2 211 177 | 13 009 578 | 15 220 755 | 9.96% |
| South Africa | Cape Town International Airport (CTIA) | Cape Town | 7 682 509 | 1 713 047 | 9 395 556 | 8.79% |
| Morocco | Mohammed V International Airport | Casablanca | 795 760 | 7 379 899 | 8 175 659 | 2.88% |
| Ethiopia | Bole International Airport | Addis Ababa | 1 096 981 | 6 644 555 | 7 741 536 | 11.69% |
| Algeria | Houari Boumediene Airport | Algiers | 1 883 565 | 4 996 065 | 6 879 630 | 6.53% |
| Nigeria | Murtala Muhammed International Airport | Lagos | 3 778 086 | 3 023 478 | 6 801 564 | -7.70% |
| Egypt | Hurghada International Airport | Hurghada | 540 230 | 6 226 114 | 6 766 344 | -6.32% |
| Egypt | Sharm el-Sheikh International Airport | Sharm el-Sheikh | 845 762 | 4 918 576 | 5 764 338 | -7.56% |
| Kenya | Jomo Kenyatta International Airport | Nairobi | 1 403 009 | 3 913 778 | 5 316 787 | 0.22% |
| South Africa | King Shaka International Airport (KSIA) | Durban | 4 632 085 | 288 188 | 4 920 273 | 8.93% |
| Tunisia | Tunis-Carthage Airport | Tunis | 254 957 | 4 326 316 | 4 581 273 | -10.49% |
| Morocco | Marrakesh Menara Airport | Marrakesh | 177 407 | 3 764 979 | 3 942 386 | -1.48% |
| Sudan | Khartoum International Airport | Khartoum | 513 986 | 2 602 157 | 3 116 143 | 10.50% |
| Mauritius | SSR International Airport | Plaine Magnien | 159 265 | 2 939 601 | 3 098 866 | 9.87% |
| Egypt | Borg El Arab Airport | Borg El Arab | 135 268 | 2 652 233 | 2 787 501 | 11.42% |
| Ghana | Kotoka International Airport | Accra | 565 166 | 1 666 780 | 2 231 946 | -5.81% |
| Reunion | Aeroport de la Reunion Roland Garros | Saint-Denis | 180 | 2 057 251 | 2 057 431 | 3.37% |
| Senegal | Leopold Sedar Senghor | Dakar | | 1 696 767 | 1 696 767 | 1.98% |
| Cote D Ivoire | Aeroport Felix Houphouet Boigny | Abidjan | 41 357 | 1 427 287 | 1 468 644 | 23.30% |
| Uganda | Entebbe International Airport | Entebbe | 14 934 | 1 375 144 | 1 390 078 | 2.57% |

**Source:** Adapted from AFRAA (2017:21) and ACSA (2017g).

The first half of 2016 (H1) saw global airport traffic increase by 5.6% with international traffic growing at a faster rate than domestic traffic (Airports Council International, 2016b). Growth in H1 2016 was affected by numerous terror attacks around the Middle East and Europe and economic uncertainties. The H1 figures for airports also showed that all regions have shown some form of growth in passenger traffic, except for Africa, which saw a decline in passenger traffic (-4.4%). Key influences on the African figures is the impact of terror attacks in North Africa which have severely affected the summer holiday season influx of European tourists to countries like Egypt and Tunisia. Whilst many African airports experienced a decline in H1 traffic, a notable exception was South Africa which showed a 7.3% rate of growth for the first half of 2016. An interesting point is that domestic passenger traffic grew by more than international passenger traffic: 8.5% versus 4.9% respectively (Airports Council International, 2016b). For the first half of 2016 OR Tambo International Airport recorded growth of 5.8% and Cape Town International Airport recorded 8.0% growth.

### 2.5.2 Key South African airports

South Africa's main airports are controlled and run by the Airports Company South Africa (ACSA). They are the main airport operator in South Africa, managing the operations of the 9 main airports in the country. In October 2016 ACSA signed an agreement to take over the management of Mthatha airport (Kilian, 2016). The nine main airports include:

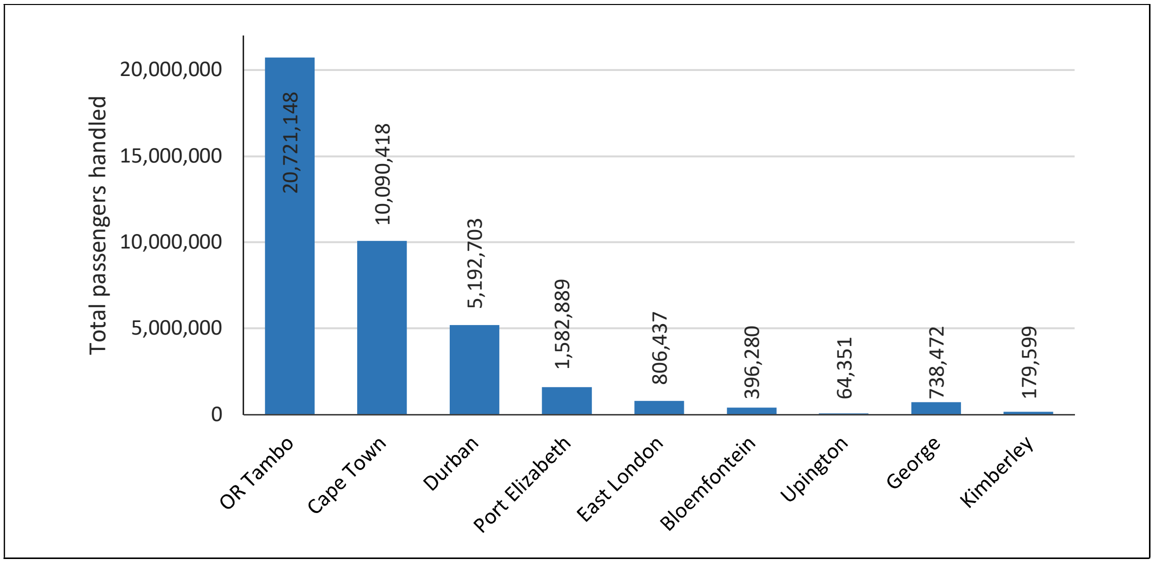
- O.R. Tambo International Airport (ORTIA)
- Cape Town International Airport (CTIA)
- King Shaka International Airport (Durban) (KSIA)
- Bram Fischer International (Bloemfontein)
- Upington International
- East London Airport
- George Airport
- Kimberley Airport
- Port Elizabeth International.

Other notable airports in the South African market that are utilised for scheduled air transport, and are not managed by ACSA, include:

- Lanseria International (addressed in section 2.5.2.4)
- Hoedspruit Airport
- Kruger Mpumalanga International Airport (Nelspruit)
- Polokwane International.

Figure 1.1 (*see* section 1.2.2) identified the 10-year trend for passenger departures at ACSA controlled airports. According to their integrated report for 2016, ACSA recorded 284 285 aircraft landings and 19.37 million departing passengers for the 2015/2016 financial year (ACSA, 2016i:15). A review of figure 2.14, which outlines total passenger movements (arrivals and departures), gives an indication of the size of the South African air travel market in terms of commercial air travel and the total number of passengers handled at the various airports for the 2016 calendar year. The top three airports (OR Tambo, Cape Town, and Durban) stand out from the rest and are referred to as the 'golden triangle' as they connect the destinations with the highest passenger numbers and have the highest load factors.

**Figure 2.14: Passenger traffic (arrivals and departures) at ACSA airports for 2016**




**Source:** Adapted from ACSA (2017e).

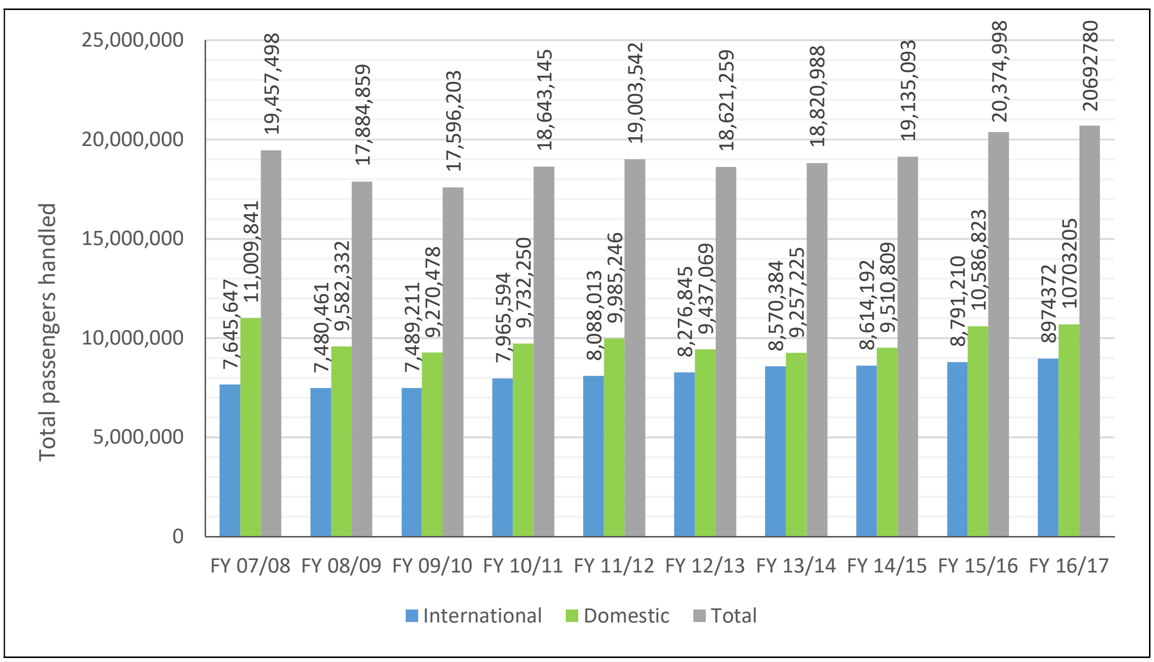
Significant developments have taken place at ACSA airports over the past decade with overall infrastructure being substantially upgraded. These infrastructure developments were done largely at ORTIA and CTIA to accommodate the growing domestic and international passenger numbers. The airport terminals were significantly enlarged and provision made to accommodate the larger aircraft that have entered service; the Airbus A380-800 for example. The A380-800 can carry up to 544 passengers in a four-class configuration, which required more passenger handling capacity and larger aircraft parking bays. Additionally, runways needed to be widened to accommodate the dimensions of this aircraft. December 2016 saw two airlines operating the A380 to ORTIA – Air France and British Airways. Emirates are set to introduce the A380 to ORTIA from 2017. The bulk of the upgrades to ORTIA and CTIA were made in time for the influx of expected passengers for the FIFA 2010 soccer world cup. ACSA has ZAR 7.7 billion expansion plans for its airports which include the current (2015-2017) upgrade to CTIA's domestic and international terminals and upgrades to ORTIA's remote aprons (ACSA, 2014). Despite being praised for the improvements, ACSA has also received criticism for the way in which they are recovering the expansion costs through tariff increases. This criticism comes from passengers, airlines, and industry bodies like IATA. The topics of airport tariffs and charges are explored in more detail in section 5.4.5 of chapter 5. Despite these criticisms and other problems being experienced, South Africa's quality of air transport infrastructure was ranked 10th in the world in the travel and tourism competitiveness report for 2017 (World Economic Forum, 2017:305). To develop key ACSA airports into major hubs for the region, ACSA, in conjunction with the relevant municipalities and other relevant stakeholders, is working towards establishing ORTIA, CTIA, and KSIA and the surrounding areas as aerotropoli (ACSA, 2016i:64).

In terms of this study, the two largest airports in South Africa will be the focus for data collection – O.R. Tambo International Airport and Cape Town International Airport. The discussion in this section will briefly look at the three airports making up the 'golden triangle' to highlight the importance of these destinations and their airports.

#### 2.5.2.1 O.R. Tambo International Airport (ORTIA)

ORTIA is the air transport hub of Southern Africa through which intra-African and intercontinental traffic flows. The airport was ranked number 98 in the world in terms of passengers handled for 2015. For 2015, the airport handled a total of 20 076 000 passengers (Flight Airline Business, 2016b:31), which was an increase of 4.8% from the previous year. The 2015/2016 financial year recorded 112 177 arriving air traffic movements (ACSA, 2016i:15). The growth pattern at the airport for the past ten years, in terms of passengers handled (arriving and departing), is seen in figure 2.15.

**Figure 2.15: ORTIA ten-year total passengers handled (arriving & departing)**




**Source:** Adapted from ACSA (2012c) and ACSA (2017d).

The overall pattern for the past six financial years is relatively stable with fluctuations mirroring economic peaks and recessions. When separating the total figures into international and domestic passengers, it can be seen that for the 2015/2016 financial year, the airport handled 8.79 million international passengers and 10.59 million domestic passengers. This represents an annual growth of 2.05% and 11.31% respectively. This growth trend continued into the 2016/2017 financial year with figures showing 10 703 205 domestic passengers (1.09% increase) and 8 974 372 international passengers (2.04% increase) for a total of 20 692 780 passengers handled (1.6% growth) (ACSA, 2017d). It is also clear that the airport handles more domestic passengers per annum than international passengers. Figure 2.15 clearly shows that number of international passengers had returned to the 2007/2008 pre-recession highs by 2010/2011. As of the end of the 2016/2017 financial year, domestic passenger numbers have not yet reached the pre-recession levels (FY 2007/2008).

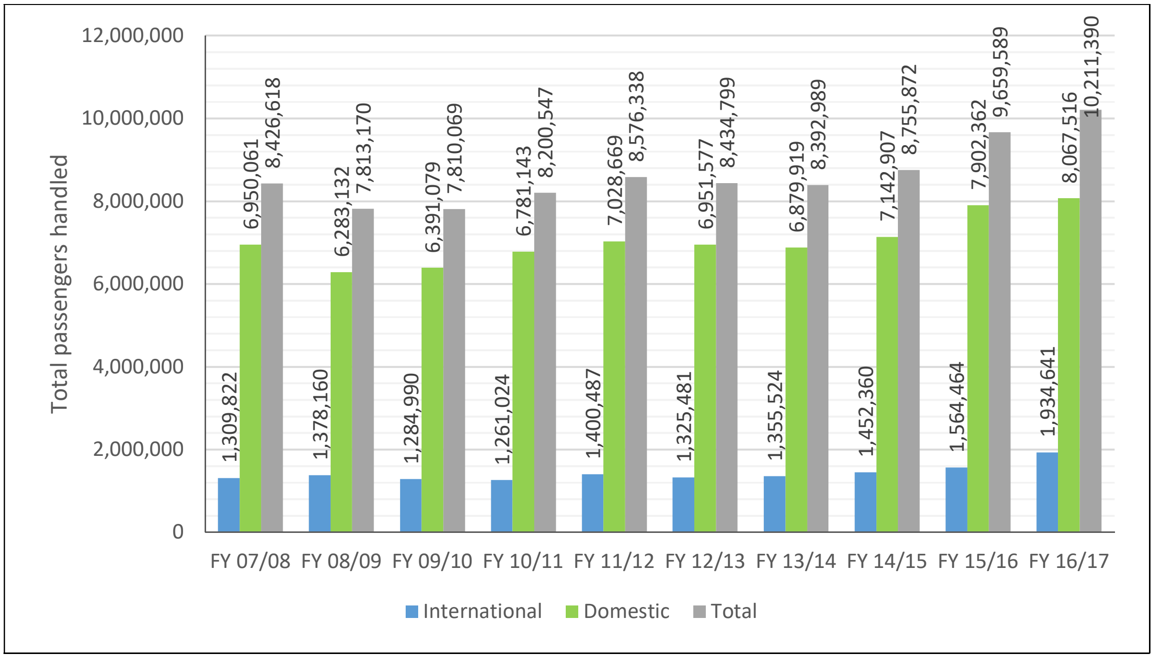
In addition to substantial developments at the airport (identified in the introduction to section 2.5.2), improved transport links have also been established between the airport and the commercial centres of Johannesburg and surrounding areas with the development of the Gautrain Rapid Rail Link (opened 2010).

#### 2.5.2.2 Cape Town International Airport (CTIA)

In terms of passengers handled, Cape Town International Airport is the 2nd largest airport in South Africa and the 3rd largest in Africa handling 9.66 million passengers in 2015/2016 (ACSA, 2017c). The airport did not make the global top 100 rankings for 2015, falling well below the airport in position 100, which handled 19.5 million passengers. The 2015/2016 financial year saw 50 127 arriving air traffic movements. Figure 2.16 shows the total number of passengers handled (arriving and departing passengers) at CTIA for the past ten financial years.

The 2015/2016 results show an increase in total passenger numbers handled across the board for the airport. Separating international passenger numbers and domestic passenger numbers, it can be seen that, for the 2015/2016 financial year, the airport handled a total of 1.56 million international passengers and 7.9 million domestic passengers. This means that 81.8% of the passengers handled by the airport (arriving and departing) are domestic passengers. The growth trend continued into the 2016/2017 financial year with figures showing 8 067 516 domestic passengers (2.05% increase) and 1 934 641 international passengers (19.13% increase) (ACSA, 2017c) for a total of 10 211 390 passengers handled (5.7% growth). The last few days of 2016 saw CTIA reach the mark of 10 million passengers handled in a calendar year (Traveller24, 2017). ORTIA is the main international hub in South Africa, so many of the passengers travelling to and from CTIA are international passengers transferring to and from international flights at ORTIA.

**Figure 2.16: CTIA ten-year total passengers handled (arriving & departing)**




**Source:** Adapted from ACSA (2012d) and ACSA (2017c).

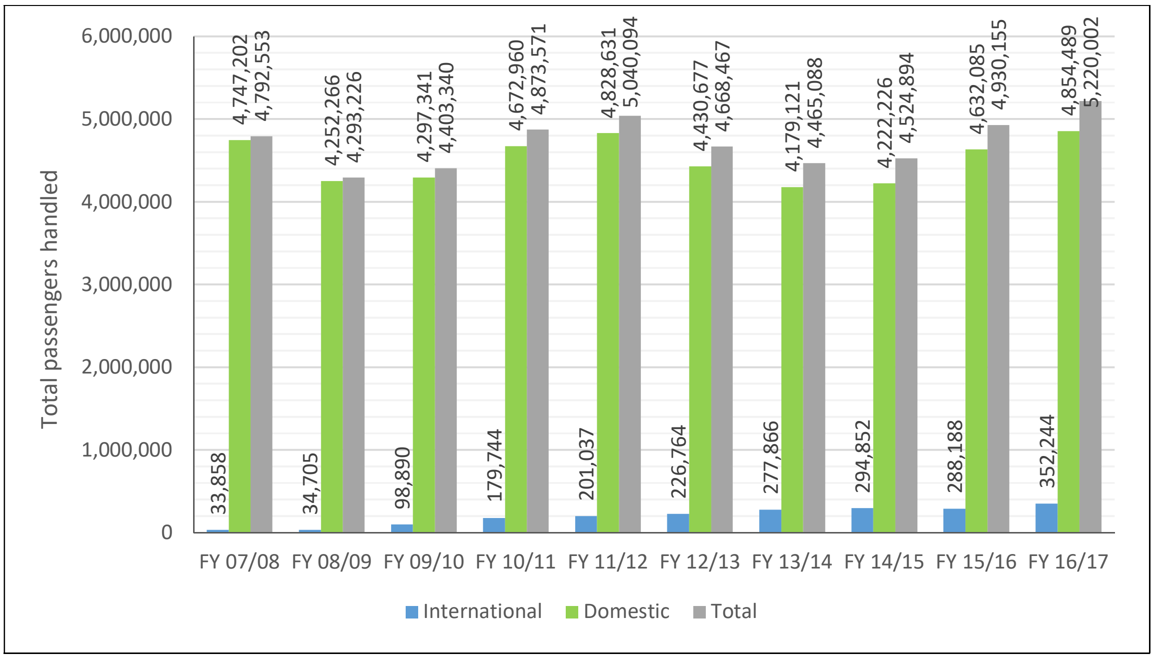
The statistics for the airport show that growth has been a bit unstable airport with passenger numbers rising and falling over the years with stable annual growth only being achieved from FY2014/2015. The airport returned to pre-recession highs relatively quickly (2011/2012) for both international and domestic passengers. Significant redevelopment of the domestic and international terminals is being undertaken at the airport (September 2015 – September 2017) to accommodate growing passenger numbers and larger aircraft (ACSA, 2015:76).

#### 2.5.2.3 King Shaka International Airport (Durban)

The current King Shaka International Airport (KSIA) opened in May 2010 making the airport 6 years old in 2016. Prior to that, flights were operated from the old Durban International Airport. All operations were transferred from the old airport to the new King Shaka International Airport on May 1st 2010. Statistics in the paragraphs that follow reflect operations at both airports, as the transfer of operations from one airport to the other was seamless with operations stopping at the old airport at midnight 30 April 2010 and starting at the new airport at the same time. KSIA was developed to handle large international carriers like the A380 and had an original capacity to handle just over six million passengers per year (Oxford Economics, 2009:107). Future plans saw this capacity being raised to 7.5 million passengers by 2015 and a planned 45 million by 2060.

From figure 2.17 it can be seen that for the 2015/2016 financial year Durban airport handled a total of 4.93 million passengers (arriving and departing), which is an overall increase of 9.0% from the previous financial year but still below the overall high of 5 million passengers in 2011/2012. The 2015/2016 financial year saw 26 190 arriving air traffic movements. Passenger numbers have returned to pre-economic downfall numbers and are showing a steady increase. Domestic passenger numbers only recovered to pre-recession levels in the 2011/2012 financial year.

**Figure 2.17: KSIA ten-year total passengers handled (arriving & departing)**




**Source:** Adapted from ACSA (2012e) and ACSA (2017g).

The breakdown between domestic and international passengers handled clearly shows that international passengers handled had a growth spurt in 2009/2010 and another in 2010/2011 (largely due to the impact of the 2010 FIFA World Cup) and have been growing steadily since then except for a slight decline of 2.2% in 2015/2016. For the 2015/2016 financial year, the airport handled 288 188 international passengers and 4.63 million domestic passengers (ACSA, 2017g). This represented a 9.7% increase in domestic passengers from the previous year. A simple calculation shows that for 2015/2016, domestic traffic handled accounted for 93.95% of the total passenger traffic (arriving and departing) at KSIA. This growth trend continued into the 2016/2017 financial year with provisional figures showing 4 854 489 domestic passengers (4.58% increase) and 352 244 international passengers (18.19% increase) for a total of 5 220 002 passengers handled (5.5% FY growth) (ACSA, 2017g).

Much of this international passenger growth can be attributed to the introduction of daily flights by Emirates between Durban and Dubai in 2009. Over time, Emirates have upgraded the aircraft flying to Durban resulting in an overall 54% increase in capacity since the route's inception (Emirates, 2016b:1).

The addition/promised addition of flights by Qatar Airways, Turkish Airlines, and Ethiopian Airlines will add to this growth in international traffic. The Emirates flights have had a secondary effect, in that the number of domestic passengers between ORTIA and Durban declined due to some passengers now no longer having to fly domestically to/from Johannesburg to catch a connecting Emirates international flight. This impact will possibly affect domestic airline growth rates should the number of new international airlines flying direct to Durban increase.

#### 2.5.2.4 Lanseria international airport

The only other airport in South Africa with international status in Gauteng is privately-owned Lanseria airport located to the north west of Johannesburg (Lanseria, 2016). Lanseria airport is the only non-ACSA airport currently (2016) utilised by the commercial domestic mainline carriers in South Africa (Kruger Mpumalanga International Airport is served by regional carrier SA Airlink). The airport handled just over 160 000 passengers in 2003 which was before the influx of the LCCs (Lanseria, 2016). kulula.com (LCC) was the first to operate from the airport in February of 2006 under an exclusivity deal, which was subsequently challenged by other airlines who reported them to the competition commission. Mango (LCC) was the second carrier to start flights from the airport in June 2011. The British Airways brand of Comair was the third operator to schedule flights out of Lanseria to Maputo in September 2011 but have subsequently withdrawn the route. 1time (LCC), before their demise, operated from Lanseria from the 5th March 2012 until the 2nd of June 2012 (Lanseria, 2012a). The 1st of August 2016 saw FlySafair start operating flights from Lanseria to Cape Town and George (Lanseria, 2016a). As a result of the growing number of passengers, the terminal buildings were upgraded in 2010, the drop-off and pick-up zones enlarged (Lanseria, 2012c), and the runway lengthened and widened in 2013. The growth in passenger numbers has seen Lanseria become the fourth busiest airport in South Africa (Lanseria, 2013) after Durban's KSIA.

## 2.6 SUMMARY

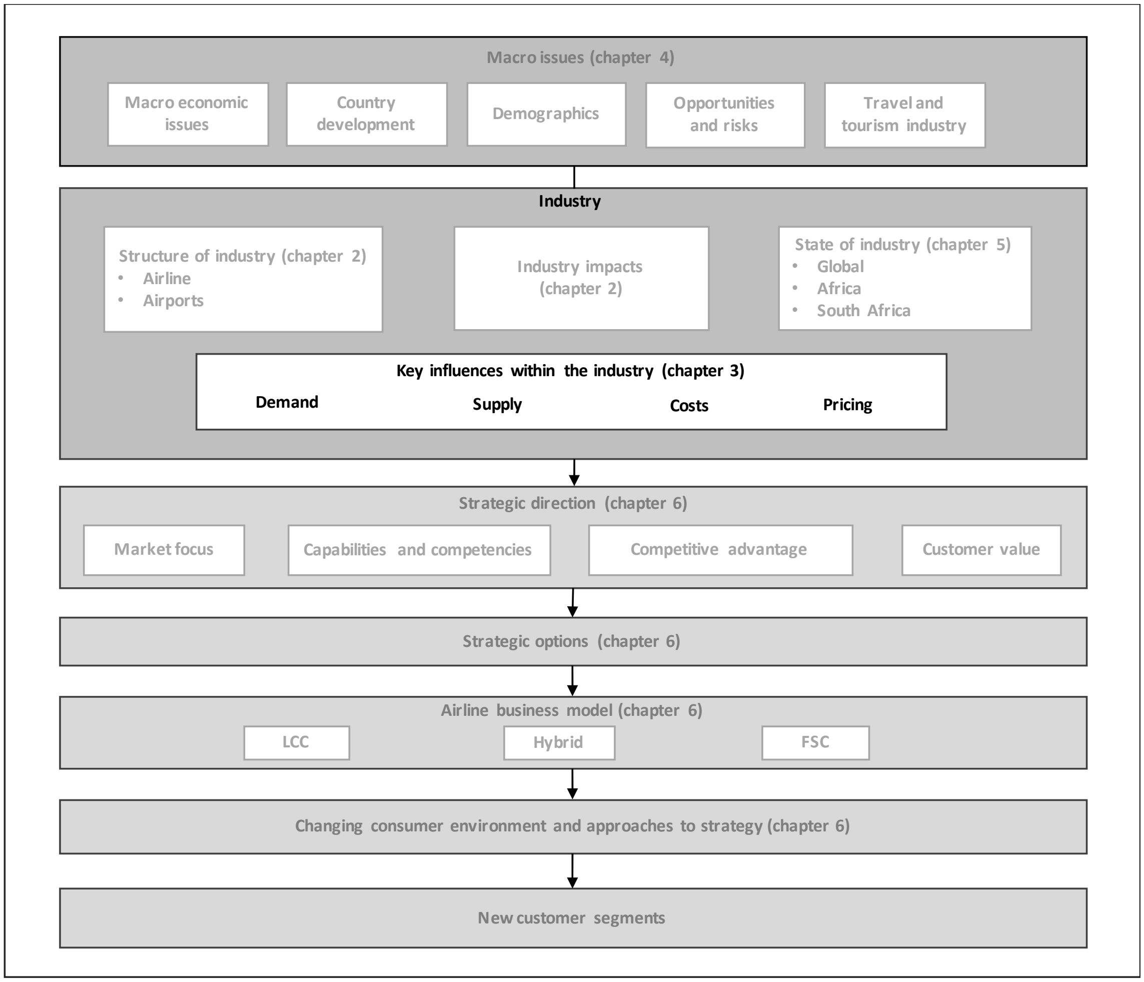
This chapter covered a wide and varied number of topics that combine to describe the structure and working of the airline industry. The industry is a complex one that is intricately tied to the extent of economic growth (or decline) that exists in the general economic environment of the global economy and the individual countries. In the context of this study, it is important to understand the size of the industry as well as the main airlines and airports that make up the South African air transport industry. This knowledge will provide context for the research, particularly with regard to the review of the business environment in which the South African domestic air transport industry operates and the influences on this industry by the LCCs and FSCs (secondary objective 1).

The first part of the chapter considered the air transport system. This system has customer demand at its core. Each of the components of the system were addressed and an indication of their interactions outlined. As a part of this discussion, a list of terms and concepts relevant to the air travel industry were identified and defined. These definitions form the basis of further discussions throughout the document. A discussion was also given on the impacts of the air transport industry in terms of economic, social, and environmental impacts. The discussions on the economic and social impacts of the air transport industry focussed on the positive impacts, whilst the discussion of the environmental impacts highlighted the key negative impacts associated with the industry.

The next topic addressed focussed on two key components of the air transport system – airlines and airports. The purpose of this section was to establish the size of the operators in the market and thereby provide a point of comparison for the size and nature of the South African market. What is apparent from the review is that from a global context, South Africa is a relatively small player in the market. However, when looking solely at the African continent, South Africa is the leader on the continent. This is despite its location at the southern tip of the continent and limited markets to access. South Africa has developed its own 'micro global industry' where it has a functioning industry with LCCs, FSCs, hybrid carriers, and regional operators serving an established set of developed airports throughout the country.

The focus of the next chapter will be on the numerous issues relating to demand, supply, costs, and pricing in the commercial air transport industry.

# Chapter three in the context of the thesis model



# CHAPTER 3

# DEMAND, SUPPLY, COSTS, AND PRICING IN THE COMMERCIAL AIR TRANSPORT INDUSTRY

*Recession is when you have to tighten your belt; depression is when you have no belt to tighten. When you've lost your trousers - you're in the airline business.*

*- Sir Adam Thomson (founder of British Caledonian Airlines)*

## 3.1 INTRODUCTION

The introductory quote accurately reflects the reality that the commercial air transport industry is a difficult and volatile industry in which to operate. Being a global industry, it is affected by events that occur in the global context. Natural disasters, terrorism, and political upheaval can severely disrupt the industry's operations and lead to massive losses for the carriers (World Economic Forum, 2015:59–61). Economic recessions and financial crises have a negative impact on the industry. The result is that airline operators are constantly addressing issues of demand, capacity, costs, revenue, and pricing. From the outset, it is clear that the foundations of the commercial air transport industry must be established.

The purpose of this chapter is to establish the context within which airlines operate. An understanding of the issues addressed in this chapter provides a solid framework within which consumer preferences and their behaviours relating to pricing can be understood. The unique characteristics of the airline industry are addressed and linked to the nature of demand and supply in the industry. Attention is given to the link between air travel demand and Gross Domestic Product (GDP), and the key industry problems of cyclicality and over-capacity. Connected to the concepts of supply and demand are the topics of costs and pricing. The importance of understanding costs is emphasised and the various classifications of airline costs are addressed. The discussion on pricing addresses the various influences on airline pricing and then considers the various approaches to pricing – including a discussion on the issue of price discrimination. The discussion on pricing concludes with a brief overview of the function of yield management and how it is used to balance demand and supply.

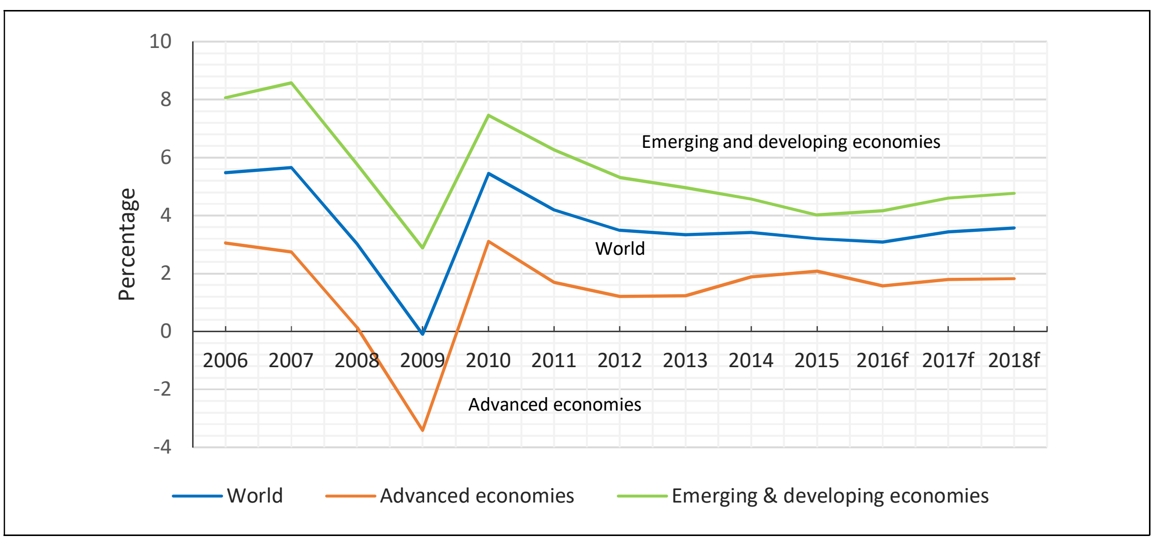
## 3.2 THE LINK BETWEEN AIR TRAVEL DEMAND AND GDP

A study looking at the perceptions, behaviours, and travel expectations of consumers regarding airlines needs to start by looking at the underlying economic principles that are at work in the air transport industry. These economic principles, in part, set the background in terms of how airlines structure their offerings and market their services to the consumer. It is therefore important to consider the industry from the micro-economic perspective by considering the nature of supply and demand in the air transport industry. This also entails understanding the nature of an airline's costs and the influences on pricing. GDP has a strong link to the air transport industry. As such, it will be referred to in many instances and in different contexts throughout this study. In section 2.3.1 GDP is addressed in terms of the global economic benefits of the air transportation industry, whilst in section 5.4.3 GDP is addressed in terms of the contribution of aviation to the South African economy. On a broader level, section 4.2.1 analyses the broader trend in global and South African GDP, which serves to highlight the economic environment in which the air transport industry currently operates. Firstly, however, attention is given in section 3.2.1 to outlining the observed relationship between growth in air travel (RPKs) and growth in GDP.

### 3.2.1 The importance of Gross Domestic Product

Gross Domestic Product (GDP) refers to the "market value of all final goods and services produced within a country in a given period of time (Mankiw, 2015:310). This economic measure is used to indicate the extent of growth within a particular economy and fluctuates based on events and circumstances that arise within a particular year. Domestic growth is essential for the economies of the world in order to obtain a competitive position in the global economy and ensure the social development of the population of the home market. Figure 3.1 highlights the short-term trend line of global GDP since 2006 and provides the International Monetary fund's (IMF) forecasted growth expectations to the end of 2018. The severe nature of the economic downturn experienced in 2008/2009 and the resultant slow return to growth is clear to see. It can also be seen that the advanced economies were harder affected by this downturn when compared to the emerging and developing economies.

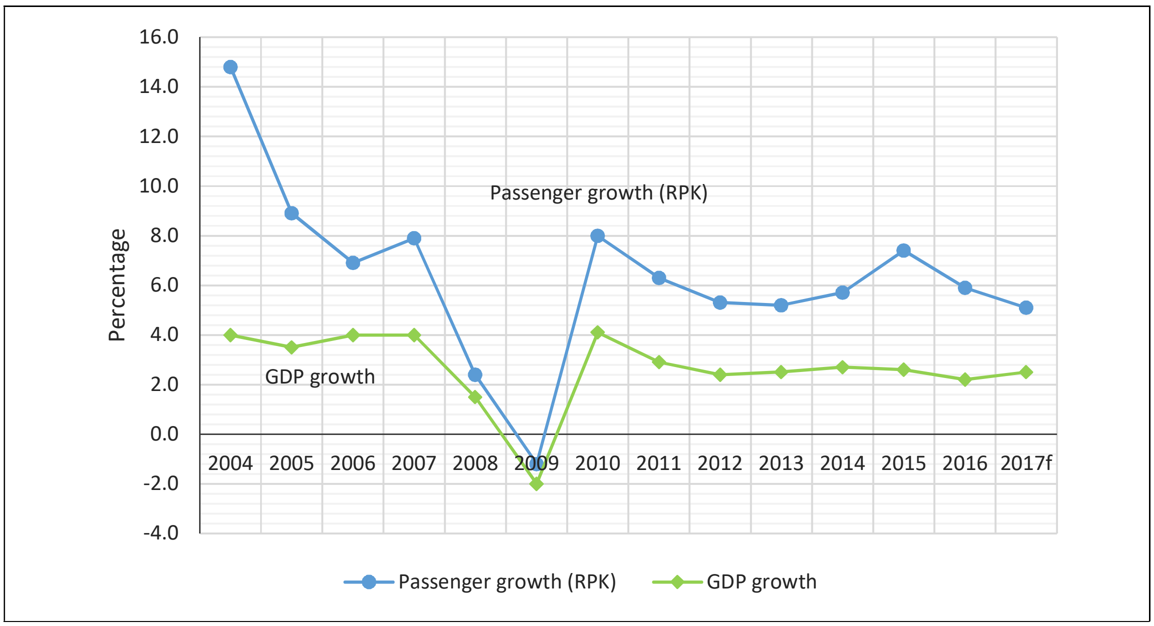
**Figure 3.1: Real global GDP growth: 2006–2018f (IMF)**




**Source:** Adapted from IMF (2016a:228) and IMF (2016b).

In terms of GDP and air travel, it has long been observed that a strong correlation exists between global GDP and the rate of growth or decline in the airline industry. Authors and institutions highlighting this relationship over time include BCG (2006:1), Hanlon (2007:20 & 26), Doganis (2010b:192), IATA (2011d:36), Boeing (2012a:7), Lee, Copeland and Morphet (2015:11–15), Profillidis and Botzoris (2015:23–27), and Gonzalez and Velasco (2016:32-34). As indicated in section 2.4.1, air travel growth is measured in terms of Revenue Passenger Kilometres (RPKs). Historical figures show that there is a 2:1 relationship between the two measures. Specifically stated, it is observed that air travel demand grows or declines at approximately twice as fast as the changes in GDP. Accurate measurement of this relationship shows that the ratio varies between 1.5 and 2.0, but the trend is consistent. This relationship is highlighted in figure 3.2.

**Figure 3.2: Global GDP growth and passenger RPK growth (2004–2017f)**



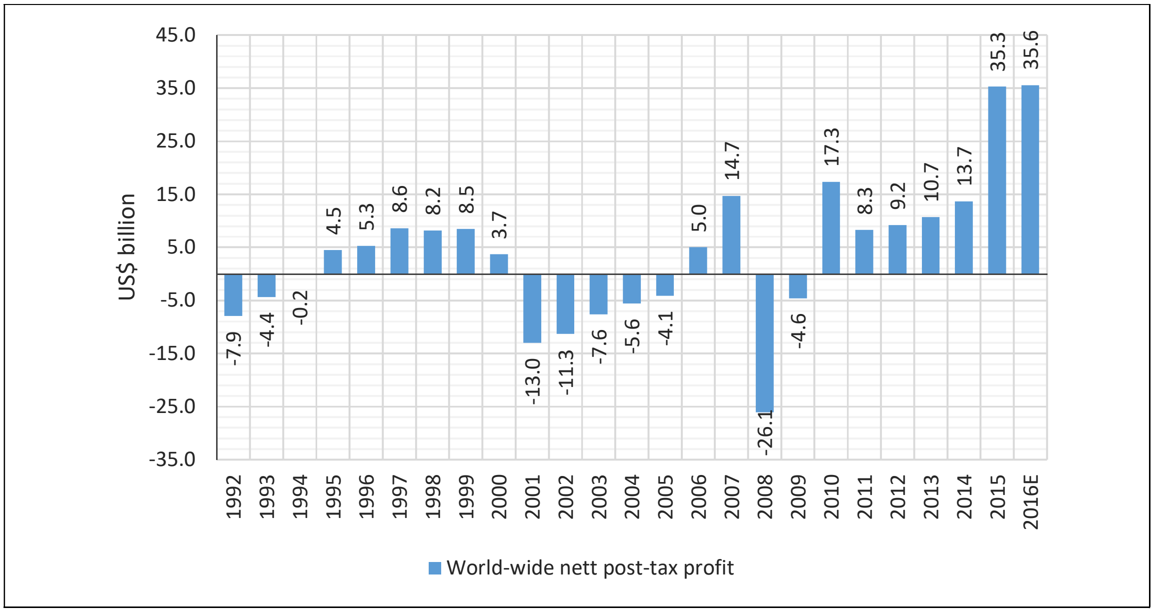

**Source:** Compiled from IATA (2016f).

From this figure is can be seen that over the past decade, GDP growth has resulted in growth in air travel of approximately double the GDP growth rate. This relationship is also evident in cases where the rate of GDP growth has slowed and RPKs are observed to decline by approximately double the GDP rate. From figure 3.2 it is also noted that changes in airline demand lag slightly behind the GDP curve, again indicating that the two are linked with economic growth being the key driver of growth in the airline industry (O'Connell & Williams, 2011:68). The years 2014 and 2015 showed a divergence from this relationship with RPKs showing growth as GDP growth slowed. This has been attributed to the rapid decline in the oil price and rapid rise of the LCCs in the Asian economy (IATA, 2016g).

### 3.2.2 The problems of cyclicality and capacity

Much has been made of the problems in the airline industry with many airlines failing and others having to be perennially rescued with bailouts from their governments to ensure their survival. With its link to GDP growth, it has been established that airline demand is influenced by external economic factors. Referring back to figure 3.2, it can be seen that, like GDP, airline demand is cyclical. These cycles are driven by occurrences and influences in the economy of the global market. Examples of these influences include wars, inflation, unemployment, and fluctuating energy costs for example. The cyclical nature of the airline industry is highlighted by the industry's financial performance over time in figure 3.3. (Section 3.3.3 identifies cyclicality as one of the six special characteristics of the air transport industry).

**Figure 3.3: Airline industry financial performance 1992–2017f**




**Sources:** IATA (2013a:13), Boeing (2016:18), and IATA (2016f).

With reference to figure 3.3, Doganis (in O'Connell & Williams, 2011:39) states that the cyclicality within the industry is such that, on average, every 4–5 years of loss making have been followed by 4–5 years of growth and profitability. In effect, the periods of profitability provide the airlines time to recover from the periods of loss-making and thus maintain an overall balance over time. However, the 2008/2009 recession and financial crises affected this trend in that the downturn became deeper with shorter periods of time between the up and downturn (O'Connell & Williams, 2011:69). The effect of this is clear from figure 3.3 where the recovery from the 2001–2005 downturn was followed only two years of industry net profit (2006–2007) before once again experiencing substantial losses. This placed significant pressure on many airlines that were unable to recover financially from the previous downturn and thus led to massive industry losses in 2008. The current cycle shows that the industry as a whole is experiencing record levels of overall profitability.

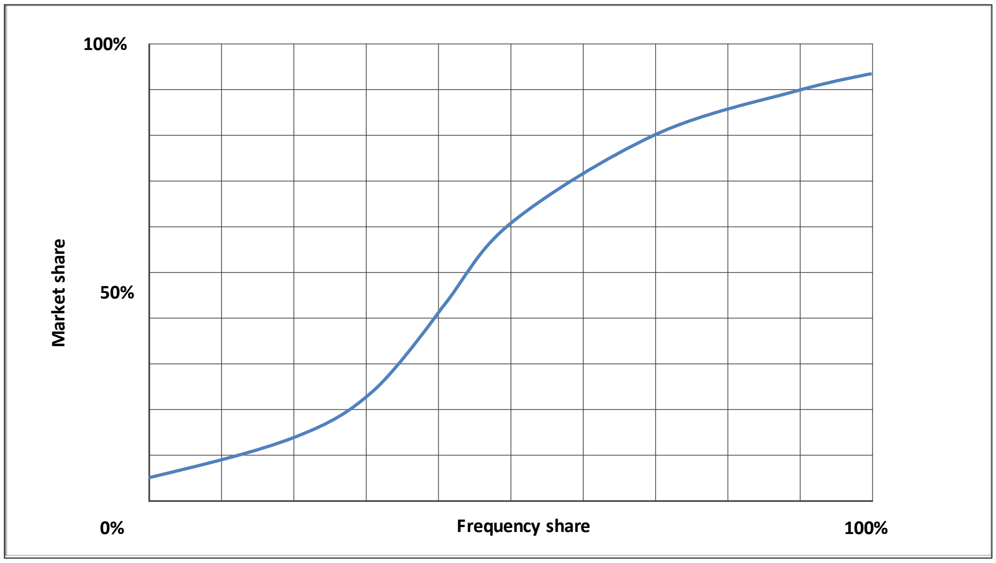
Doganis (in O'Connell & Williams, 2011:39) argues that whilst recessions and other natural disasters have caused many problems for the industry over the past four to five years, there is a more 'fundamental structural problem' with the industry that is affecting its overall ability to recover and be successful. His argument focuses on the economic principle of equilibrium (*see* section 3.4.4). According to the basic economic theory, periods of instability are followed by weak competitors exiting the market and markets seeking a point of equilibrium. Equilibrium is the point where the demand for a product/service (at a price the consumer is willing to pay) is matched by the supply of the product/service (at a price where the supplier can make adequate profit) (Varian, 2014:293). Doganis (in O'Connell & Williams, 2011:39) argues that the airline industry is in a constant state of 'chronic disequilibrium' due to it being in a constant state of over-supply. In the airline context, this means overcapacity; that is, too many ASKs for the level of passenger demand (section 3.4 addresses the theoretical issues relating to air transport supply, with sections 5.2.3.1, 5.3.2 and 5.4.2.2 quantifying global capacity, African capacity and South African capacity respectively).

Doganis (2010a:11) and Wojahn (2012:1–5) identify two main reasons for this tendency of constant overcapacity: (i) an insatiable tendency by airlines to provide excessive capacity, and (ii) the difficulty of market exit. The reasons given by Doganis (2010a:11) and Wojahn (2012:1–5) to support these two points include:

- **The ease of acquiring new aircraft.** Aircraft are movable assets and are thus easy for the financiers to move around should the airline default or collapse. Additionally, there are many export credit agencies that make the process of acquiring aircraft finance even easier. Airlines can also lease their aircraft from the large airline leasing agencies. The governments of many countries provide guarantees for aircraft financing deals, which again makes it easier for airlines to obtain aircraft.
- **Manufacturer pressure.** Technological developments on the part of the manufacturers promise technologically advanced aircraft that offer fuel savings and greater operational efficiencies – and ultimately the promise of future profit improvements. Manufacturers further encourage these additional purchases through finance assistance, the buy-back of old aircraft, or assistance in the sale of the old aircraft to another buyer.
- **Government policies.** National policies of some governments require expansive growth in their economies, which require strong transport links to facilitate business and travel. Airlines thus invest in the additional capacity to meet national imperatives. These airlines add capacity, with the financial backing of their governments, even though the routes might not be profitable and run at low load factors (SAA's Johannesburg–Beijing route before it was abandoned for example). In this case, airlines that should have been ejected from the marketplace through normal market forces remain in business and the market remains in a state of overcapacity, and thus in disequilibrium.
- **An obsession with market share by the airlines.** This is particularly relevant on the routes for the airlines where they feel the need to preserve their presence on the route and flood the route with

capacity in order to build share. In this case, capacity is being added at the expense of yields. The rationale behind this line of thought is based on the s-curve relationship that has been shown to exist between market share and frequency share (*see* figure 3.4). This relationship shows that the market share of an airline on a particular route is approximately equal to the airline's frequency share on the route (Belobaba et al., 2015:398p). From a managerial perspective, following the logic of this s-curve relationship, the greater the airline's capacity, the greater their market share.

**Figure 3.4: S-curve model of market share and frequency share**




**Source:** Adapted from Mason (2010a) and Belobaba et al. (2015:398q).

It is clear that, like most industries, it is extremely important that the nature of demand and supply in the particular industry be thoroughly understood. The next few sections will take a look at some of the key issues relating to the topics of airline demand, airline supply, costs, and pricing to provide a foundation for topics covered in this study.

## 3.3 DEMAND IN THE AIR TRANSPORT INDUSTRY

Demand was introduced as a component of the air transport system section 2.2.1 of the study. Holloway (2010:131) states that, "demand does not just exist; it exists at a price". This statement is made in the context of the link between price and its influence on demand. The basis of understanding and managing demand in the airline industry requires an understanding of the nature of the demand curve and the influences on the nature of the curve itself.

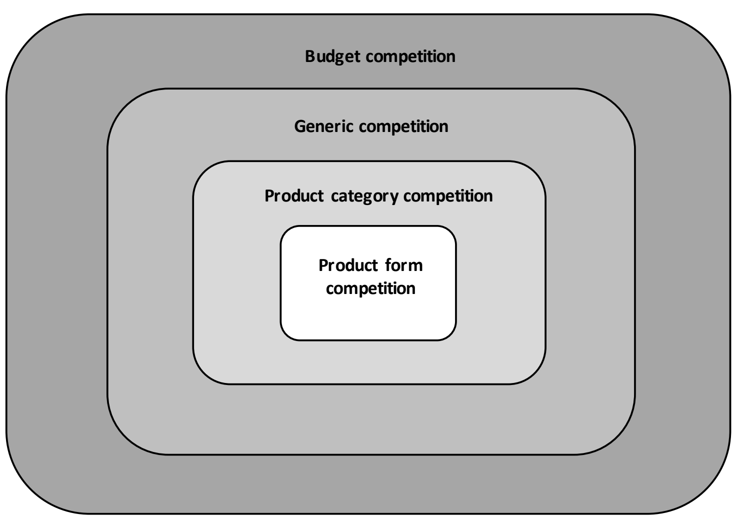
### 3.3.1 Direct and derived demand

In the opening paragraphs of section 2.2 of chapter 2, it was established that the demand for air travel is considered to be derived demand. In the airline economics context, there needs to be a distinction made between direct demand and derived demand. The two concepts focus on the source of demand for a particular product or service. Direct demand relates to demand that arises for a specific product or service that satisfies the consumer's needs directly (Vasigh et al., 2013:51). Alternatively stated, the demand for a particular product arises directly from the need for the specific product. If a person is hungry they might purchase a sandwich or burger to satisfy the need. Derived demand arises from the consumer's need to satisfy another need. In the case of the airline industry, the demand for passenger services is derived from the passengers' need to satisfy another need. This could be the need to go on a holiday, attend a meeting, partake in a cultural activity, or visit relatives for example. This indirect, or derived, nature of air transport demand means that air travel demand depends on:

- the existence of demand for the underlying reason of the travel required by the passenger.
- the costs and benefits associated with the use of substitute products to facilitate the satisfaction of the consumer's needs. For example, is it cheaper and more efficient to fly to a business meeting or to conduct a teleconference?
- the overall proportion of the cost of the air travel as a percentage of the overall cost of satisfying the need (Holloway, 2010:97).

Mason (2010a:2) emphasises that it is extremely important to keep the competing and substitute satisfiers of demand for air transport services in mind. When identifying the various competitors and substitutes for the air transport product, airline managers need to keep four levels of competition in mind to ensure that a complete picture is obtained of the sources of competition and thus the sources of demand. Figure 3.5 highlights these four levels of competition.

**Figure 3.5: Levels of competition**




**Source:** Adapted from Cravens and Piercy (2013:49).

From figure 3.5 it can be seen that the four levels of competition are product form competition, product category competition, generic competition, and budget competition. Examples of each of these types of competition, highlighted in terms of the airline industry, are given in table 3.1 below. Each of these levels needs to be considered and analysed by the airlines in their situation analyses.

**Table 3.1: Levels of competition with airline-related examples**

| Type of competition | Examples |
|---|---|
| Product form competition | First class, business class, premium economy class, economy class |
| Product category competition | Low-cost carriers, Full-service carriers, charter airlines, hybrid carriers |
| Generic competition | Air travel, rail travel, bus travel, car travel, teleconference, |
| Budget competition | Short-haul travel, food, school fees, utility bills, clothing |

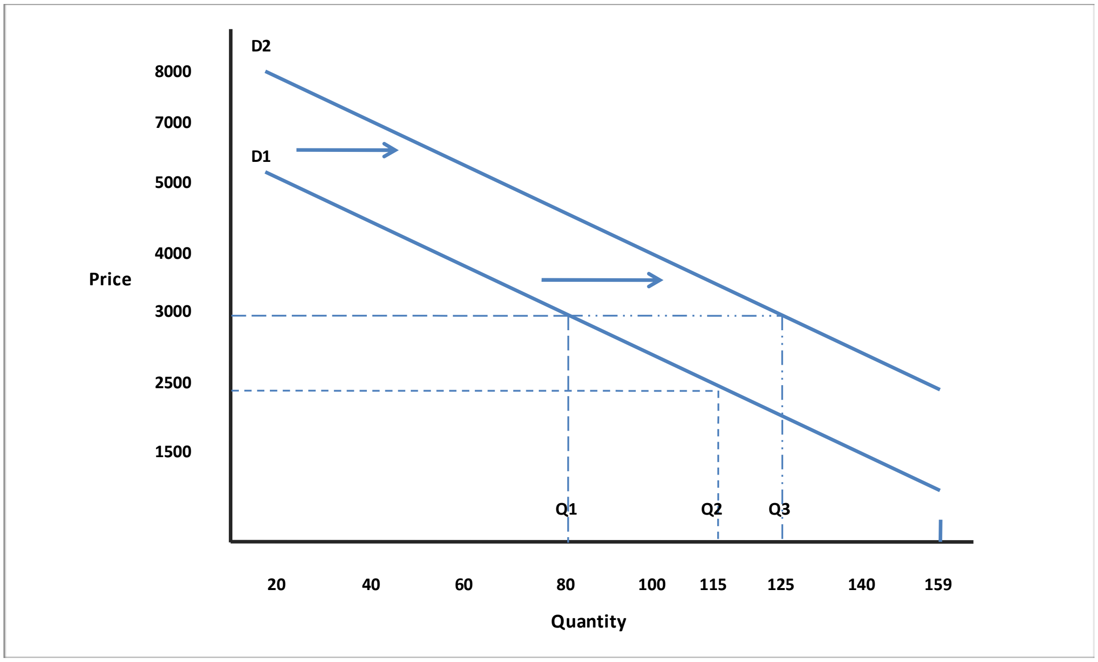
**Source:** Author interpretation.

### 3.3.2 The demand curve

In economic terms, demand is defined as, "the various amounts of a product or service the consumers are willing and able to purchase at various prices over a particular time period" (Wensveen, 2015:332). Furthermore, the law of demand states that, "*ceteris paribus*, the quantity of a good demanded is inversely related to the good's price" (Browning & Zupan, 2012:17). Simply stated, a price increase reduces the amount of a good demanded whilst a decrease in price results in an increase in demand at that new price. A demand curve is a visual representation of the changes in demand resulting from a change in price. Using the fictitious example of a Boeing 737-800 (157 seat configuration) on the Johannesburg to Cape Town route, the demand curve is illustrated in figure 3.6.

Vasigh et al. (2013:50) state that the curve does not represent actual purchases but merely serves to illustrate what the consumer is willing and able to purchase. They also state that the demand is cumulative – those who purchase at R5 000 would also purchase at a lower price whilst those at a price of R2 500 would purchase at a level of R2 500 and lower but probably not beyond R2 500. From Figure 3.6, it can be observed that at a price level of R3 000 a quantity of 80 tickets are demanded but at a price level of R 2 500 the demand is 115. *Ceteris paribus*, a change in price results in the quantity demanded (Q1 to Q2) as reflected along demand curve D1. A change in one of the factors of demand, other than price, will result in a shift in the demand curve. This shift can be either to the left or the right of the original curve. Figure 3.6 reflects a move to the right (D1 to D2), which is a positive move from the perspective of the airline. Assume that in this hypothetical case consumer income has increased which means they have more disposable income to spend on goods and services like travel. The overall effect is that at the same price level a higher demand for the services exists and thus the curve has moved to the right. This is seen in figure 3.6 where the curve has moved to D2 and now at a level of R 3 000 the quantity demanded is 125 tickets, instead of 80 (Q1 to Q3).

**Figure 3.6: Hypothetical demand curve for Cape Town to Johannesburg**




**Source:** Author interpretation.

The importance of the demand curve to the airlines is based on the need for the airlines to understand the sources of demand and the effects of changes in demand and the quantities demanded. It is specifically important for the airlines to understand the variations in demand that arise as a result of (i) a change in quantities demanded and (ii) those variations that arise as a result of a shift in demand (Holloway, 2010:60). Each of these demand variations arise out of different situations and require that airlines understand them in order to respond to them with the appropriate strategic and tactical execution.

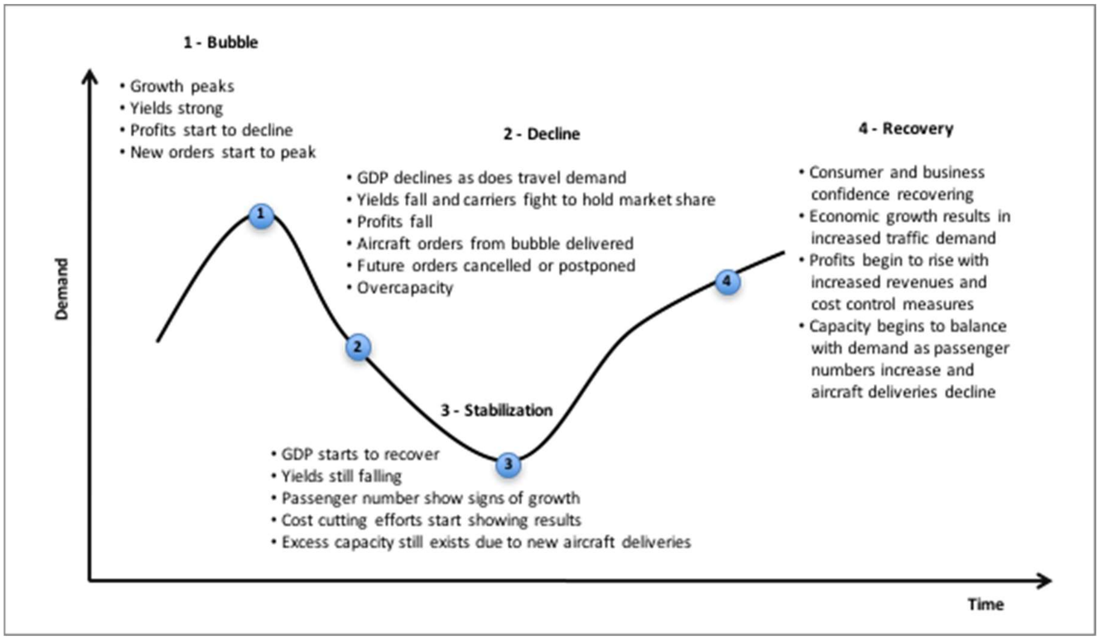
### 3.3.3 Special characteristics of the air transport industry

Before outlining the determinants of airline demand, it is important to highlight some of the special characteristics of the commercial air transport industry that affect the nature of demand in the industry. Subsequent discussions on these special characteristics in section 3.3.4 serve to put them into context with the determinants of air travel demand. Mason (2010a:12) identifies six 'special characteristics':

- **Influenced by economic cycles.** As addressed in section 3.2.1, growth and decline in the air travel demand is closely linked to the growth and decline of GDP. Figure 3.2 in section 3.2.1 highlighted that industry RPK growth tracks GDP growth with the trend of the economic cycle clearly evident.
- **Cyclical.** Whilst the extent and length of the cycle varies according to the circumstances, the air transport industry does follow a 'typical' cyclical pattern with 'typical' characteristics at each phase of the cycle (as introduced in section 3.2.2). Figure 3.7 below is a simple representation of a typical

cycle with four key stages identified. The figure highlights the 'typical' characteristics of events happening at the identified stages.

**Figure 3.7: The typical airline demand cycle**




**Source:** Adapted from Costa, Harned, and Lundquist (2002).

- **Highly seasonal.** Demand for air travel in most markets is highly linked to geography and seasons. Demand for flights to ski resorts is high in winter and low in summer. Beach resorts are in higher demand in summer than winter. (seasonality is explored further in section 3.3.4).
- **Seats are perishable.** Once an aircraft has departed, the empty seats represent lost revenue as they cannot be stored or held over for the next trip. The high level of fixed costs in the short-term mean that airlines have to actively manage pricing in order to maximise revenues to cover fixed costs.
- **Long lead times between aircraft order and delivery.** A new aircraft ordered today might only be delivered two or three years from the date of order, providing there are no production delays or other problems. Aircraft manufacturers typically have large order books and backlogs meaning that airlines have to wait extended periods before adding new aircraft to their fleet. Should demand on a route double, airlines cannot simply go and buy a new plane today and use it tomorrow.
- **Historically weak financial performance.** Whilst airlines have shown good growth in terms of overall RPKs, their financial performance over time has been extremely poor with the industry as a whole failing to deliver a return on capital. It is only in 2015 and 2016 (forecasted) where a return on invested capital has been realised (IATA, 2016L:3).

Other texts (O'Connor, 2001:5; Holloway, 2010:106; IATA, 2011d; Vasigh et al., 2013:61) give reference to a number of additional points that characterise the air transport industry. These include:

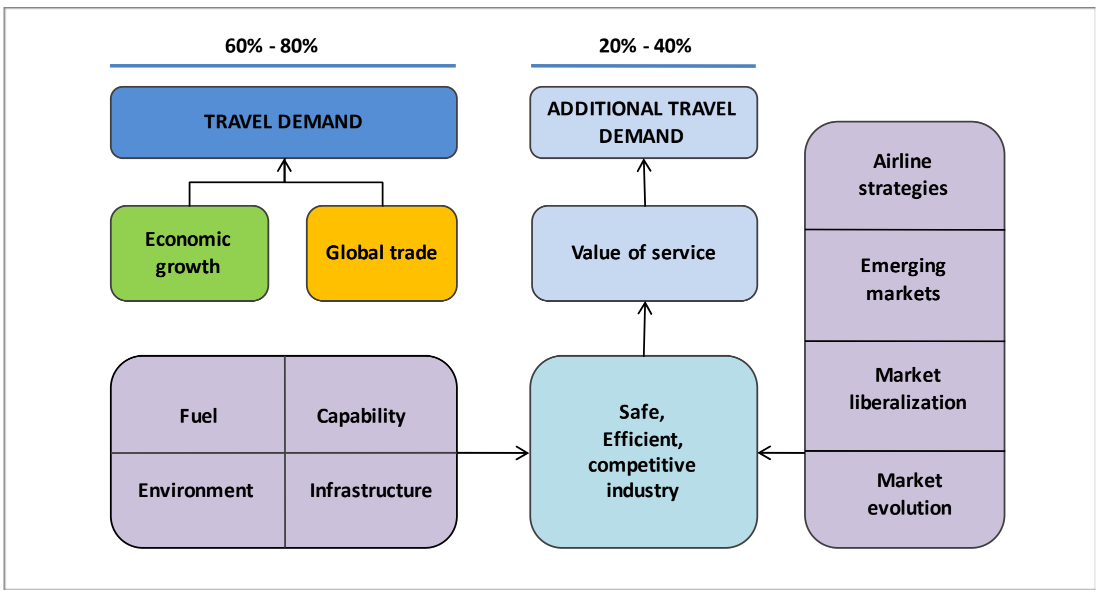
- **Undifferentiated product.** The products and services offered by airlines are difficult to distinguish from each other. Whilst attempts are made to differentiate the product, they are either not successful or sustainable as competitors can easily copy them. Essentially, the air travel product is a commodity with the choice of airline being based on price or some other factor of convenience like schedules, frequency, or availability (IATA, 2011d).
- **Oligopolistic and monopolistic tendencies.** The industry is dominated by a number of large airlines and alliances. Over time, smaller and weaker airlines exit the market or merge with the dominant operators, leaving a few large airlines in a monopolistic or oligopolistic position. In some cases, this occurs even though the large dominant airline might be technically bankrupt but survives through government support and bailouts (O'Connor, 2001:5). Examples of this scenario include Alitalia, JAL, and SAA.
- **Directionality.** (Vasigh et al., 2013:61). This characteristic arises from the fact that airlines offer services from point A to point B and then a return flight to point A. Directionality addresses the point that there might be greater demand for seats on an outward-bound flight than for the inbound flight. In this case, a plane might be full in one direction but only half full on the other. As an example, consider an event like the FIFA soccer World Cup held back in South Africa in 2010. During this period, the demand for seats coming into the country was higher than the demand for seats leaving the country. After the event, the demand for seats to leave the country was higher than the demand to enter the country. The result is an excess in capacity in one direction for a period of time. This presents a problem to the airlines because they still need to fly the aircraft in both directions to satisfy the high demand on the outbound demand leg, even though the aircraft might be half empty for the inbound leg. This characteristic of the airline industry presents the airlines with important decisions to be made in the areas of fleet assignment, scheduling, network management, and pricing and revenue management (Holloway, 2010:106).

### 3.3.4 Determinants of air travel demand

An understanding of the demand curve needs to be coupled with a thorough understanding of the determinants or drivers of demand for air travel. Hanlon (2007:19) states that there are three overall determinants of air travel demand; fares (price), income, and service quality. Authors like Doganis (2010b:178), Holloway (2010: 79–95), Vasigh et al. (2013:54), Wensveen (2015:334), Valdes (2015), and Belobaba et al. (2015:398c) all identify lists of factors that drive or affect passenger demand for air travel. A review of these lists reveals that the factors identified all form sub-sets of the categories identified by Hanlon (2007:19). Whilst it is beyond the scope of this study to review all these determinants of air travel demand in detail, an overview of some of the key determinants is given.

Before considering these determinants of demand it is insightful to consider the model used by Boeing (Boeing, 2012c:13) when analysing air travel demand. Their model of demand estimation, as set out in figure 3.8, is based on the relationship between GDP growth and growth in RPKs at a ratio of approximately 2:1 (*see* section 3.2.1). The Boeing model works on a ratio of 1.5–2:1(Boeing, 2012c:13). Boeing concludes that 60%–80% of air travel demand is driven by economic growth and global trade. The remaining 20%–40% is 'additional travel demand' that results from perceived added consumer value. Figure 3.8 shows a number of issues that contribute to the stimulation of additional passenger demand. Some of the sources of 'additional travel demand' include emerging markets, market liberalisation, safer aircraft, fuel efficiencies, and environmental issues. The model also identifies airline strategies as a driver of air travel demand. This refers to the marketing communication activities of the airlines themselves to persuade consumers to increase their air travel frequency, or to choose air travel over land travel, sea travel, or electronic communication (teleconferencing or Skyping) for example.

**Figure 3.8: Boeing's drivers of air travel**



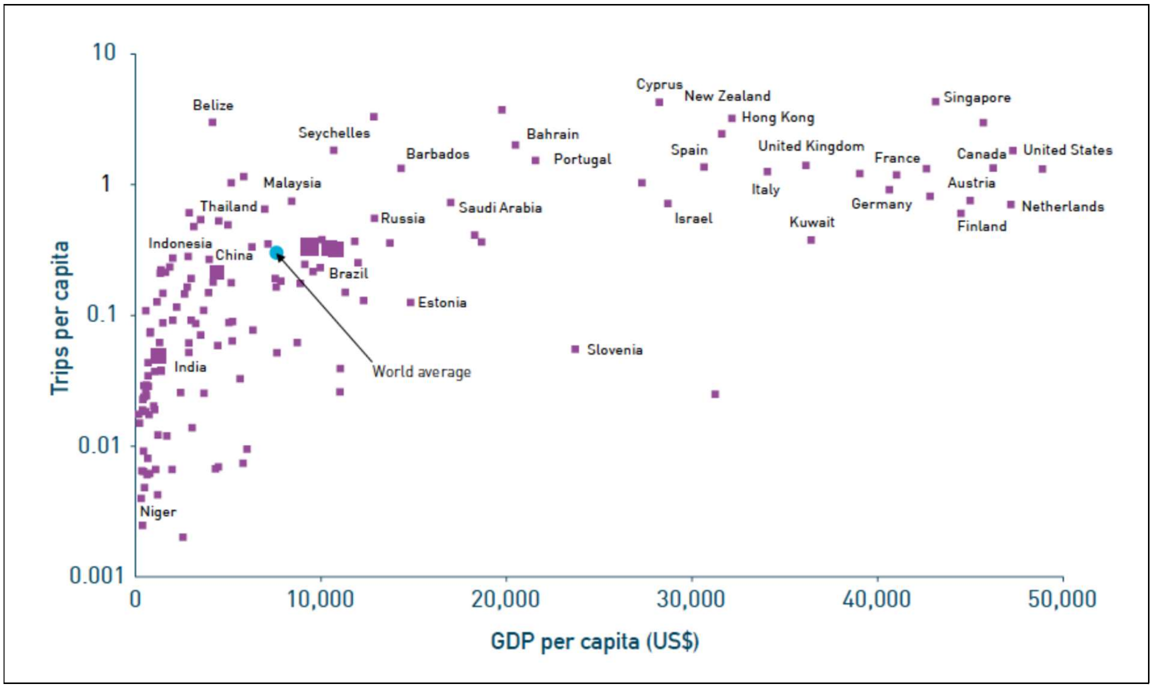

**Source:** Adapted from Boeing (2012c:13) and Boeing (2016:21).

The following determinants of air travel demand reflect the most important ones identified by the authors (Doganis, 2010b:178; Holloway, 2010:79–95; Vasigh et al., 2013:54; Wensveen, 2015:334; Valdes, 2015; Belobaba et al., 2015:398c) identified in the first paragraph of this section:

- **Price.** As addressed in section 3.3.2, price influences the amount of demand for a product. The effect of price increases or price decreases is influenced by the degree of price sensitivity in the market. In the modern world, consumers have access to many search engines that can perform flight searches and price comparisons to find the best price at the most appropriate time. This puts extreme importance on the pricing structures and decisions of airlines. Belobaba et al. (2015:398c) highlight that the price paid and the restrictions associated with the price have the largest influence on the level of demand on a route. Restrictions associated with a fare include items like required weekend stays, non-refundability, switching fees, and inconvenient departure times. As will be addressed in section 3.6.1, there are also numerous compulsory and non-compulsory charges for the consumer that are associated with the ticket price. Taken together, these fees, charges, and taxes significantly contribute to the final price of the air ticket and thereby affect the amount of travel demanded in the origin and destination markets.

- **Price of substitute products/services.** Demand is affected by the price of travel alternatives like road, rail, or sea to the desired destination. The availability of alternative technologies like teleconferencing and Skype also affect the demand for business air travel or visiting friends and relatives travel.
- **Price of complimentary products/services.** Air travel generally only forms one component of the entire travel experience and thus only one part of the total trip cost for the consumer. If the price of hotels, car rentals, cost of a conference, or event is expensive, then air travel demand will be lower than if the entire trip was more affordable.
- **Seasonality and fluctuations.** As stated in section 3.3.3, different destinations have seasonal highs and lows depending on the nature of activities carried out at the destination. This is not restricted to the generic concept of climatic seasons, but refers to demand fluctuations that arise on a daily, weekly, monthly, quarterly, and seasonal basis (Doganis, 2010b:188). What makes this determinant of demand more complex for airlines is the fact that the fluctuations and seasons are different for the different destinations served. The importance of demand management in the airline industry is once again emphasised.
- **Economic conditions.** One of the special characteristics of the airline industry identified in section 3.3.3 is that the industry is highly influenced by economic cycles. As a determinant of demand, it is logical that demand increases in a period of growth, and vice versa. The development or emergence of 'new' economies like China, Brazil, India, and other developing nations leads to greater global air travel demand (Airbus, 2016:7). Refer to figure 3.9 for a visual representation of how the level of development in a country influences the amount of travel. From this figure, it is clear that the trips per capita increase with the level of development and GDP per capita.
- **Income.** Closely linked to economic conditions, increases in income mean that consumers have higher levels of disposable income and thus more to spend on discretionary or luxury items. This includes air travel products. In effect, the increased income results in consumers becoming less price sensitive and more open to the marketing efforts of airlines (Holloway, 2010:87). An increase in income might arise due to a decrease in the interest rates in a country. The effect of this is that the consumer's repayments on cars, houses, and other loans are reduced, leaving more discretionary income available for other uses. This determinant of demand also relates to the levels of employment at the source of demand. During times of high employment, *ceteris paribus*, the demand for air travel will be higher than when there are high levels of unemployment. The effect of consumer income on air travel demand is an important issue for airlines to understand, with a particular need to understand price- and income elasticity in the markets in which they operate.

**Figure 3.9: Countries propensity to travel – trips per capita for selected countries**




**Source:** ATAG (2016:21) and Airbus (2016:12).

- **Social and demographic environment.** The social structure of a community or country exerts an influence on the level of air travel demanded. Attitudes towards travel, religious influences on travel, free time availability, family structures, even class structure, differ between markets and influence the levels of demand. In terms of demographics, the population growth rates, levels of education, and relative age of a population, amongst others, affect the levels of air travel. Demand for air travel between two cities is also affected by the linkages between the two cities (Belobaba et al., 2015:398c). In the South African context, most large businesses are located in Johannesburg and Cape Town with the result that there is a lot of demand for business travel between the two cities. In terms of the number of businesses, the link between Polokwane and Upington is much smaller and therefore there is much less air travel demand.
- **Overall product quality and attributes.** Issues like safety, frequency, routes, on-board services and seat pitch influence the demand for a particular airline. The more these features stand out from competitors, the better the opportunity for increased demand. Specific service attributes that are of importance include schedule convenience, trip time, in-flight products, and on-time performance. Holloway (2010:94) states that research by the Mitre Corporation in the USA found that trip time and on-time performance have an impact on the levels of air travel demand. Statistics quoted in this regard show that a one percent decrease in the trip time results in a 0.8% increase in demand. Similarly, an improvement of one percent in on-time performance leads to a 0.43% increase in demand. Whilst in itself this might not seem significant, when an airline is carrying 6 000 000 passengers per annum, the total demand increase becomes significant (approximately 25 800

additional passengers per annum). Airlines that offer an overall better quality of service with the desired attributes are in a better position to benefit from increases in demand. It does need to be remembered that the airline industry is characterised by an undifferentiated product. This makes it difficult, although not impossible, for airlines to obtain and maintain this type of advantage.

- **Travel restrictions.** The imposition of a visa requirement for citizens of one country to travel to another presents a significant hurdle for travel between some countries. For example, South African citizens have to obtain a visa to travel to the United Kingdom. It is not only the cost and time on the part of the applicants that influences demand, but the stringent requirements placed by many governments that prevent many people from travelling to certain countries. The South African requirement for a full unabridged birth certificate for minors entering and departing South Africa is an example in this regard. Whilst not a major determinant, it does have an impact on demand.
- **Marketing, frequent flyer programmes, and branding.** Each of these activities is aimed at increasing consumer demand for air travel (albeit on a specific airline). The aim is to move the demand curve to the right by stimulating demand for the airline or to increase frequency of use. Each of these issues, coupled with high levels of service delivery, is aimed at securing customer preference and loyalty, which in turn reduces customer price sensitivity.
- **Unplanned-for circumstances.** As will be addressed later in this study, many unplanned events can significantly affect demand (both positive and negative). Examples include Icelandic volcanic ash clouds, the New York 9/11 terrorist attacks, and Ebola outbreaks in Africa between 2013 and 2016. Whilst these identified events are negative for the country where they occur, they can be a positive for other countries due to travel demand being diverted to unaffected countries.

The above list highlights some of the main determinants of air travel demand. To finalise the discussion on air travel demand, a few comments will be made on the elasticity of demand.

### 3.3.5 Demand elasticity

Whilst there are a number of factors that affect the level and type of demand for air travel, it is important to consider how sensitive that demand is to changes in the environment and changing circumstances. In economic terminology, this demand sensitivity is referred to as elasticity. Elasticity is defined in Pindyck and Rubinfeld (2013:33) as a measure of "the sensitivity of one variable to another. Specifically, it is a number that tells us the percentage change that will occur in one variable in response to a 1% increase or decrease in another variable". In the air travel context, it is a look at the sensitivity to changes in demand for air travel (dependant variable) as a result of a change in the independent variable – price, income, marketing efforts, or seasonality for example.

In determining the extent of elasticity that occurs from manipulating the independent variable, Vasigh et al. (2013:81) state that a distinction firstly needs to be made between endogenous and exogenous variables. Endogenous variables are those over which the airline can exert control. Service levels, marketing efforts, and schedules are endogenous because the airline develops and controls these elements. Consumer demographics, income, economic trends, and travel restrictions are beyond the airline's control and therefore are exogenous variables. Vasigh et al. (2013:81) emphasise the importance of understanding the exogenous variables and their effect on air travel demand by highlighting that they enable the airlines to better manage capacity and demand.

When considering the elasticity of demand for air travel, the extent of elasticity can generally be divided into three categories (Holloway, 2010:82; Baumol & Blinder, 2016:111):

- **Elastic demand.** Occurs when the change in demand (positive or negative) is greater than the change in the independent variable. When income decreases by 5% and results in air travel demand decreasing by 10%, demand is said to be elastic.
- **Inelastic demand.** Occurs when the change in demand (positive or negative) is less than the change in the independent variable. When income increases by 10% and only results in air travel demand increasing by 4%, demand is said to be inelastic.
- **Unitary demand.** Occurs when the change in demand (positive or negative) is equal to the change in the independent variable. When income increases by 5% and results in a 5% increase in the demand for air travel, the demand is said to be unitary.

Three main elasticities are generally addressed in economics and airline economics literature; price elasticity, cross-price elasticity, and income elasticity (Holloway, 2010:79; Browning & Zupan, 2012:33–39; Baumol & Blinder, 2016:116). Price elasticity, logically, looks at the sensitivity of demand to changes in pricing. Cross-price elasticity considers the effect on demand for one airline when another airline or indirect competitor increases or decreases their prices. This gives an indication on whether consumers view the products/services to be substitute or complementary products. In an industry where the product/service is a commodity, understanding the cross-elasticity of demand is crucial. Income elasticity looks at the sensitivity of air travel demand to changes in income. GDP is considered the best measure to use when determining income elasticity Vasigh et al. (2013:90). Wensveen (2015:339) highlights four key determinants of elasticity that relate to the air travel industry.

- **Competition.** The more competition on a route and the greater the frequencies offered by the various airlines, the greater the elasticity.
- **Distance.** Demand for long-haul travel is more price elastic than demand for short-haul travel due the price differences between them. A fare decrease of 10% on a R10 000 long-haul flight has a greater Rand impact than a 10% fare decrease on a R1 000 short-haul flight (R1 000 versus R100).
- **Purpose of travel.** Leisure travellers show a higher level of price sensitivity than business travellers.

- **Time.** When the consumer's timing is flexible they exhibit a greater degree of price sensitivity because they have options. However, in instances when the consumer has to be at a point on a certain date and time, there is less scope for price sensitivity and they accept the going rate.

From the above descriptions, it becomes apparent why it is important to understand the demand elasticity that is prevalent in the market and the consumer. By understanding these elasticities, the airlines will be in a better position to make strategic and tactical decisions, as they will have a better idea of what the consumer response will be. This is particularly relevant to pricing and by extension capacity and revenue management as well.

## 3.4 SUPPLY IN THE AIR TRANSPORT INDUSTRY

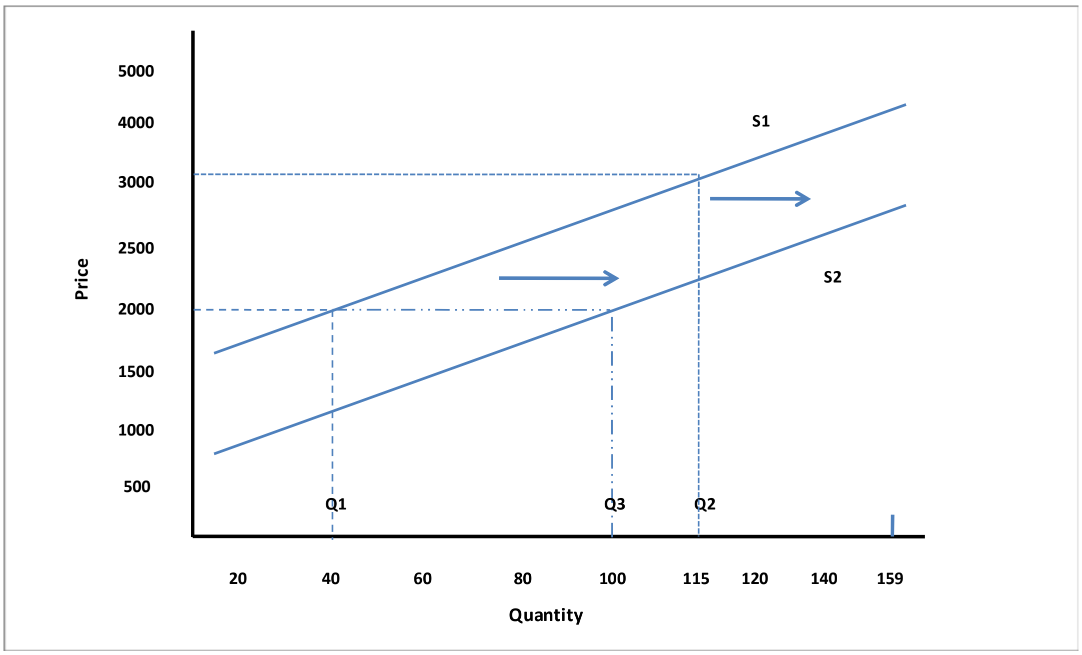
In section 3.2.2, an overview was given of one of the key problems facing the airline industry, namely, excess capacity. This view was expressed by Doganis (in O'Connell & Williams, 2011:39) in particular. Vasigh et al. (2013:62) support this statement with clarification. They state that the main cause behind excess capacity and capacity management problems in the airline industry relates to demand and supply. In the context of the air transport industry, demand is constantly fluctuating due to the influence of issues like seasonality, economic cycles, price, and income (*see* section 3.3.4). Supply, on the other hand, is considered to be relatively fixed and thus relatively inflexible. This can be rationally explained by considering that aircraft have, for example, a fixed number of seats, set schedules which are planned up to a year in advance, and set points of origin. These commitments make it very difficult for the airlines to change supply overnight or even over longer periods. The varying levels of demand, coupled with the fixed nature of supply, means that the system is inherently unstable. This in turn continuously presents airlines with capacity management issues and, as was established in section 3.2.2, leads to the entire system being in a state of disequilibrium. The importance of understanding the nature of supply and the factors affecting supply is therefore readily apparent.

### 3.4.1 The supply curve

In its simplest form, supply is the amount of product or service offered for sale at different price levels. Supply itself is directly linked to production costs and the factors of production that are needed to produce the supply. From an economics perspective, the law of supply states that, *ceteris paribus*, "the higher the price of a good, the larger quantity firms want to produce" (Browning & Zupan, 2012:21). This implies that as the price of an air ticket increases, the airlines will be more willing to increase supply. The supply curve, which is a visual representation of the supply function, typically has a positive slope (rising from left to right) when depicted graphically (Baumol & Blinder, 2016:61). Alternatively stated, there is a direct and positive relationship between supply and price. This is in contrast to the demand function, which exhibits an inverse relationship between demand and price. This supply curve is shown in figure 3.10 for a route between Johannesburg and Durban.

From figure 3.10 a number of basic supply issues can be determined. On curve S1, at a price of R2 000, airlines would supply output Q1, whilst at a price of R3 000 they would supply output at Q2. *Ceteris paribus*, a change in price results in a change in the quantity supplied as shown along supply curve S1. The logic applied here is that in order to increase supply, additional costs like labour are incurred and therefore a higher price is required to cover the increased costs. A change in price results in movement along the supply curve.

**Figure 3.10: Hypothetical supply curve for a route between Johannesburg and Durban**




**Source:** Author interpretation.

A change in one of the factors of supply, other than price, will result in a shift in the supply curve (Pindyck & Rubinfeld, 2013:23). This shift can be either to the left or the right of the original curve. Figure 3.10 reflects a move to the right, which is a positive move from an airline's perspective. For example, assume that the jet fuel price has decreased, which means that production costs are now lower. The overall effect is that at the same price level a higher supply of air travel (Q3) can be offered. The curve has moved to the right. This is illustrated in figure 3.10 where curve S1 has moved to S2 where at a price level of R2 000 an output of Q3 is supplied. The extent of this change in supply in response to the various independent variables gives an indication of the elasticity of supply. Holloway (2010:197) states that supply for airlines tends to be relatively inelastic in the short-term and more elastic in the longer-term. This is because airlines face capacity issues and these issues take time to negate. For example, the acquisition of a new aircraft takes time (medium to long term) and therefore cannot be added overnight (short-term) to increase supply.

### 3.4.2 Characteristics of air transport supply

Bull (in Page, 2009:20) highlights that the airline economist is interested in addressing three main questions from the supply side: (i) what to supply, (ii) how to produce it, and (iii) when, where, and how to produce the supply.

To address these questions, it is necessary to firstly understand some of the characteristics of air transport supply. Vasigh et al. (2013:67) state that there are two important characteristics of air transport supply that need to be kept in mind; seasonality and rigidity. Whilst they are two different concepts they closely influence the other.

- **Seasonality.** In the discussion in section 3.3.3, it was explained that seasonality, as a special characteristic of the airline industry, has an impact on air travel demand. This same characteristic has implications for supply as well. Due to the fact that air travel demand is highly variable, highly cyclical, and seasonal, it is logical to state that supply needs to be adapted to these circumstances to match consumer demand. As addressed in the previous section, this is made difficult by the fact that it is not easy for airlines to change supply over the short term due to the nature of the planning and assets involved.
- **Rigidity.** An airline's supply is rigid in that it is difficult to make sudden changes to supply in response to changes in demand. Schedules, bookings, and aircraft for example are planned and secured long in advance of service delivery and require long-term commitments upfront. Thus, any changes in the short term are difficult to immediately respond to and typically require a longer term to make the changes. Short-term changes, if they can be made, can entail substantial additional costs, which could offset any gains to could be realised on the demand side.

From this discussion, it is apparent that the concept of capacity forms a large part of air transport supply. Throughout this chapter reference has been made to the concept of 'capacity' in the context of 'overcapacity' or 'under capacity' (*see* section 3.2.2). For the purposes of understanding supply and the use of the concept of capacity throughout the rest of the study it is necessary to move beyond the generic use of the concept and consider more specific terms and their use in the context of supply. Three key terms are addressed in this regard. They are defined in Holloway (2010:194) as follows:

- **Capacity** is the potential output of a fleet if it is fully utilised. Overcapacity is a situation that arises when the fleet is not fully utilised to achieve maximum available output.
- **Output** refers to the Available Seat Kilometres (ASKs) supplied to the market by the airline. Excess output refers to a situation when the ASKs are higher than the demand from the market at a given price (supply exceeds demand).

- **Utilisation** is the extent to which the fleet's capacity is actually utilised. That is the actual amount of output sold. As defined earlier in the chapter, this is referred to as Revenue Passenger Kilometres (RPK). The concept of spoilage refers to the situation where adequate demand for the available output exists but there are still empty seats that depart. A simple example to illustrate this concept is where cancellations arise at the last minute and the seat can't be filled before departure.

A number of other characteristics of the air transport industry are worth noting in the context of supply. As was shown in section 3.2.2, there is an S-curve relationship between market share and frequency share. In other words, the greater the airline's capacity, the greater their market share. Size and frequency matter. This line of thinking by airlines has led to overcapacity (excess output) in the market. The tendency to oversupply in the air transport market is an issue that needs to be addressed in pricing (*see* section 3.6) where passengers requiring greater flexibility pay a higher fare for the privilege of this added flexibility. This higher fare in effect covers the costs the airline incurs from the excess capacity.

The air travel product is a service and thus requires that the airlines take the unique characteristics of services into account when managing supply. These unique characteristics include perishability, intangibility, simultaneous production and consumption of the service, and the delivery of a heterogeneous product by the customer-facing staff (Wilson, Zeithaml, Bitner, & Gremler, 2012:15). These unique traits greatly influence the type of service that is provided and thus the characteristics of supply. The air travel industry is skilled-labour intensive and asset-intensive, which results in an industry with high fixed costs. The management of labour, assets, and fixed costs needs to be balanced with supply in order to generate sufficient volume with the factors of production at hand.

Moving from some of the characteristics of air transport supply, the next section will summarise the main factors that affect the supply of air travel services.

### 3.4.3 Factors affecting air transport supply

Holloway (2010:98) states that whilst airlines do not have much control over demand, they are in control of their supply and are thus able to exert some influence over demand by varying their supply. In this context, supply refers to issues like flight frequencies, seat availability, aircraft size, routes offered, and flight departure times. Whilst most of the factors affecting air travel supply have been alluded to in other parts of this section, a summary of these factors is given below:

- **Price.** The discussion on the supply curve (*see* section 3.4.1) showed that as the price of travel increases (*ceteris paribus*) so does the supply that the airline is willing to place into the market.
- **Resource costs.** Resource costs play a significant role in the amount supply offered to the market (Vasigh et al., 2013:63). Major resources in the airline industry include labour, jet fuel, aircraft, and

other costs linked to the use of airports. As these resource costs decrease, the airline is more willing to place more supply into the market at the same price (a move to the right of the supply curve). The converse is true where, as the resource costs increase, the airlines may have to reduce supply at a particular price (a move to the left of the supply curve). (Airline costs are covered in section 3.5).

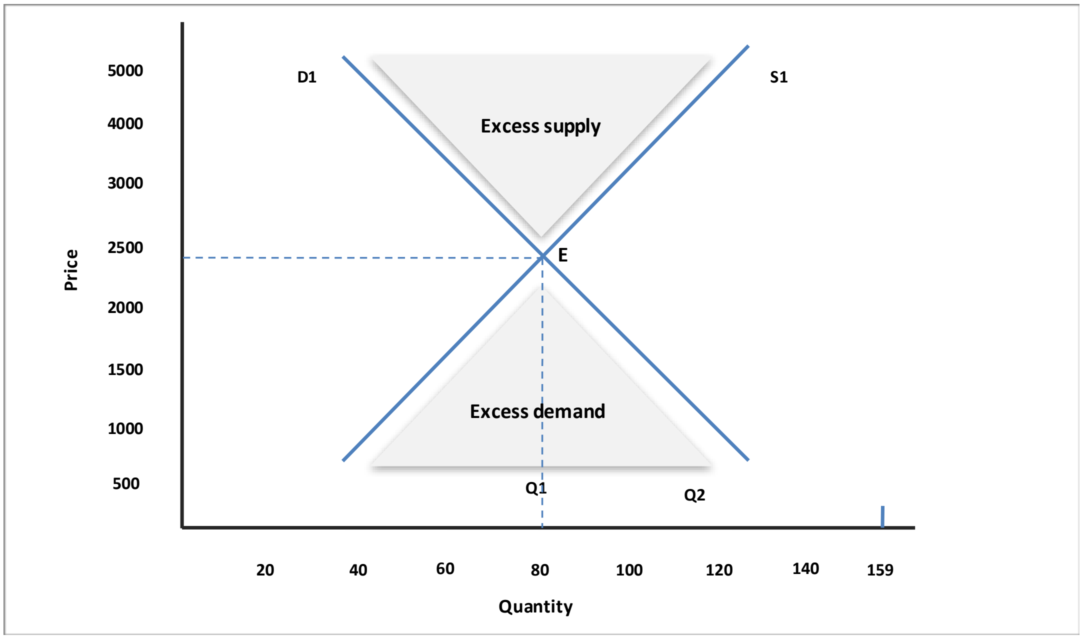
- **Technological developments.** As technology develops, more energy efficient and cost efficient resources are made available to the air transport industry. The result is that their costs are reduced and they are thus willing to put additional supply into the market at the same price. Examples include the development of jet engines that are more fuel-efficient and allow the aircraft to fly further using less fuel. The Airbus A320neo can be given as an example in this regard. The aircraft will offer double digit fuel burn reductions, noise reduction, with no increases in maintenance costs (Airbus 2016b).
- **Competitor's actions.** Given the relationship between frequency and market share (*see* section 3.2.2, figure 3.4), the actions of competitors are constantly monitored and supply adjusted according to the competitor's actions in the market.
- **Governmental and regulatory requirements.** Air travel supply in some markets may be regulated or restricted by various bilateral air service agreements or governmental policies that might be in place (Holloway, 2010:205). As was discussed in section 3.2.2, some national governments might have significant growth policies and require that the national airline invests heavily in air connections even though the routes might not be profitable. This leads to an industry that is in a state of oversupply and thus disequilibrium (*see* section 3.4.4). Where market regulation exists, air travel supply to the destinations is restricted by an imposed supply cap even though market forces might determine that consumer demand is higher than the set cap on supply.
- **Unplanned events and circumstances.** Unplanned events can negatively or positively influence supply in a market. These unplanned events can be of a short- or long-term nature. An example is the grounding by ANA of many of its Boeing 787 Dreamliner fleet in September 2016 due to problems experienced with the turbines in the plane's engines. ANA's Dreamliner fleet at the time consisted of 50 aircraft. In August 2016, the airline had to cancel 18 flights as a direct result of the problem, with more expected over time as the problem is rectified (Yan & Wakatsuki, 2016). This problem significantly reduced the airline's supply during this period.

Whilst there are a number of other factors that will have an influence on air travel supply, the factors addressed above should serve to highlight the complex nature of air travel supply and the diverse nature of the influences on the supply decision.

### 3.4.4 Equilibrium

After having considered the nature of demand and supply in the air travel market it is prudent to give comment on the interaction between the two concepts and the elusive goal of equilibrium in the air transport industry. The previous sections considered the two concepts separately (sections 3.3 and 3.4), but by bringing them together into one graph an equilibrium price can be observed where the two lines intersect (S = D). This is illustrated in figure 3.11.

**Figure 3.11: Market equilibrium – the matching of supply and demand**




**Source:** Adapted from Browning and Zupan (2012:24) and Pindyck and Rubinfeld (2013:25).

Varian (2014:293) states that in the supply and demand model, "the equilibrium price of a good is that price where the supply of the good equals the demand". Equilibrium is therefore the price point in the market where the amount of travel demanded by the consumer is equal to the amount supplied by the airlines (point E in figure 3.11). In terms of a free market, forces of demand and supply interact at various price levels in order to find the level where demand and supply match. This interaction is based on an organisation's desire to achieve the highest possible price to cover costs and achieve profit and the consumer's desire to get the best possible value at the lowest price. In economics terminology, this is referred to as a market's 'tendency to clear'.

This interaction between the forces of supply and demand to find equilibrium (to clear the market) is explained by the dynamic laws of supply and demand (Colander, 1998:72). In a situation where the supply of air travel exceeds demand, a surplus arises. In this situation, it is logical for airlines to lower prices to a level where the seats begin to sell again to utilise the excess capacity. Where demand exceeds supply, a shortage exists. Revenue is being lost, as there is not enough capacity to satisfy demand. In this case airlines can raise prices and increase supply to match the demand. These basic descriptions encapsulate the three dynamic laws of supply and demand, which are given in table 3.2.

**Table 3.2: Dynamic laws of supply and demand**

| | |
|---|---|
| First dynamic law of supply and demand | When the quantity demanded is greater than the quantity supplied, prices tend to rise; when the quantity supplied is greater than the quantity demanded, prices tend to fall. |
| Second dynamic law of supply and demand | In a market, the larger the difference between quantity supplied and quantity demanded, the greater the pressure on process to rise (if there is excess demand) or fall (if there is excess supply). |
| Third dynamic law of supply and demand | When the quantity supplied equals the quantity demanded, prices have no tendency to change. |

**Source:** Compiled from Colander (1998:72).

Pindyck and Rubinfeld (2013:25) and Baumol and Blinder (2016:66) state that it is important to realise that equilibrium price is the price that markets have a tendency to search for. The actual market price is not always the same as equilibrium price because markets and circumstances are constantly changing and the actual equilibrium price is unknown and constantly changing in response to market changes. In other words, equilibrium price is not a set price but one that varies with the changes in the markets. From a capacity management perspective, it is important to understand the interaction between supply and demand and the need to find equilibrium. This is particularly important in the airline industry context given the tendency to overcapacity and disequilibrium in the airline industry as described by Doganis (in O'Connell & Williams, 2011:39) in section 3.2.2. (The use of discriminatory pricing to find equilibrium is addressed in section 3.6.3).

## 3.5 AIRLINE COSTS

An understanding of airline costs provides insights into the nature of supply decisions, responses to demand, and pricing issues. It is however, a complex topic. The ways in which airline costs can be classified and categorised could take up volumes on their own. This section will however only focus on outlining the generally accepted cost categories to highlight the significance of costs to an airline's operation and put into context why the margins earned by airlines are traditionally low.

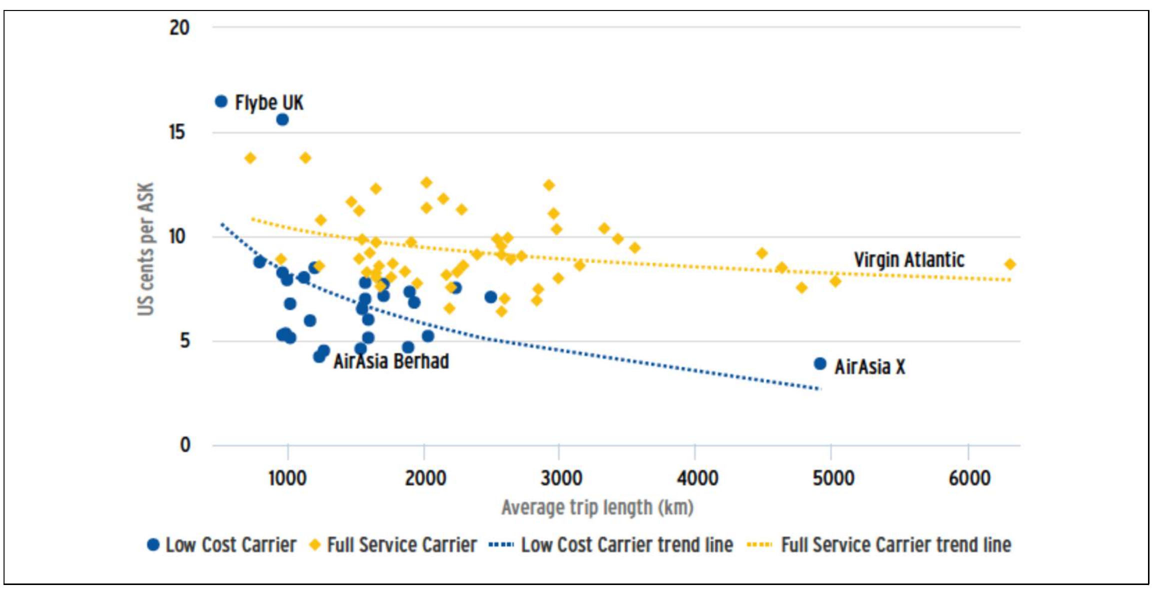
Costs have always been an important issue in managing a business, but the economic events of the past decade have sharpened the focus on costs, particularly in the air transport industry. From a full-service carrier perspective, the focus on costs has been sharpened even more with the increasingly strong presence of the low-cost carriers. From the low-cost carrier perspective, managing and reducing costs is the basis of their competitive strategy.

### 3.5.1 The importance of understanding costs

Making money relies on providing a valued and need-satisfying product or service to the consumer at a price that covers the organisation's costs and obligations, leaving the opportunity to generate a net profit. The airline industry is one that is constantly changing and constantly being influenced by events in the market environment (Doganis, 2010b:64). These changes, be they predicted changes or unexpected changes, have significant impacts on an airline's costs. The importance of costs from an airline's perspective is that they have a large influence on an airline's pricing structure. In turn, costs and pricing (*see* section 3.6.2) have a significant influence on an airline's ability to generate revenue. The overriding point regarding costs is that their purpose is to generate revenue (Holloway, 2010:265). They form an integral part of the decision-making processes of an airline and need to be fully analysed and understood to ensure that informed decisions are made in order to remain competitive in the market.

As stated in the introduction to this section, the emergence of the LCC has driven the entire air transport industry to an even closer focus on costs and cost management (*see* section 6.3.5.1 for the full discussion on the emergence of the LCC model). The success of the LCCs is based on the fact that they have built a business model around providing air travel services at a low cost and at the same time achieving greater utilisation of their assets and resources (Belobaba et al., 2015:5e). For purposes of illustration of this point, figure 3.12 highlights the extent of the cost savings advantage LCCs have over FSCs in the global market. In this figure, the darker dots represent the LCCs, whilst the lighter diamonds represent the FSCs. Whilst there are other forces at play in the different markets, the trend lines clearly highlight that that LCCs have a lower cost per available seat kilometre (CASK) than the FSCs. This cost gap between FSCs and LCCs over a ten-year period is illustrated in section 5.2.3.10 (figure 5.11). The emergence of the LCCs forced FSCs to re-evaluate their models and markets. As a result, they have had to actively reduce costs and improve resource utilisation in order to remain competitive in their traditional markets. (The theory relating to the low-cost model is discussed in depth in chapter 6.3.5, with the LCC sector quantified in chapter 5).

**Figure 3.12: World airlines - Cost (US cents) per available seat kilometre (CASK) versus average passenger trip length 2014**




**Source:** Airline Leader (2016:63).

Whilst it might seem that achieving low costs guarantees profitability and efficiency, it is not necessarily the case. Neither are high costs a guarantee of losses. From an individual airline's perspective, the most important issue is the generation of revenue to cover the costs. Williams (2008:4) emphasises the fact that it is the relationship between unit cost and yield that is the most important aspect to monitor.

Another factor that has added to the importance of understanding costs is deregulation. Airline deregulation has meant that competition has increased in the commercial air transport market with the result that added pressure is placed on airlines to implement measures on both the revenue and cost sides of the business to achieve profitability. This entails cutting costs to generate revenue and increasing asset productivity.

Many more reasons have been put forward over time to highlight the need to manage costs. Merkert (2010:12) provides a brief summary of these reasons:

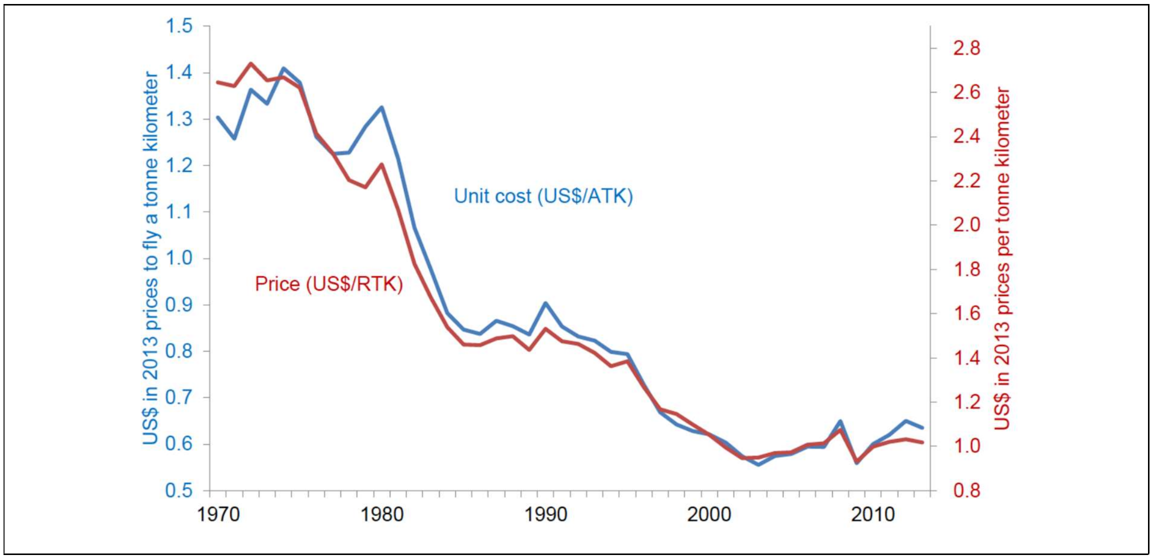
- Long term economic downturn which resulted in structural instability
- The arrival of the LCCs which eroded short haul routes
- Airline deregulation and liberalisation
- Fuel price volatility
- Finance and restructuring costs
- Overcapacity
- Declining yields which necessitated revisions to pricing and cost strategies
- Growing pressures from politicians and environmentalists on environmental issues
- Infrastructure deficiencies

Merkert (2010:19–20) goes further to state the need to have an understanding of not only the current cost structures but to look at future costs as well. He states that this knowledge should be used to:

- Monitor performance and identify where changes will be required.
- Establish fares and tariffs.
- Identify outsourcing opportunities and evaluate possible new routes.
- Assist in the aircraft selection process to identify the most cost efficient aircraft for a specific route (Merkert, 2010:19–20).

Numerous reasons have been given to highlight the necessity and importance of managing costs. Many cost savings have been achieved over the years. On a macro scale, many of the cost savings that airlines have been able to achieve have come from technological developments in aircraft, jet engines, and fuel (IATA, 2011d:7). IATA states that the real cost of providing air travel has actually decreased by 60% over the past 40 years. Adjusted for inflation, this fall in real costs is illustrated in figure 3.13.

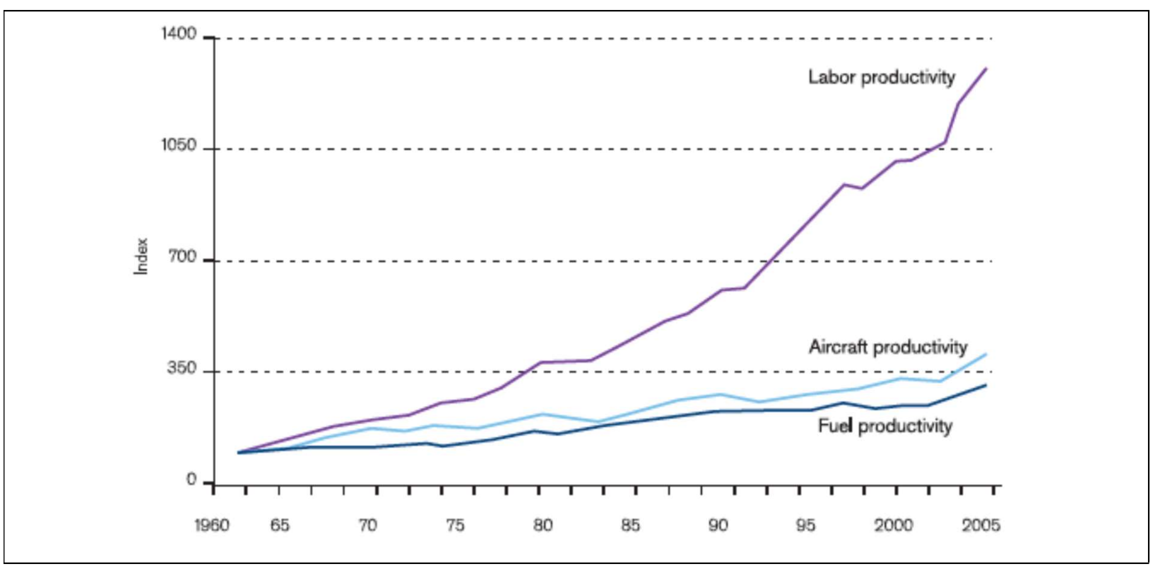
**Figure 3.13: Declining real cost and price of air transport (inflation adjusted)**




**Source:** IATA (2014b:14).

The three main cost areas for an airline are labour, aircraft related factors, and fuel. Over the years, through improved management and the development of more efficient technologies, airlines have been able to manage and reduce their costs in many areas and obtain greater productivity from their assets. Figure 3.14 highlights the extent to which productivity has improved over the past 55 years in the three key areas; labour productivity, aircraft productivity, and fuel productivity (IATA figure to 2005 only because of inaccessibility of more recent data). From this figure is can be clearly seen that the greatest improvements in productivity have been achieved in labour improvements. Each of these issues will be dealt with in a bit more detail in section 3.5.3.

**Figure 3.14: Key productivity improvements in the airline industry**




**Source:** IATA (2011d:8).

Despite these improvements in productivity, these three items still represent significant costs to an airline. Prior to discussing the categories of costs and addressing some specific cost items related to the managing of an airline, a brief look will be taken at the financial statements of four airlines to give an indication of the types and scale of costs faced by the airlines. Given in tables 3.3, 3.4, and 3.5 are abridged statements from three airlines highlighting some of their key financial indicators. The airlines selected are Emirates (fast growing Middle East FSC), Southwest Airlines (largest global LCC), and South African Airways (including the South African Airways FSC brand and the Mango LCC brand).

**Table 3.3: Emirates revenues and operating costs FY 2015 and FY 2016**

| Revenue | 2014 – 2015 AED mil. | 2015 – 2016 AED mil. | % change | 2015 – 2016 % of revenue |
|---|---|---|---|---|
| Passenger | 70 013 | 68 029 | (2.8) | 81.5 |
| Cargo | 12 298 | 11 140 | (9.4) | 13.3 |
| Excess baggage | 436 | 413 | (5.3) | 0.5 |
| **Transport revenue** | **82 747** | **79 582** | **(3.8)** | |
| Sale of goods | 2 550 | 2 673 | 4.8 | 3.2 |
| Hotel operations | 693 | 700 | 1.0 | 0.8 |
| Others | 738 | 545 | (26.2) | 0.7 |
| **Total Revenue** | **86 728** | **83 500** | **(3.7)** | **100,00** |
| | | | | |
| **Operating costs** | **2014 - 2015 AED mil.** | **2015 - 2016 AED mil.** | **% change** | **2015 - 2016 % of operating costs** |
| Jet fuel | 28 690 | 19 731 | (31.2) | 25.7 |
| Employees | 11 851 | 12 452 | 5.1 | 16.2 |
| Aircraft operating leases | 6 920 | 8 085 | 16.8 | 10.5 |
| Depreciation and amortisation | 7 446 | 8 000 | 7.4 | 10.4 |
| Sales and marketing | 6 098 | 5 893 | (3.4) | 7.7 |
| Handling | 5 094 | 5 646 | 10.8 | 7.4 |
| In-flight catering & related costs | 3 883 | 4 114 | 5.9 | 5.4 |
| Overflying | 2 648 | 2 711 | 2.4 | 3.5 |
| Aircraft maintenance | 2 527 | 2 513 | (0.6) | 3.3 |
| Facilities and IT costs | 2 240 | 2 347 | 4.8 | 3.1 |
| Landing and parking | 1 761 | 1 992 | 13.1 | 2.6 |
| Cost of goods sold | 1 260 | 1 335 | 6.0 | 1.7 |
| Corporate overheads | 2 508 | 1 895 | (24.4) | 2.5 |
| **Total operating costs** | **82 926** | **76 714** | **(7.5)** | **100.0** |

**Source:** Emirates (2016a:68 & 70).

**Table 3.4: Southwest Airlines revenues and operating costs FY2013 to FY2015**

| | 2013<br>US $ mil | 2014<br>US $ mil | 2015<br>US $ mil | 2015<br>(% of revenue) |
|---|---|---|---|---|
| **Operating revenue** | | | | |
| Passenger | 16 721 | 17 658 | 18 299 | 92.3 |
| Freight | 164 | 175 | 179 | 0.9 |
| Special revenue adjustment | - | - | 172 | 0.9 |
| Other | 814 | 772 | 1 170 | 5.9 |
| **Total operating revenue** | **17 699** | **18 605** | **19 820** | **100%** |
| **Operating expenses** | | | | |
| Salaries, wages and benefits | 5 035 | 5 434 | 6 383 | 40.6 |
| Fuel and oil | 5 763 | 5 293 | 3 616 | 23.0 |
| Maintenance materials and repairs | 1 080 | 978 | 1 005 | 6.4 |
| Aircraft rentals | 361 | 295 | 238 | 1.5 |
| Landing fees and other rentals | 1 103 | 1 111 | 1 166 | 7.4 |
| Depreciation and amortisation | 867 | 938 | 1 015 | 6.5 |
| Acquisition and integration | 86 | 126 | 39 | 0.2 |
| Other operating expenses | 2 126 | 2 205 | 2 242 | 14.3 |
| **Total operating expenses** | **16 421** | **16 380** | **15 704** | **100%** |
| | | | | |
| **Operating income** | **1 278** | **2 225** | **4 116** | |

**Source:** Southwest Airlines (2016a:77).

**Table 3.5: South African Airlines revenues and operating costs FY 2015 to FY 2016**

| | Group | | Company | | |
|---|---|---|---|---|---|
| **ZAR mil.** | **2015** | **2016** | **2015** | **2016** | **% of 2016** |
| **Income:** | | | | | |
| - Airline revenue | 28 513 | 28 827 | 26 127 | 26 310 | 93.8% |
| - Other income | 1 592 | 1 558 | 1 704 | 1 743 | 6.2% |
| **Total airline income** | **30 105** | **30 385** | **27 831** | **28 053** | **100%** |
| **Operating costs:** | | | | | |
| - Aircraft lease costs | 2 840 | 3 149 | 2 795 | 3 095 | 11.2% |
| - Accommodation and refreshments | 1 040 | 1 279 | 1 416 | 1 566 | 5.6% |
| - Commissions and network charges | 1 461 | 1 629 | 1 375 | 1 531 | 5.5% |
| - Electronic data costs | 543 | 657 | 530 | 636 | 2.3% |
| - Fuel and other energy costs | 10 217 | 7 344 | 9 449 | 6 673 | 24.0% |
| - Employee benefit expenses | 5 687 | 5 822 | 3 747 | 3 810 | 13.7% |
| - Maintenance costs | 3 412 | 4 283 | 4 491 | 5 510 | 19.9% |
| - Navigation, landing and parking fees | 2 207 | 2 384 | 1 980 | 2 108 | 7.6 |
| - Fair value and translation movements | 25 | (875) | 11 | (901) | (3.2) |
| - Other operating costs | 5 144 | 4 362 | 4 484 | 3 728 | 13.4 |
| **Operating costs** | **32 546** | **30 034** | **30 278** | **27 756** | **100%** |
| | | | | | |
| **Operating profit/(loss) before interest, tax, depreciation and amortisation** | **(2 441)** | **351** | **(2 447)** | **297** | |
| - Depreciation and amortisation | (819) | (725) | (2447) | (649) | |
| - Impairments | (1894) | (158) | (748) | (98) | |
| - Net loss on disposal of property, aircraft and equipment | (9) | (6) | (1635) | (2) | |
| **Operating loss** | **(5163)** | **(538)** | **(3)** | **(452)** | |

**Source:** South African Airways (2016a:94).

In each of the tables it is immediately noticeable that labour costs and fuel are the largest costs faced by the airlines, irrespective of whether they are full-service or low-cost carriers. From the results, it can be seen that fuel represents the largest cost item for most of the airlines, ranging from 23.0% to 39.2%. Southwest seem to be the exception in this case where for 2015 the labour expense was more than the fuel expense but this situation has only arisen in the light of the drastic decline of the price of oil. Whilst many of the differences between the airlines might be explained by how the costs have been grouped and reported, the overall trend is supported in that both costs make up between 40% - 60% of an airline's costs. Further analysis of the financial results of other airlines like Lufthansa and Air Asia (not represented in tables 3.3–3.5) reveals the same pattern. Other cost items that are of significance include maintenance, depreciation and amortisation, and marketing/distribution costs. By analysing and classifying the different types of costs, airlines are able to understand the nature of specific costs and how much control they have over them to in order to reduce them.

### 3.5.2 Classification and types of costs

Whether viewed from the accounting, financial or economic perspective, costs can be categorised and classified in a number of ways. The classification chosen for a particular format will depend on the purpose for which the cost analysis will be used (Doganis, 2010b:64). For the purposes of this study the most common classifications will be outlined to give a broad overview of the costs faced by airlines.

It has already been stated that costs are incurred to generate revenue and can therefore not be fully eliminated. They therefore need to be properly managed in order to minimise them and thereby maximise the operating margin. When considering how to manage costs, the airline manager needs to consider the degree of control they have over their costs. To this end, Doganis (2010b:87) distinguishes between three basic degrees of control that a company might have over their costs:

- **Costs over which airlines have limited or no control.** An airline has no control over the price of oil so they are limited in what they can do to reduce the cost impact. They could purchase more fuel-efficient aircraft, but this also depends on the availability of fuel-efficient aircraft – another aspect beyond the airline's control.
- **Costs over which airlines have some control.** In this case, management does have some degree of control over the costs that are incurred. These are costs that have to be incurred but management has the choice or ability to make a decision on the extent and type of cost incurred. In terms of labour, airlines are labour intensive and employees need to be put in place. However, the airline can decide how many to employ and the levels of skill they should have (higher skilled labour comes at a higher price).
- **Costs over which airlines have a high degree of control.** These costs are easier to manage as the airline is in a position to make changes if the need arises. The costs incurred here are a direct result

of the decision-making of airline management and they determine the level and nature of the cost. The branding and corporate look, for example, is under full control of the airline, which make all final decisions on these issues.

The degree of control the airlines have over the various costs determines the strategic and tactical actions that can be taken to minimise or stabilise that particular cost.

A review of the literature identifies a number of perspectives from which costs can be classified and the types of information they deliver (Holloway, 2010:273–284; Doganis, 2010b:65–83; Wensveen, 2011:320–325; Vasigh et al., 2013:97–105; Vasigh, Humphreys, & Fleming, 2015:48–51; Belobaba et al., 2015:5e–5k). These classifications range from the broad to the refined. Vasigh et al. (2013:100–105) describe four broad approaches to cost classification:

- **Time.** In this context, historic, current, future, replacement, and sunk costs are considered.
- **Relation to output.** From an economic perspective, the most valuable approach to cost measurement and analysis is to view it in terms of its relation to output. Costs are viewed in terms of their impact on output in that they are either fixed costs or variable costs.
- **Explicit and implicit costs.** Explicit costs represent a monetary cost that the airline has to pay. Implicit costs are the costs incurred when choosing one option over another. This implicit cost is generally referred to as an opportunity cost. It considers cost of pursuing one option versus the gain or loss made from pursuing another (Browning & Zupan, 2012:7).
- **Accounting and economic costs.** The key difference between the two is that accounting costs focus only on explicit costs whilst economic costs included both implicit and explicit costs. The accounting cost includes actual expenses and depreciation, whilst economic costs are the costs an airline incurs to produce the service as well as the opportunity cost. A distinction is made between the costs that an organisation, like an airline, can and cannot control (Pindyck & Rubinfeld, 2013:230).

Airlines use the classification that is suited to their home markets or economic community. In most cases, however, the classifications tend to follow the cost classification provided by the International Civil Aviation Organisation (ICAO) (Belobaba et al., 2015:5i). ICAO collects operating cost data from its members annually in a pre-determined format. This standardisation makes cost comparisons relatively easier. The development of the ICAO cost classifications is closely based on that used by most of the large European and American Airlines, which has led to it being the unofficial 'world standard' (Belobaba et al., 2015:5i). The basis of this classification is to divide operating costs into direct operating costs (DOC) and indirect operating costs (IOC). Table 3.6 outlines the cost categories as identified by ICAO.

**Table 3.6: ICAO cost categories**

| Direct operating aircraft costs |
|---|
| **Flight operations (total):**<br>- Flight crew<br>- Fuel and oil<br>- Other<br>- Maintenance and overhaul<br>- Depreciation and amortisation |
| **Indirect operating costs** |
| **User charges and station expenses (total):**<br>- Landing and associated airport charges<br>- Other<br>- Passenger services<br>- Ticketing, sales and promotion<br>- General, administrative and other |

**Source:** Belobaba et al. (2015:5i).

Merkert (2010:21) states that the major advantage of the ICAO classification is that the categories match the functional areas within an airline. On the negative side, he states that it is not always possible to accurately distinguish between direct operating costs and indirect operating costs.

Authors like Doganis (2010b:65), Wensveen (2015:348) and Vasigh, Humphreys, and Fleming (2015:48–51) take this ICAO classification a bit further and discuss cost structures under the headings of operating costs and non-operating costs. Operating costs are further divided into direct operating costs and indirect operating costs. All of these costs are summarised in Table 3.7.

**Table 3.7: Categorisation of airline costs**

| OPERATING COSTS | |
|---|---|
| **Direct operating costs**<br><br>1. Flight operations<br><br>- Flight crew expenses<br>- Fuel and oil<br>- Airport and en-route charges<br>- Aircraft insurance costs<br>- Rental/lease of flight equipment<br>- Other flight operation expenses<br><br>2. Maintenance and overhaul<br><br>- Engineering staff costs<br>- Spare parts consumed<br>- Maintenance administration<br><br>3. Depreciation and amortisation<br>- Flight equipment<br>- Ground equipment and property<br>- Extra depreciation<br>- Amortisation of development costs and crew training | **Indirect operating costs**<br><br>1. Station and ground expenses<br><br>- Ground staff<br>- Buildings and equipment<br>- Transport<br>- Handling fees paid<br><br>2. Passenger services costs<br><br>- Cabin crew salaries and expenses<br>- Other passenger service costs<br>- Passenger insurance<br><br>3. Reservations, sales and promotional costs<br><br>4. General administrative, and other costs |

| NON-OPERATING COSTS AND REVENUES |
|---|
| 1. Gains from the retirement of property or equipment (aeronautical and non-aeronautical)<br>2. Interest paid on loans<br>3. Profits and losses arising from affiliates<br>4. Other items not classifiable into other categories - e.g. currency transactions<br>5. Direct government subsidies and other government related payments |

**Source:** Doganis (2010b:65–78) and Wensveen (2015:348–352).

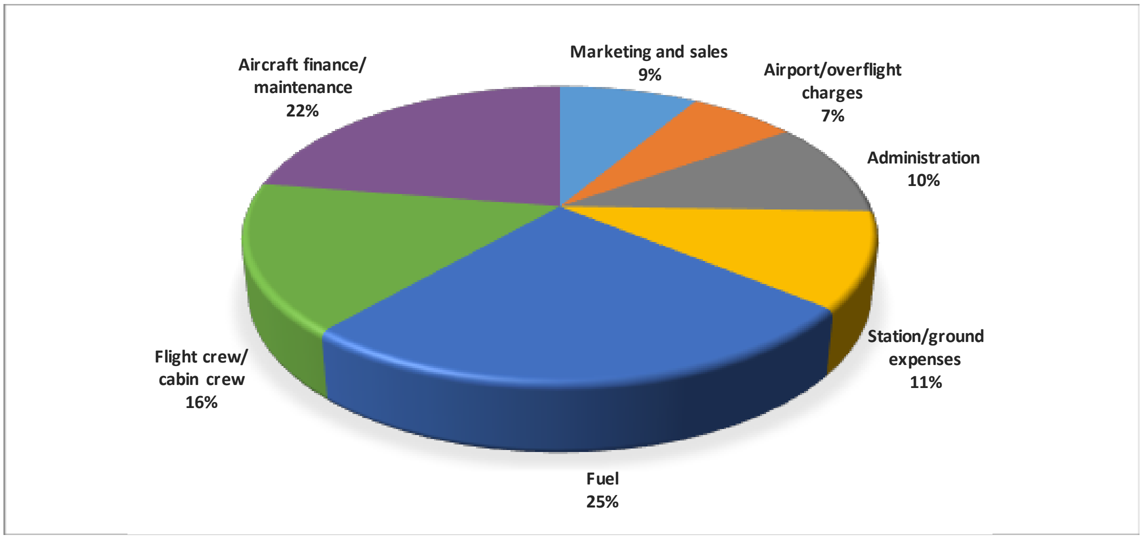
Non-operating costs are defined in Wensveen (2015:351), as "those expenses and revenues not directly related to the operation of an airlines own transportation services". The nature of the non-operational costs are usually quite different for each airline. These costs arise out of specific deals the company makes, the unique circumstances in the home market, the nature of governmental influence or subsidies, or the sale of aircraft of other assets for example. Some non-operational costs include interest paid on loans and profit/losses from affiliated companies. Due to the unique nature of these non-operational costs, they provide little value for analysis and thus comparisons between airline costs are best done before the inclusion of non-operational cost figures (Doganis, 2010b:66).

Direct operating costs (DOC), as defined by Holloway (2010:275), are costs that "are largely dependent upon the types of aircraft in the fleet and how they are operated and so would change if the fleet were changed or operated differently". The DOCs for an airline are a function of aircraft characteristics, the airline's fleet mix, route structure, and route network. The specific DOCs are highlighted in the top left section of table 3.7. DOCs can be calculated based on time, that is, annually, monthly, weekly, or daily. They can also be calculated based on a particular route or for the entire network. DOCs can also be calculated for a particular aircraft or for particular key performance areas (Merkert, 2010:23). In the context of total costs to an airline, DOCs make up, on average, 50% of the total costs (Williams, 2008:11). This figure can vary though, with DOCs representing up to 70% of the costs for some airlines.

Indirect operating costs (IOC) are defined in Holloway (2010:275) as "costs related to the sale and delivery of passenger and cargo services that are independent of the composition or usage of an airline's fleet." The costs in this case are passenger-related and general administration related as opposed to DOCs, which are aircraft related. The specific IOC's for an airline are highlighted in the top right section of table 3.7.

Total operating costs are the sum of the DOCs and IOCs. Figure 3.15 provides insight into the make-up of an airline's operating costs and the contribution of individual costs to the total cost. This figure 3.15 clearly identifies labour, fuel, aircraft finance and aircraft maintenance as the biggest costs with the other cost items forming a smaller percentage of total cost (the latest version is inaccessible due to cost considerations).

**Figure 3.15: Distribution of airline total operating costs**




**Source:** Adapted from IATA (2011d:25).

Belobaba et al. (2015:5f) discuss costs from an administrative and functional perspective. Administrative categories follow accounting principles in that costs are reported as inputs (operating costs) to deliver outputs (operating revenues). Examples of categories include labour costs, materials purchased, services purchased, and categories for other uncategorised costs. The downside of this categorisation is that it does not provide a breakdown of the costs that are associated with aircraft operations and those with ground or back office operations. This results in a total cost for labour being given with no distinction between labour costs for operating the aircraft and labour costs of support functions (sales, admin, and procurement for example). The other option addressed by Belobaba et al. (2015:5f) is the functional cost categorisation. In this case, costs are categorised according to the various functions within the airline. They identify three main cost categories;

- **Flight operating costs.** Covers all costs associated with the operation of the aircraft. Included here are flight operations, maintenance, and depreciation and amortisation.
- **Ground operating costs.** Covers all costs directly incurred when getting the customer to use the air service. Included here are ticket selling and promotional costs linked directly to reservations, ground-handling costs at the airport, and aircraft handling costs on the ground.
- **System operating costs.** These are typically indirect operating costs that are not directly involved in supplying the air travel service. They are support functions and are costs that are necessary to ensure that the flying operations can run smoothly. Included here are passenger service costs, advertising and publicity, general admin costs, and other transport-related overheads.

This functional approach described above closely resembles the ICAO approach.

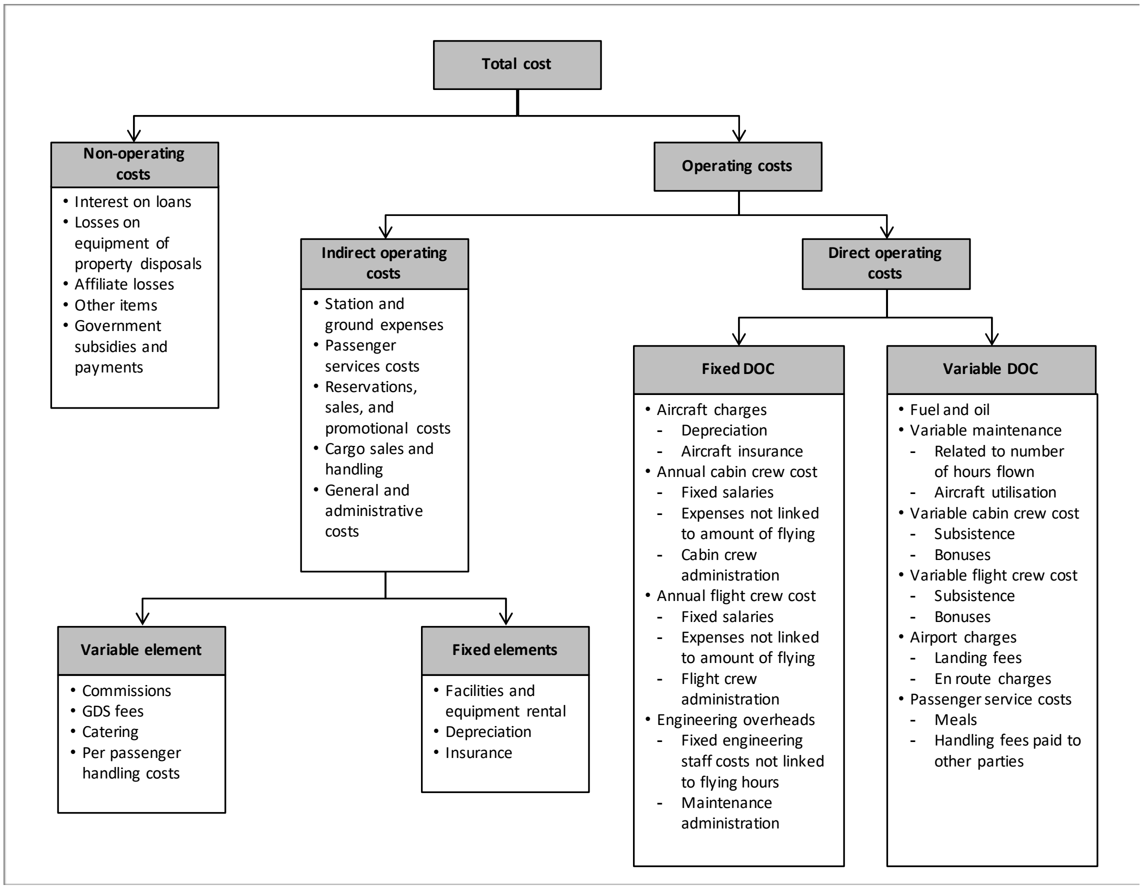
The discussion thus far has focussed on classifying an airline's costs in a relatively simplistic manner, which allows management and accounting tasks to be performed. From an economic evaluation perspective, they offer limited assistance (Doganis, 2010b:79). Economic evaluation looks at both the explicit and implicit costs. This, as was addressed earlier, means looking at the opportunity costs associated choosing one option over another. As an example, an airline might need to evaluate the opportunity cost of adding a route from Durban to Mpumalanga instead of a route from Durban to Pilanesberg (Sun City). In this case, the economic costs approach is of more value than just the accounting cost approach as it brings in the implicit cost element in order to evaluate the opportunity costs. An earlier classification also gave reference to classifying costs in relation to output. It was highlighted here that costs are viewed in terms of their impact on output, that is, they are either fixed costs or variable costs. In order to be able to perform economic analysis and make the relevant cost decisions it is therefore necessary to divide an airline's costs in fixed and variable costs (Wensveen, 2015:352). From an economics perspective, the best method of classifying operational costs is therefore in terms of output (Vasigh et al., 2013:104). The concept of escapability is one that needs to be introduced at this stage.

Escapability simply refers to the amount of time that has to pass before a cost can be avoided or escaped (Doganis, 2010b:78). Some costs can be avoided immediately based on a simple management decision, whilst other costs are unavoidable for a much longer timeframe – for example, aircraft repayments which are a cost incurred over the long-term and exist until the aircraft is paid off or sold. In an economic sense, any cost for an organisation becomes variable over time (Holloway, 2010:267). At some point in time, a point will be reached when an organisation can free itself from a cost commitment thus eliminating that fixed cost from its operating costs. It is just the amount of time that varies or the nature of the cost.

To understand the nature of the escapability of costs and the impact of actions on costs, airline managers take their direct and indirect operating costs and sub-divide them into fixed and variable costs (Merkert, 2010:37; Wensveen, 2015:352). This gives the airline a clearer understanding of the costs that will remain and those that will be eliminated should various courses of action be taken. This then provides useful information to be used when assessing the opportunity costs of a decision and ultimately which opportunity will maximise the benefits to the airline.

At the simplistic level, fixed costs are those costs that remain fixed in the short term irrespective of the level of output. In airline terminology, this output is referred to as Air Seat Kilometres (ASK). Variable costs are those that vary in relation to increases or decreases in output (Vasigh et al., 2013:101). The total cost for an airline is thus the sum of the fixed and variable costs. Figure 3.16 shows the cost classifications of direct and indirect operating costs, as identified in table 3.7 but with the added breakdown of the cost items into fixed and variable costs.

**Figure 3.16: Cost classification showing fixed and variable costs**




**Source:** Adapted from Doganis (2010b:81) and Holloway (2010:274).

In the context of the air travel industry, variable costs can be referred to as flying costs and fixed costs referred to as standing costs. It is also important to note that, whilst variable costs fluctuate in relation to output, the cost fluctuations are not in proportion to the changing output (Vasigh et al., 2013:103). As was established earlier, due to the nature of the air travel product it is not always possible to make changes to supply in the short-term. As an example, schedules are planned long in advance and reservations are taken many months in advance thus making it complicated to make a schedule change within a week or even a month. The analysis of fixed costs and variable costs allows airline managers to evaluate the costs involved should such changes need to be made (Holloway, 2010:271–272).

The nature of fixed and variable costs also explains, to an extent, the nature of competition between FSCs and LCCs (Belobaba et al, 2009:122–125; Holloway, 2010:360–361). More specifically, it illustrates why some FSCs have battled to compete with LCCs when introducing a LCC of their own or simply tried to compete on the basis of low costs with the LCCs. The FSCs, or 'legacy carriers' as they are often referred to, come with a legacy; a legacy of an existing 'high' cost structure. To compete with LCCs, many of the legacy carriers reduced the prices of their tickets on offer but these short-term changes did not match the existing fixed cost structures. So, despite the increase in passenger numbers due to the lower fares, their fixed costs were still the same and in effect the ‘legacy’ carriers were simply reducing their margins. These ‘legacy’ carriers were in effect engaging in tactics that did not match their strategies and cost structure, which affected their bottom-line. The LCCs on the other hand were mostly newly established airlines, with no legacy fixed costs, and their business models were focussed on low costs and the principles of the low-cost model. This meant that their cost structures were focussed on low prices and they were thus better able to compete with the FSCs who were trying to operate in a manner at odds with their business model.

### 3.5.3 Specific costs

The discussion thus far has considered overall cost categorisations without much being said about the various costs contained in them. Whilst an analysis of most of these costs is given in the next chapter, which focusses on the industry analysis, a few comments will be given here on some of the most important costs to put them into context with the airline industry. Jet fuel, labour, and aircraft maintenance are discussed in this section.

#### 3.5.3.1 Jet fuel

Airline fuel costs are traditionally the biggest cost of operation for most airlines (Doganis, 2010b:90). This was particularly the case for the years 2008 and 2011–2014 which saw the price of jet kerosene averaging around US $120 or higher for the year (IATA, 2016f). Table 3.8 highlights the crude oil and jet fuel price volatility for the years 2006–2017 (This section focusses on the jet fuel price as a business cost. The influence of the oil price on the air transport industry is addressed in section 1.2.1.3, with section 4.2.3 reviewing the overall macro trend in the oil price in the global context). The table also highlights the fuel expenditure of global airlines as a percentage of costs for the past 10 years. The rise of fuel costs as a percentage of total costs is seen to range from 29.8% of total expenses in 2007 to a high of 33.2% in 2012 and 2013. A look at the relevant figures further into the past shows that the jet kerosene price ended 2003 at only US $34.7 per barrel with fuel only making up 14% of an airlines costs (IATA, 2012c).

**Table 3.8: Global Jet fuel expenditure 2007–2017F**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016e | 2017f |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jet fuel expenditure (US $ billion) | 146 | 203 | 134 | 151 | 191 | 228 | 231 | 224 | 180 | 124 | 129 |
| Jet fuel as a % of costs | 29.8% | 35.6% | 28.3% | 28.3% | 30.7% | 33.2% | 33.2% | 31.3% | 27.3% | 19.2% | 18.7% |
| Crude oil price - Brent (US $ per barrel) | 73.0 | 99.0 | 62.0 | 79.4 | 111.2 | 111.8 | 108.8 | 99.9 | 53.9 | 44.6 | 55.0 |
| Jet kerosene price (US $ per barrel) | 90.0 | 126.7 | 71.1 | 91.4 | 127.5 | 129.6 | 124.5 | 114.8 | 66.7 | 52.1 | 64.9 |

**Source:** IATA (2016f).

Table 3.8 shows that the outlook is extremely positive for the end of the 2016 with fuel expected to make up only 19.2% of global airline costs. The lower oil price in 2015/6 is attributed to continued US oil output and slowing oil demand due to continued slow economic growth around the globe (The Economist, 2014:2–3). The price of jet fuel is linked to the price of crude oil, so the continued fluctuation of the oil price and the market forces influencing this volatility will continue to affect the price of jet fuel into the future (Doganis, 2010b:90). Given the dependence of aircraft on fuel, the fuel cost is one that is largely out of an airline's control.

The cost of fuel to an airline is influenced by two broad factors, (i) the price of jet fuel in the market, and (ii) fuel efficiency (Vasigh et al., 2013:118). Airlines are not able to control the price of jet fuel and crude oil, but they can manage their fuel bill through efficient purchasing and fuel investment strategies (hedging) (Holloway, 2010:287). In terms of fuel efficiency, airlines do have a degree of control in that they can select fuel-efficient aircraft and invest in the latest technologically advanced aircraft to reduce their fuel burn for example. Many airlines employ minor actions in their operations that reduce fuel burn. This includes removing unnecessary items from the aircraft in order to reduce weight and properly maintaining the exterior of the aircraft to ensure that any damage is repaired to reduce unnecessary drag on the aircraft. However, most of the improvements in fuel efficiency have come from technological advancements in fuel technology and jet engine technology (Doganis, 2010b:93). New technology does however come at a cost, but it does result in longer-term fuel savings. Figure 3.14 in section 3.5.1, shows the increase in fuel productivity that has taken place over the past decade. Whilst it is not as significant as the efficiency improvements in labour, it does represent a significant cost saving to the airlines. The use of fuel investment strategies like hedging can be a powerful mechanism to reduce the impact of fuel increases (Holloway, 2010:287). However, with the volatility of the oil price and the increasing difficulty in predicting the direction of change, this is a risky strategy and can result in large losses to an airline if they hedge at the wrong time. An example of an airline that has succumbed to the riskiness of the fuel-hedging instrument is South African Airways, which has experienced a number of severe fuel hedging losses over the past decade. The 2008/2009 financial year saw them make over ZAR 1 billion loss on fuel hedges with the 2004 losses being even higher (Centre for Aviation, 2009). Comair also suffered a fuel hedging pre-tax loss of ZAR 71 million on Dollar-oil hedges in 2016 based on hedges made in mid-2014 (Maqutu, 2016). A strengthening of the Rand towards the end of 2016 saw the extent of this fuel hedging loss reduced (Gernetzky, 2017b).

Many factors affect fuel consumption and thus fuel costs. Jet fuel consumption is affected by the size of aircraft operated on a route, the distance travelled on a sector, and the staff required on a particular sector. Weather conditions, like wind speeds during the flight also affect fuel consumption and thus fuel costs. Governmental taxes and levies also significantly add to the fuel bill.

In summary, Holloway (2010:286) identifies six key drivers of an airline's annual fuel cost:

- The age of the aircraft
- Jet fuel market price
- Fuel price pressure in domestic market
- Design of the airline's network
- Factors at the airports that the airline serves
- Currency exchange rates

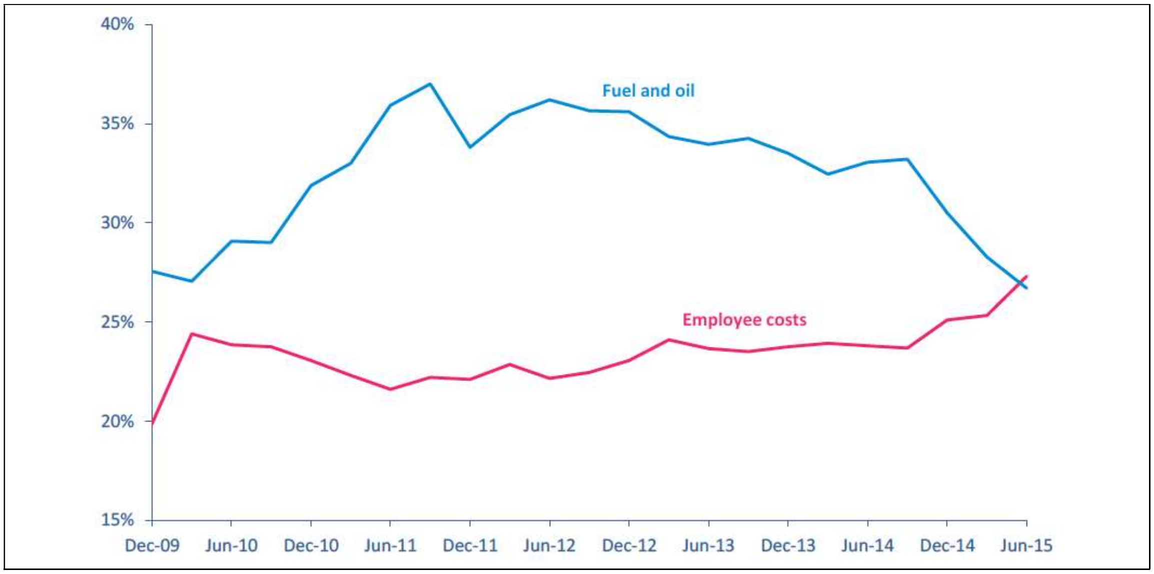
Ultimately, fuel costs significantly add to an airline's overall costs, which will lead to airfare increases and/or fuel surcharges when the price of fuel increases. Conversely, when the price of fuel decreases, airlines have the option of reducing fares in order to be more competitive. Depending on whether the fuel price increases or decreases, the cost to the consumer will increase or decrease which will have a knock-on effect in terms of reduced or increased consumer demand. Research reported by Airbus in 2011 (Airbus, 2011b:33) states that increasing fuel costs are particularly negative in the leisure travel market where demand is price elastic and even more so in current market conditions where global economies are struggling to emerge from economic recession.

Viewing the cost impact of the rising or declining price of jet fuel in isolation provides a misleading picture in some cases. This is because the price of oil is largely priced in USD dollars and thus any currency fluctuations have an influence on the price paid per barrel. For emerging economies like South Africa, Brazil, or Russia, a drop in the oil price might be counteracted by a strengthening of the Dollar against the Rand and thus significantly reduce the benefits of a lower oil price (IATA, 2016:12) (*see* section 4.2.3 for the discussion on the trends in the oil price).

#### 3.5.3.2 Labour

From 2001 to 2003, labour was the biggest direct operating expense for airlines in the air transport industry. The rapid increase in oil prices from 2004 to 2008 saw fuel costs gradually overtake labour costs as the biggest direct operating cost to the industry (IATA, 2010a:2). This occurred at different rates across the different continents but by 2008 fuel was the largest operating cost across the global industry (IATA, 2010a:1–2). With the slight easing of the oil price in 2009, the gap between fuel and labour costs narrowed, but following another oil price spike from 2011 to 2014 (which saw the price of Jet kerosene at over US $120 per barrel) fuel costs overtook labour as the largest operating cost (IATA, 2015b). The turmoil in the air transport industry that began with the financial crisis in 2008 resulted in a number of restructurings in the air transport industry that have allowed airlines to reduce their labour headcount and become more labour-efficient. It was only at the end of 2014, when the oil price once again tumbled, that fuel and labour costs converged again with mid-2015 seeing labour costs overtake fuel costs as the largest operating cost for airlines (albeit at a very small margin) (IATA, 2015b). IATA forecasts that at the end of 2016, labour costs will still be the largest operating cost for airlines. Figure 3.17 highlights the divergence and convergence of labour and fuel costs as a percentage of total operating costs across the global air transport industry from the beginning of 2010 to the end of 2015.

**Figure 3.17: Labour and fuel costs as a percentage of operating costs**




**Source:** Adapted from IATA (2015b).

Given that the air travel industry is a service industry with a highly complex and labour intensive product, it is logical that labour would be a major component of an airlines costs. Holloway (2010:308) identifies seven main drivers of labour costs that require careful management. These include staff numbers, salary packages, social costs, labour contracts, seniority, training, and the level of outsourcing. Each of these combines to influence the total labour cost for an airline. To put the nature of labour costs into context it is worthwhile highlighting the number of employees that work for some airlines. Comair (British Airways and kulula.com) at the end of the 2015/16 financial year had 2 085 employees (Comair, 2016:3). South African Airways, which operates international routes, had 10 706 employees at the end of 2016 (South African Airways, 2016a:4). Whilst 10 706 people is a significant number of employees and begins to illustrate the importance of labour costs, it is when considering the larger international operators that the bigger picture emerges. Examples of employee numbers at a few of the larger international operators (for the identified periods) include:

- Southwest Airlines (LCC) – approximately 53 000 employees (end 2016)
- Emirates (FSC) – 61 205 employees (FY 2015/2016)
- Delta (FSC) Airlines – 83 756 employees (end 2016)
- Ryanair (LCC) – approximately 12 000 employees (end 2016)

**Sources:** Emirates (2016a:5); Delta Airlines (2017a:6); Southwest Airlines (2017); Ryanair (2017a).

In most industries, labour is one of the largest costs to an organisation and one of the first costs to be reduced in periods of decline. From the airline's perspective, a number of key issues make the task of managing the labour force more challenging. Workers in the industry are highly unionised (Vasigh et al., 2013:121). The operation of a flight also requires that a lot of services need to be provided. Not only are these services provided by the airline's own staff, but many services are provided by external operators like airport staff, catering staff, air traffic control for example. Union action by just one of these providers affects the operations of all stakeholders and can result in cancelled flights, which have numerous cost implications for the airline. Another issue that adds to the challenge of labour costs is that airlines are service businesses. Reduction in staff numbers can severely impact on the delivery of the promised service levels as well as reduce general staff morale (Holloway, 2010:312). Doganis (2010b:99) identifies flight crew, cabin attendants, and maintenance engineers as the three most expensive labour clusters for an airline. With this in mind, it should also not be forgotten that many of these jobs (pilots and maintenance engineers specifically) are highly skilled jobs and thus airlines need to employ highly skilled labour (O'Connor, 2001:81). Highly skilled labour is more expensive than unskilled or semi-skilled labour, which adds to the operating costs.

As was illustrated in figure 3.14, of the three main costs to an airline, labour productivity has improved the most over the past 50 years (IATA, 2011d:8). This has been achieved through strict management of employee numbers, greater efficiencies from ground staff, and the outsourcing of non-core operations (IATA, 2011d:8). Another way in which employee productivity has been enhanced in the industry is by reducing the number of tasks that have to be performed by people through the introduction of specific technologies and by transferring some of the tasks to the passengers themselves (Belobaba et al., 2015:597p). Examples of this include passengers being able to book their tickets online, check-in online, and print their own online boarding pass. Some airports even require that the passenger weigh and tag their own baggage and then drop it off for loading. Improved aircraft technologies have made aircraft more efficient and robust and thus require less maintenance, which increases overall labour efficiency. For long haul carriers, costs like overnight and stopover allowances for cabin staff and pilots add to the overall costs (Holloway, 2010:308).

#### 3.5.3.3 Aircraft and aircraft maintenance

The size of an airline's fleet has an impact on its costs and revenues. Each airline bases its aircraft type and fleet size on factors like the markets in which they operate, the distances travelled per sector, demand, and financial negotiating power to name but a few. The impact of the fleet on the airline's costs is a function of the fleet size and composition, the age of the aircraft in the fleet, the size of aircraft, the speed of the aircraft, and the cabin configurations (Holloway, 2010:313). In terms of utilising aircraft (owned or leased), airlines are faced with leasing payments (if leased), depreciation (if owned), capital repayments, interest repayments, and insurance costs to highlight the broadest expenses. Putting the cost of aircraft ownership into perspective, table 3.9 identifies the 2016 average list prices of Boeing and Airbus.

**Table 3.9: Aircraft list prices for Boeing (2016 average) and Airbus (2016 average)**

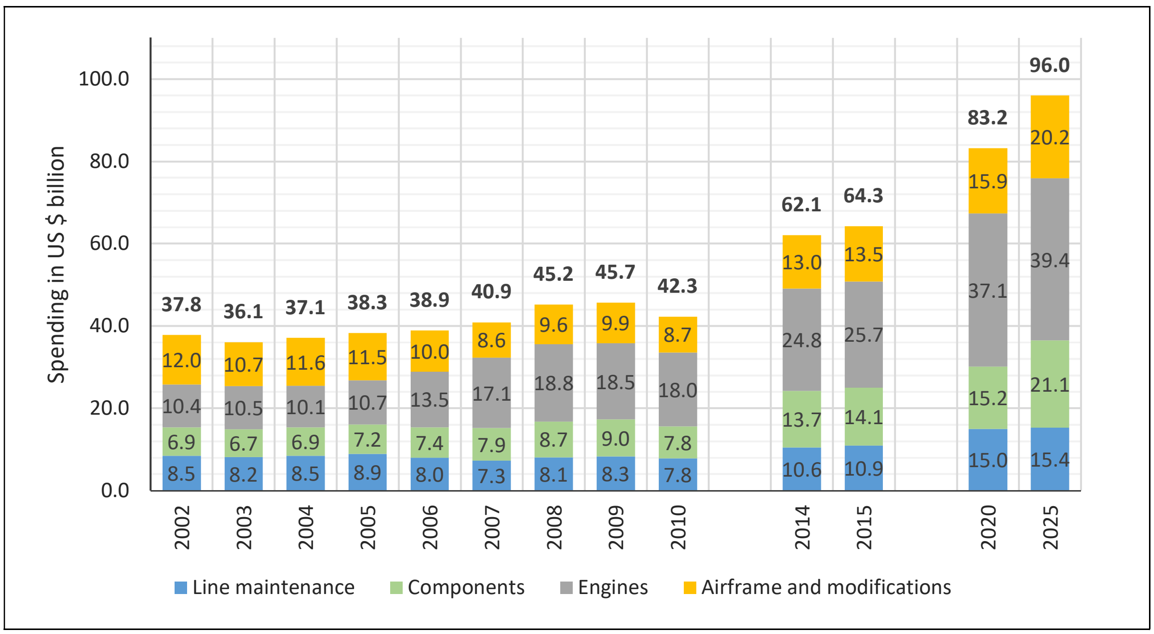
| BOEING | | AIRBUS | |
|---|---|---|---|
| **Aircraft** | **2016 avg. list price (US $ mil)** | **Aircraft** | **2016 avg. list price (US $ mil)** |
| 737-700 | 80.6 | A318 | 75.1 |
| 737-800 | 96.0 | A319 | 89.6 |
| 737-900ER | 101.9 | A320 | 98.0 |
| 737 MAX 7 | 90.2 | A321 | 114.9 |
| 737 MAX 8 | 110.0 | | |
| 737 MAX 200 | 112.9 | A319neo | 98.5 |
| 737 MAX 9 | 116.6 | A320neo | 107.3 |
| | | A321neo | 125.7 |
| 747-8 | 378.5 | | |
| 747-8 Freighter | 379.1 | A330-200 | 231.5 |
| | | A330-800neo | 252.3 |
| 767-300ER | 197.1 | A330-200F | 234.7 |
| 767-300 Freighter | 199.3 | A330-300 | 256.4 |
| | | A330-900neo | 287.7 |
| 777-200ER | 277.3 | | |
| 777-200LR | 313.8 | A350-800 | 272.4 |
| 777-300ER | 339.6 | A350-900 | 308.1 |
| 777 Freighter | 318.7 | A350-1000 | 355.7 |
| 777-8 | 371.0 | | |
| 777-9 | 400.0 | A380-800 | 432.6 |
| | | | |
| 787-8 | 224.6 | | |
| 787-9 | 264.6 | | |
| 787-10 | 306.1 | | |

**Source:** Boeing (2016a) and Airbus (2016c).

Aircraft maintenance is a crucial and regulated component of any airline operation. Aircraft cost money and the only way for them to make money is if they are flying. Any maintenance issues that put an aircraft out of operation, even for a short period, cost an airline a lot of money. The issue of maintenance therefore revolves around ensuring passenger safety and avoiding delays and breakdowns. It is also, as Holloway (2010:316) notes, an issue of branding and perception. Aircraft undergo a structured maintenance schedule and these costs add up. This cost differs wildly for different airlines and is based on the size of their fleet as well as the size and type of the aircraft in their fleet (Vasigh et al., 2013:123). Logically, the more aircraft in the fleet and the larger the aircraft, the higher the maintenance cost. Other issues that need to be considered when looking at maintenance costs, at noted by Holloway (2010:318), include the age of the aircraft in the fleet, standardisation of the fleet, and the level of aircraft utilisation. LCCs focus on achieving maximum utilisation of their aircraft per day which means that extra pressure is placed on the aircraft. This reduces the amount of time between maintenance checks. LCCs tend to have lower maintenance costs per block hour when compared with FSCs simply because they are newer market entrants with newer fuel-efficient aircraft (Belobaba et al., 2015:5y).

Figure 3.18 identifies the estimated global annual spend by airlines on maintenance, repair, and overhaul (MRO) for a number of identified periods. From this figure, it can be seen that the total spending on MRO has grown steadily over the past decade. The years 2008–2010 saw the MRO spend stabilise and even decline briefly. This relates to the economic crisis at the time. Figure 3.18 highlights the fact that MRO spending is expected to grow substantially to the year 2025. A large part of this increase in overall spend is due to a growing global fleet (more aircraft to maintain). Noteworthy from figure 3.18 is how the MRO costs are divided up and which elements are increasing more than others. In this case, it can be seen that the MRO spending on engines is growing more than the other three elements and by 2025 it is expected that the percentage spend on MRO for engines will represent 41% of total MRO spend (IATA, 2016h:16). By 2025 it is expected that the Dollar value of MRO spend by global airlines will be US $96 billion, which is a substantial cost element in any economic sector.

**Figure 3.18: Global MRO spending and forecast**




**Source:** IATA (2015c:8) and IATA (2016h:16).

The way in which airlines handle the maintenance function differs significantly between airlines as well. Some do it all in-house, others outsource it, whilst others perform certain checks in-house and outsource the bigger checks (Vasigh, 2013:122). Flight equipment maintenance involves three major cost categories; airframe maintenance, engine maintenance, and an overhead maintenance burden (Wensveen, 2015:349). Each of these categories require labour inputs and materials (parts) to perform the maintenance task and thus have associated costs. These maintenance activities are carefully managed to minimise costs and disruptions and to maximise efficiency and productivity in terms of assets and performance.

## 3.6 ISSUES OF PRICING AND DISCRIMINATION

The topic of demand was addressed in section 3.3 of the study. Price, in the context of the demand curve and the influences on demand, was identified in section 3.3.4 as a key determinant of air travel demand. The analysis of the collected data also revealed that price is a crucial issue for many passengers. For this reason, the topic is addressed in some detail in this section. The intention is not to address and explain the intricacies of airline pricing, but rather to outline the key issues and establish the link between pricing and its influence on demand and supply. Price can be viewed from a number of different perspectives; the economist's perspective, the accountant's perspective, or the marketer's perspective. In the context of this chapter, reference to price will refer to the monetary cost to the customer only. (*see* section 5.2.3.6 for the quantified discussion on the global trend in airline prices).

### 3.6.1 Pricing in context

Airlines are providing a service. The nature of the service product presents the marketer with a number of special considerations when addressing the issue of pricing (Hoffman, Bateson, Wood, & Kenyon, 2009:201). These special considerations require that the airline marketer pays special attention to the influences of pricing on the issues of demand, costs, customer behaviour, competitor's actions, product design issues, and legal implications. According to Docters, Reopel, Sun, and Tanny (2004:23), service marketers face two unique pricing challenges;

- Services are intangible and therefore customer demands are more variable.
- The cost of service failure goes beyond the service's price.

With the service being intangible and made up of number of service elements, determining the actual cost, and resultantly the price, is more difficult. The cost of failure can be particularly high for the customer. A delayed flight causing a businessperson to miss a business meeting cannot be made up with a 'replacement' service. A seat on the next available flight still means that the meeting is missed due to the time delay.

Given the complex nature of the commercial air travel market and the need to improve the financial performance of airlines, it can easily be understood why the issue of pricing is one that receives a significant amount of attention in the management of an airline. In fact, as Doganis (2010b:253) state, price plays a critical role in combining the service features in an effort to match demand with supply. It is well known that airline prices are highly confusing to consumers and are a source of many complaints. Fares are also highly variable with different fares not only applying to different routes but also to different passengers on the same flight (Doganis, 2010b:255; Vasigh et al., 2013:347). This fact links in with the unique characteristics of a service but also addresses the point that the final fare that the customer pays is made up of a number of different elements (Shaw, 2011:211). Holloway (2010:126) provides a simple breakdown of an airfare in order to distinguish between the part of the fare that contributes an airline's revenues and the part that is passed on to other stakeholders. This breakdown can be seen in table 3.10.

**Table 3.10: Composition of an airline's ticket price**

| | Contributes to airline operating revenue | Does not contribute to airline operating revenue |
|---|---|---|
| **Customer required to pay** | • Fare<br>• Fuel surcharge<br>• Other charges and fees that the airline does not legally have to collect and transfer to a third party | • Taxes, fee and other charges that have to be collected by the airline and passed on to the relevant government and airport authorities<br>• Examples include airport taxes, security charges, VAT, safety charges, baggage handling, and ticket taxes. |
| **Customer has an option to pay** | • Service attributes separated from the main air travel product. Referred to as ancillary services | |

**Source:** Holloway (2010:126).

Table 3.10 highlights the point that the airfare that is paid by the customer is a combination of a variety of separate charges from a number of suppliers and are not just charged by the airline. A distinction is made between those components that are optional and those that are not. In general, the airfare is made up of the airline base fare and then the various taxes, levies, and any surcharges that are added to arrive at the final price. Airport taxes, charges, and other governmental fees are compulsory and do not form part of the airline's revenue. From an airline's perspective, these additional taxes and governmental fees are beyond their control and the only way to reduce them is to absorb the cost themselves, which then affects their own margins and profitability. As can be seen from the example of a return domestic flight within South Africa given in table 3.11, taxes and other charges form a meaningful percentage (22.6%) of the final fare paid. (*see* section 5.4.5, which focusses on taxes and tariffs as part of the ticket price, for additional examples of pricing across all South African domestic carriers).

**Table 3.11: Domestic flight quote illustrating base fare, taxes and charges**

| **Price details for a return fare on SAA from Cape Town to Johannesburg, departing 21 November 2016 and returning 24 November 2016 (quoted 20 October 2016)** | | |
|---|---|---|
| **TOTAL FARE FOR ONE ADULT** | | **ZAR 1 886,46** |
| **Total Air transportation charges** | | ***ZAR 146,00*** |
| - Base fare | ZAR 600,00 | |
| - Carrier imposed fees (YR) | ZAR 860,00 | |
| **Total taxes, fees and charges** | | ***ZAR 426,46*** |
| - South Africa: Passenger safety charge (EV) | ZAR 40,46 | |
| - South Africa: Passenger service charge (ZA) | ZAR 254,00 | |
| - South Africa: value added tax (ZV) | ZAR 84,00 | |
| - South Africa: Passenger service and security tax (UM) | ZAR 48,00 | |

**Source:** South African Airways (2016b).

The 'optional' components in table 3.10 refer to 'value-adding' services that the customer can purchase to improve or facilitate the service experience. This so-called ancillary revenue is prevalent amongst LCCs, who have unbundled their products and charge separate fees for the unbundled items (Shaw, 2011:110). The customer is free to choose which of these services to purchase. Examples here include excess luggage, advance seat reservations, priority boarding options, and on-board food and drinks.

### 3.6.2 Influences on pricing

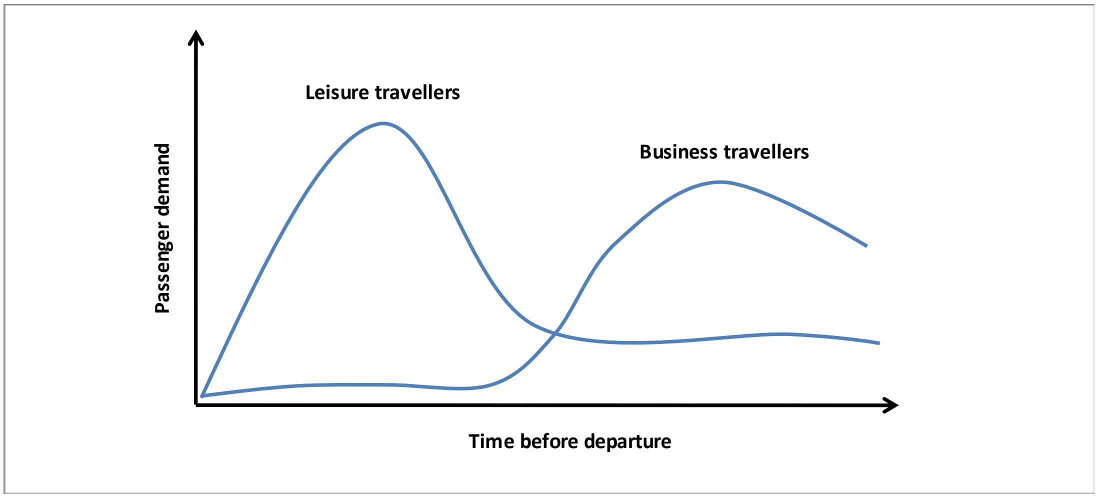
It was stated in section 3.4.4 that airline management revolves around seeking equilibrium by matching available demand to the available supply at a price in order to generate profit. Doganis (2010b:254) further referred to the link between price, demand, and supply by stating that profitability is determined by the airline's unit costs, unit revenues, and load factors. The link here is that costs are a supply-side variable and revenues and load factors are demand-side variables.

Mason (2010b:4) highlights a number of key factors affecting pricing strategies. He divides these influences into two components; (i) supply factors and (ii) market factors. In terms of supply factors, Mason (2010b:4) identifies influences like the regulatory situation that prevails in a country, the capacity in the market, the cost of providing the service, and the extent and type of competition in the market. From a market factor point of view, he identifies the state of the economy, the customer's willingness to pay, and the extent of demand elasticity that exists in the market.

From the above, and the earlier discussions on demand in section 3.3.4, it can be seen that demand influences prices and that prices influence demand. Demand in the air travel industry is however complicated by the fact that there are so many different segments 'competing' for seats on a flight at any one time. The needs and characteristics of the different segments are such that each segment exhibits different purchasing behaviour and timing of purchases. In fact, this timing of demand varies not only over the months leading up to the departure date, but also on the day of the week and even the time of the day. Airlines face the task of managing this segmental demand to ensure that they sell their seats to customers who will pay the highest fare. A hypothetical example of this is illustrated in figure 3.19.

Figure 3.19 highlights the difference between leisure travellers and business travellers in terms of the time in advance of a flight when their tickets are purchased. Mason (2010b) states that leisure travellers, who are price sensitive, generally know when they want to travel before business travellers do and therefore purchase their tickets longer in advance in order to take advantage of the cheaper tickets available. Business travellers, who are less price sensitive, purchase their ticket a lot closer to the date of departure and generally pay a higher fare. Ticket prices are cheaper when purchased long in advance and get increasingly expensive as the departure date arrives as airlines raise ticket prices in response to demand. In an ideal situation, the airline would like to sell all its tickets at the higher price to maximise revenues. However, they also face the situation where the number of tickets sold in advance could reach capacity before the higher yielding business travellers start purchasing. In this case, it is in the airline's best interest to hold back some capacity for a flight in order to release it closer to the departure date to take advantage of the higher revenue (higher prices) from the business travellers. Demand in this case has a clear influence on the pricing strategy followed (Mason, 2010b).

**Figure 3.19: Hypothetical ticket purchasing profile – leisure versus business travellers**




**Source:** Adapted from Mason (2010b:8).

From the supply side perspective, increased demand will lead to an increase in price so that the airline can supply the additional capacity to cover the additional costs (Holloway, 2010:131). In simple terms, as discussed in the section on supply (*see* section 3.4.1), increased capacity increases costs and therefore prices have to be increased. These cost increases include capacity costs and traffic costs. Costs can influence price in a more positive manner where operational efficiencies and/or improved technologies reduce the costs of providing the service thus leaving room for price reductions or opportunities for revenue maximisation.

The ability to take advantage of the forces of supply and demand is dependent on the airline's development of an appropriate pricing strategy and revenue management system.

### 3.6.3 Approaches to pricing

Much has been said in many forums, be it by the industry or the customer, about the pricing of airline tickets. On a single flight, the price paid by one passenger on that flight, enjoying the exact same product and level of service, could be up to almost double that of another passenger in the seat next to him/her (Hanlon, 2007:239). As identified in section 3.6.2, many factors influence the pricing decision. Seasonal demand, daily demand variances, and even intra-day variances require that prices be managed on a continual basis in order to best match the available supply with the available demand. Distance travelled, class travelled, the method of purchasing the ticket, and even the size of the travelling group, all have an influence on the price paid. The variability of demand and supply necessitates that a considered and well-managed approach be taken to pricing.

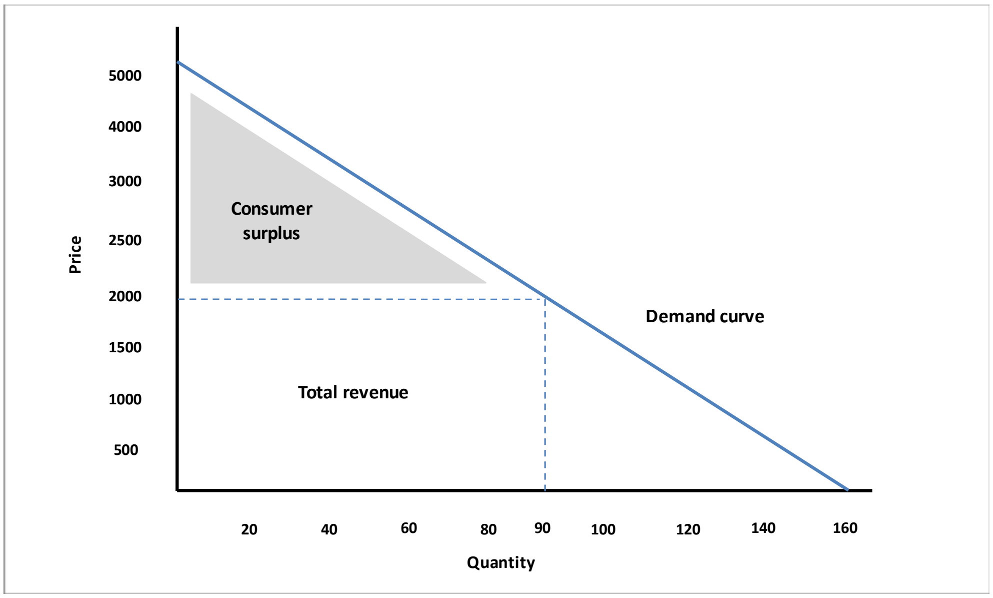
On a basic level, fares can be divided into published and unpublished fares (Holloway, 2010:144). In this sense, published fares are those that are published through the various industry channels. Unpublished fares are those fares that are not published but negotiated with specific groups and the fares negotiated are specific for that group. Mason (2010b:5) breaks the published fares down into normal/basic fares and promotional fares. A normal fare is the average unrestricted fare that is charged for travel on an airline in a particular class – be it first, business, or economy class. Promotional fares are fares that are discounted from the published normal fare for each cabin class. Attached to these promotional fares are a number of restrictions. Examples of these restrictions include departure time restrictions, limited purchasing period, and no refunds. These promotional fares are aimed at segmenting the market and offering tickets to segments based on their willingness to buy and thus their price elasticity (Doganis, 2010b:265). The establishment of these fares and their management needs to be considered in the context of an airline's approach to pricing.

A review of the literature shows that different authors address the approaches to pricing using different labels but the basic concepts that they address are the same. Belobaba et al. (2015:398z) refer to cost, demand, and service-based approaches. Doganis (2010b:259) refers to cost and market based approaches, whilst Holloway (2010:133) distinguishes between uniform, discriminatory, and differential pricing approaches. Vasigh et al. (2013:334, 336, 341–347) discuss dynamic pricing, cost-based pricing, and a uniform and multiple-pricing (which implies differential and discriminatory pricing). Shaw (2011:212) addresses uniform and differential pricing.

#### 3.6.3.1 Uniform approach to pricing

In its basic form, uniform pricing implies setting a single price for all seats on a flight (Vasigh et al., 2013:349). This approach is very cost-oriented. The fare charged is one that is based on the costs to operate the flight and a profit margin added to satisfy the airline's profitability goals. This approach does however give rise to a consumer surplus (as can be seen in figure 3.20). A consumer surplus is described as the difference between the price a consumer would be willing to pay versus the price they actually paid (Baumol & Blinder, 2016:92). Referring to the hypothetical demand curve in figure 3.20, it can be seen that using the uniform approach to pricing a fare was set at R2 000 for a flight on a route with a maximum daily demand of 160 passengers. At a pricing level of R2 000 there are 90 passengers that are willing to buy a ticket. It is also apparent that at higher price points there is demand for the flight and these consumers would have been willing to purchase their ticket at a higher price level. The result of this approach is a large consumer surplus and lost revenue for the airline. There is also a portion of the market that may be excluded from travel because they might feel that the price on offer (R2 000) is higher than what they value the service. An argument against this approach highlights that this approach does not take the individual nature of the passenger and their needs into account. The overall result of this approach might be that key segments are missed and therefore insufficient demand, and thus insufficient revenue, for a flight is generated resulting in the airline's costs not being covered.

**Figure 3.20: Basic illustration of the uniform pricing approach**

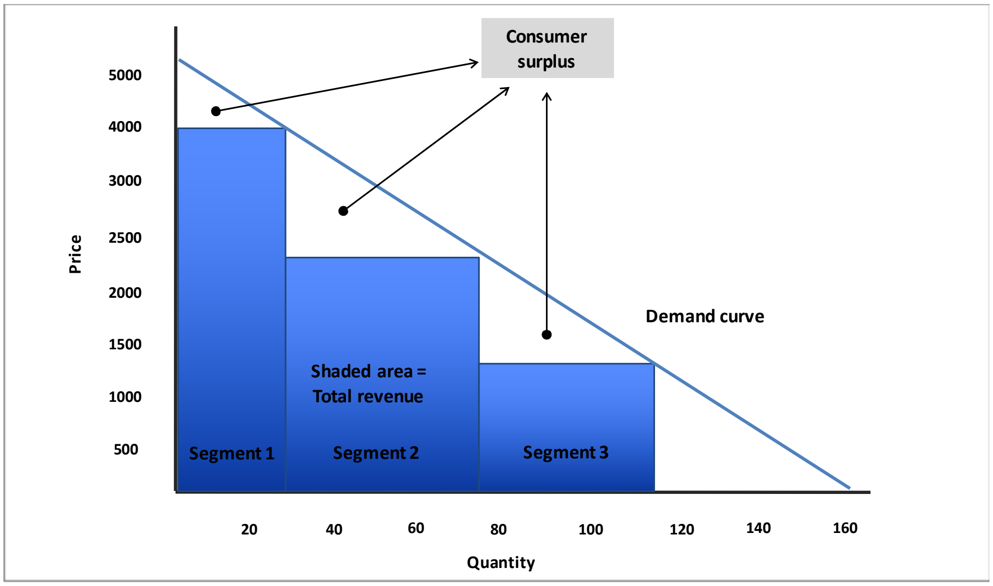



**Source:** Adapted from Doganis (2010b:275) and Vasigh et al. (2013:350).

#### 3.6.3.2 Differential approach to pricing

The differential approach to pricing moves from a cost focus to a market-focussed approach. A differential approach to pricing entails setting a price based on a differentiated product being offered to the passenger. The different products/services have additional features that add value to the product and these additional features have additional cost implications for the airline that is providing them (Belobaba et al., 2015:399b). The simplest example of this on an airline is the distinction between the first class, business class, and economy class products offered. Armstrong, Kotler, and Opresnik (2017:309) refer to this as product form pricing. This approach addresses the consumer's willingness to pay to a certain extent. Passengers purchasing a business class ticket are more willing to pay a higher fare for a ticket in order to make use of the added features of the service. A higher price is therefore charged to take advantage of the consumer's willingness to pay for the added features. In this case, the different levels of fares generate different levels of revenue with the result that the consumer surplus is reduced when compared to the consumer surplus identified under the uniform pricing approach (Shaw, 2011:213). This is highlighted in figure 3.21.

**Figure 3.21: Differential approach to pricing**




**Source:** Adapted from Belobaba et al. (2015:399d).

This approach bases its pricing on the costs of producing the differentiated products/services to the various consumer segments. It does not, however, reflect the different levels of fares charged to passengers travelling within the same class of cabin that cost the same to supply. This leads to the issue of price discrimination (Vasigh et al., 2013:351).

### 3.6.3.3 Discriminatory approach to pricing

Figure 3.21 in the previous section shows that there is a reduction in the consumer surplus compared to the consumer surplus in identified figure 3.20, but it also shows that the surplus is not eliminated. In other words, the airline is still missing out on revenue due to the fact there are still consumers buying tickets at prices lower than their 'willingness to pay' levels. To catch some of this 'lost' revenue, airlines introduce a range of pricing levels based on their consumers' levels of price sensitivity (Vasigh et al., 2013:342–345 & 351; Shaw, 2011:214). Price discrimination is defined by Hanlon (2007:246) as the situation when a "producer charges different prices for different units of the same commodity, for reasons not associated with differences in the costs of supply". There is a high focus on different market segments at which to direct the different prices.

Holloway (2010:135) sums up the purpose of a discriminatory pricing approach in three points:

- Reduce the consumer surplus in the market by capturing customers with a higher willingness to pay.
- Attract customers with a 'low willingness to pay' that would not consider travelling under the other approaches because the price is too high. Through price discrimination these passengers

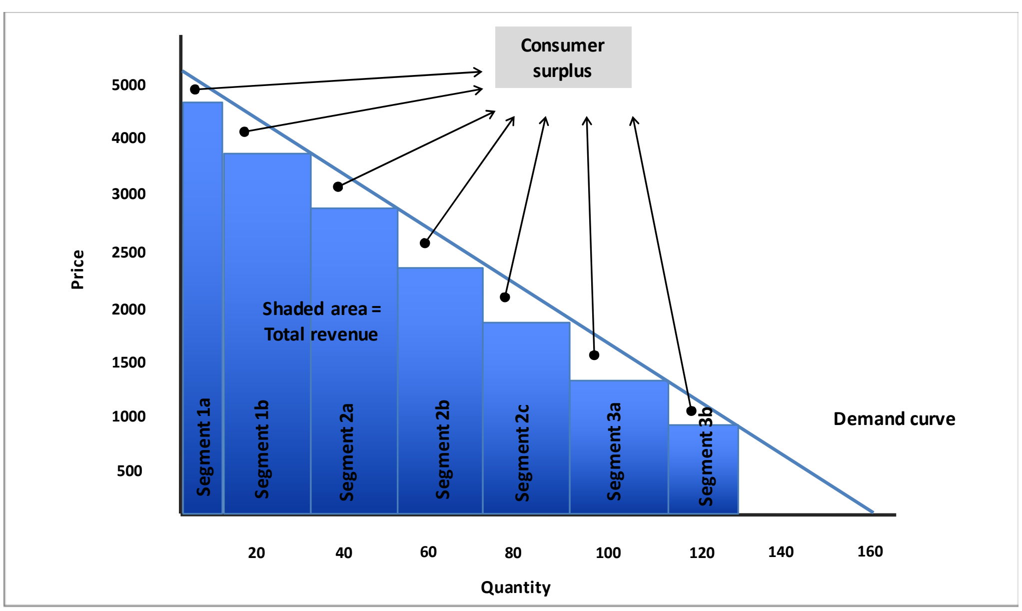
can be enticed to fly on flights that operate at low load factors in an attempt to increase loads on the emptier flights that are too inconvenient for some segments and thus cover more fixed operating costs.

- To restructure the timing of demand to obtain a situation where price sensitive and time insensitive passengers are directed to travel at off-peak times to take advantage of lower fares so that the airline can accommodate additional higher yielding passengers at the peak times. In this case, demand is better spread over the airline's capacity in order to maximise revenues.

Figure 3.22 highlights the discriminatory pricing approach across a number of segments and pricing levels. The increased number of pricing levels show that the overall consumer surplus is further reduced. A key difficulty associated with price segmentation/discrimination is that customers do not segment themselves by volunteering to pay the higher or lower price (Schindler, 2012:212). The authors referred to in the preceding sections (Doganis, 2010b:263; Holloway, 2010:137; Vasigh et al., 2013:343; Belobaba et al., 2015:399e) state that a number of key requirements need to be met if a price discrimination approach is to be followed:

- It must be possible to identify the various segments.
- Different elasticities must exist between the identified segments.
- It must be possible to charge the various segments and sub-segments different prices without passengers spilling to the lower priced categories.

**Figure 3.22: Discriminatory pricing approach**




**Source:** Adapted from Doganis (2010b:275) and Holloway (2010:140).

From the marketing literature perspective, a number of additional requirements can be added. Hoffman et al. (2009:208) state the following:

- It must be financially viable and beneficial to engage in the segmentation.
- The segments must be identifiable and the airline must be able to establish the appropriate price for that segment.
- The segments must be large enough to ensure that it is worth targeting the group.
- The pricing structures that are put in place should not confuse the consumer or make them feel that they have been 'ripped off'.

To ensure that consumers do not spill from one price level to a cheaper option, airlines need to insert a number of 'fences' or 'barriers' into their pricing structure (Schindler, 2012:213). This is the 'discrimination' referred to in the section heading. These barriers, which take cognizance of the special characteristics of the air transport industry identified in section 3.3.3, are based on the consumer's requirements and characteristics and are aimed at making the cheaper-priced ticket unattractive to that consumer and encouraging them to pick a ticket that is at the maximum of their 'willingness to pay' scale. Making a product/service unattractive to certain consumer segments is referred to as anti-marketing (Mason, 2010b:14). From the airline economics literature (Hanlon, 2007:249–254; Shaw, 2011:223; Vasigh et al., 2013:351; Wensveen, 2015:345), the most common tools used to create these barriers include:

- **Minimum and maximum stays.** Restrictions and limitations placed on the length of stay attempt to separate business and leisure travellers. Business travellers tend to take shorter trips and do not want to stay for an extended period or over weekends. Travellers that want to return earlier than the set minimum period are therefore forced into another fare category, which inevitably means paying a higher fare.
- **Advance purchase.** In this case, the cheaper fares require the purchase of the ticket long in advance of the flight departure – up to at least 30 days. Price sensitive travellers going on a leisure trip will plan and purchase their tickets longer in advance of the departure date than business travellers for example who are considered time-sensitive and less price-sensitive. Any changes to the cheaper advance ticket will result in a penalty to the consumer.
- **Ticket refundability.** This barrier is imposed on the price sensitive traveller because once they have purchased the cheaper ticket they do not have the flexibility to change their ticket and receive no refund should the ticket be cancelled. This puts a significant monetary risk on the shoulders of the passenger and thus provides a clear barrier. For the businessperson who requires flexibility and might have to change dates or time, this flexibility to obtain a refund is an attractive option. For this flexibility, a premium is paid but it is less than the alternative, which is no refund at all.

- **Charges for changes.** Higher priced tickets offer the flexibility to make changes to an itinerary (time or date) free of charge or in some cases at a minor fee. For the lower priced tickets, this option is either not available or a high fee (in addition to the ticket price difference) is levied on them to affect the change.
- **Preferential fares.** These fares relate to discounted fares offered to specifically identified groups that qualify for the discounted price. This includes tiered discounted rates for children, discounted rates for pensioners, or discounted rates for military personnel for example. These special fares generally come with certain restrictions in terms of days of the week and time of day that the travel can be undertaken.
- **Single and return pricing.** The price of two one-way tickets is higher than a return ticket. In some cases, the price of a one-way ticket can be more expensive than a return ticket but in most cases, it is only slightly cheaper than the full return fare on offer.
- **Directional pricing.** Pricing can be based on the popularity or prosperity of a particular city for example. Depending on your point of origin, it can be cheaper to purchase a return ticket from Johannesburg to London than it is to purchase a return ticket from London to Johannesburg. (refer to section 3.3.3 for the explanation of the concept 'directionality')
- **Peak and off-peak travel.** Tickets on unpopular days or at unpopular times will be priced lower than tickets at peak periods. The higher-priced fares available at peak periods are targeted at the time sensitive travellers whilst the lower priced options are available in off-peak times for the time-insensitive traveller. Typically, business travellers have certain commitments that require an early morning departure and a late afternoon or evening return. The level of demand at these periods allows the airlines to implement this type of barrier.
- **Frequent flyer mileage.** The popularity and growth of frequent flyer programmes has made the offer of mileage awarded based on ticket type purchased an option in managing demand. In simple terms, the higher the class of ticket, the more miles awarded to the passenger. Many passengers find this an important consideration in the purchase of a ticket and may be willing to purchase a ticket from a higher fare class in order to gain the additional miles awarded at that level.
- **Class fares.** Different fares are charged for different classes of travel. In this case, the services and facilities offered to the business class passenger are not offered to the economy passenger. The business traveller who values these services will purchase the more expensive business class ticket.

Table 3.12 provides an outline of these and a few other pricing barriers that are utilised by marketers to 'restrict' consumers to their relevant segments. The list is not exhaustive, but merely serves to highlight the most common barriers utilised in air travel today.

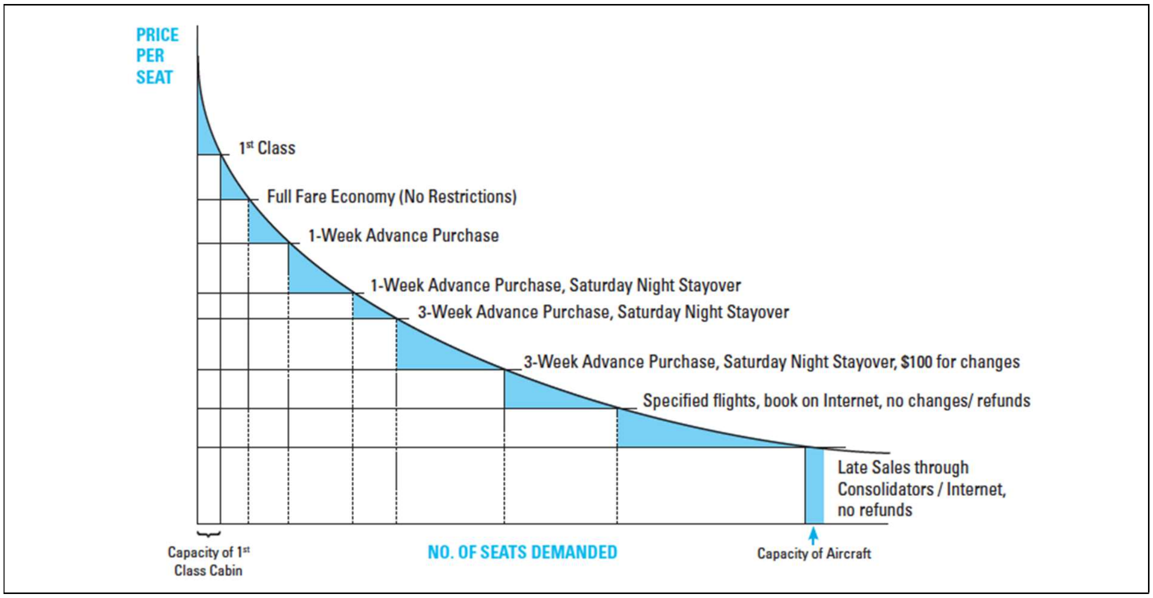
**Table 3.12: Main types of pricing barriers used by airline marketers**

| BARRIER | EXAMPLES |
|---|---|
| | |
| **Product-related barriers** | |
| Basic product | • Class of travel (business/economy class)<br>• Size and furnishing of a hotel room<br>• Seat location (Aisle, emergency exit) |
| Amenities | • Free breakfast/lunch/supper on plane, airport pick up.<br>• Shower facilities and cupboard (A380) |
| Service level | • Priority wait-listing, separate check-in counter<br>• Improved food and beverage selection<br>• Dedicated service hotlines<br>• Dedicated account management team |
| **Non-physical barriers** | |
| ***Transaction characteristics*** | |
| Timing of booking | • Discounts for advance purchase |
| Location of booking | • Passengers booking air-tickets for an identical route from different countries are charged different prices<br>• Online vs call centre vs travel agency bookings |
| Flexibility of usage | • Fees/penalties for cancelling or changing a reservation<br>• Non-refundable reservation fees |
| ***Consumption characteristics*** | |
| Time/duration of usage | • Peak vs off-peak travel<br>• Saturday night stays<br>• Trip must be longer than seven nights |
| Consumption location | • Price depends on departure location (esp. in international travel)<br>• Prices vary by location (between cities, city centre versus edges of the city) |
| ***Buyer characteristics*** | |
| Frequency/volume of consumption | • Member of certain loyalty-tier get priority pricing, discounts and loyalty benefits |
| Group membership | • Child, student, senior citizen, armed service discounts<br>• Affiliation with certain groups (e.g. Discovery Vitality)<br>• Corporate rates |
| Size of group | • Discounts based on size of group |
| Geographic location | • Local customers are charged lower rates than tourists<br>• Customers from some countries are charged higher prices |

**Source:** Lovelock and Wirtz (2011:170).

Whilst one of the key goals of airlines is to prevent passengers moving into a lower fare level, another is to get consumers to move up the demand curve as the date of departure approaches (Mason, 2010b:14). That is, get passengers to purchase additional services or benefits to enhance their experience and thereby generate more revenue. Figure 3.23 provides an example of a demand curve with the various barriers that can be implemented in order to maximise revenue and capacity. As the figure shows, the consumer surplus is being reduced at each level.

**Figure 3.23: Hypothetical demand curve showing fare restrictions**




**Source:** Lovelock and Wirtz (2011:171).

These discriminatory barriers clearly have a large influence on the levels and types of demand for air travel with an airline and play a key role in the marketing strategy for the airline. The key difficulty associated with this approach is that it is extremely difficult to identify exactly what every passenger would be willing to pay and even more difficult to ensure that each offer is targeted directly at that particular consumer. Even more difficult is the ability to manage the large and complex fare structure that such a micro-defined fare structure would entail (Shaw, 2011:281). Hence the fact that even though this approach might reduce the consumer surplus, it still does not eliminate it. These points are supported by Kalvenes, Yang, and Ratliff (2014:86) who further emphasise the point that it is crucial to ensure that the multiple fare levels are consistent with the airline's pricing strategy, are competitive in the market place, and are focussed on the identified market segments.

### 3.6.4 Yield management

It has been established that pricing is a complex task for airlines. It involves balancing supply and demand with the appropriate price to maximise revenues. The responsibility of managing the pricing for an airline involves two main tasks; (i) monitoring and responding to the price actions of competitors in the market on a daily basis, and (ii) supporting and developing the airline's position in the market through the development of innovative pricing strategies (Wensveen, 2015:342). This balancing act and development of pricing strategies and tactics to maximise revenues is referred to as yield management.

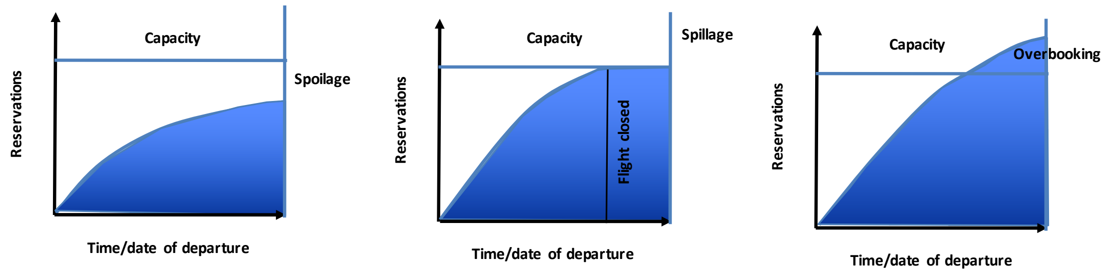
Mason states that yield management could be better described as revenue maximisation (Mason, 2010b:11).

Yield is defined as the passenger revenue per RPK (*see* glossary of terms). It can be calculated over an entire network, for domestic operations, for international operations, or even for a specific class of travel on a specific route on a particular day (Holloway, 2010:179). Yield management is the process of determining the number of seats that an airline should supply at each fare level for a particular flight so that the flight is filled with the best combination of passengers to maximise revenue for that flight (O'Connor, 2001:133). This management of yield is achieved by restricting the number of tickets sold at the lower fare levels (to price sensitive consumers who purchase longer in advance) to leave sufficient capacity to sell at higher fares to consumers who have a higher willingness to pay but who purchase at a time frame closer to the date of departure. In effect, yield management entails the turning down of a guaranteed ticket sale to a customer at a lower price in order to preserve it to sell to a potential unguaranteed future customer at a higher price (Shaw, 2011:207). As was discussed in section 3.6.3.3, use is made of barriers through price discrimination to ensure that customers do not spill over to a segment below their levels of willingness to pay.

This yield management process is driven by complex computer software based on extended sets of data to make the required forecasts and price level allocations. The task of yield management has been radically changed with the rapid development of the Internet and the various search engines (Shaw, 2011:207). On the one hand, technology has provided airlines with the tools to be more proactive and dynamic in their pricing to match supply with demand. On the other hand, consumer access to the Internet and the various fare aggregator sites has enabled the consumer to search for the cheapest and best flights online by rapidly comparing the fares of numerous airlines in an instant. The consumer is able to gain significant information in a very short time to make an informed decision, which has in effect placed a lot of power into the hands of the consumer (Doganis, 2010b:258).

Load factors are also an important issue for airlines (Holloway, 2010:555). An airline can increase its load factor by offering more seats at a lower fare. Whilst this will increase the overall load factor for the airline, it will also dilute yield in that the revenue obtained per passenger is decreased. Even though managing yield is an important issue for airlines, they do need to balance it against load factor. The literature (Vasigh et al., 2013:356; Ratliff & Cary, 2013:73; Belobaba et al., 2015:3100f–3100g) refers to three key concepts that need to be considered when managing yield and revenues. These are spoilage, spillage, and overbooking. Each of these is illustrated in figure 3.24 and outlined in the paragraphs that follow.

**Figure 3.24: The concepts of spillage, spoilage, and overbookings**




**Source:** Adapted from Vasigh et al. (2013:357).

- **Spoilage.** Is a situation where the actual number of tickets sold prior to the departure of a flight are less than the capacity of the aircraft. The result is missed revenue due to the empty seats being flown. Spoilage indicates that the price of the unsold tickets was not matched to the demand in the market or the airline's overbooking and discount allocation controls were not effective (Ratliff & Cary, 2013:73).

- **Spillage.** Refers to the situation where all seats on a flight are sold out well in advance of the departure of the flight. In this situation, the airline is missing the revenues to be gained from consumers with a higher 'willingness to pay' for a flight closer to the time of departure. Lower revenue than could have been achieved is collected. In this case, it can be determined that the fares were too low in some categories as the market demand still had room for higher fares. The spilled customers are either recaptured on another flight or they switch to a competitor (Ratliff & Cary, 2013:73).

- **Overbooking.** Refers to the situation where airlines purposefully sell more tickets than the actual capacity of the aircraft in advance of the flight departure. In most cases this is done to compensate for the number of passengers that do not show for a flight (either through arriving late, change of plans, or missed connections for example) (Shaw, 2011:192). In essence, overbooking is a tactic used in an attempt to overcome the issues of spoilage and spillage. Both spoilage and spillage look at maximising revenue from tickets sold up to the point of departure. In the situation where insufficient passengers cancel or miss their flight the airline is faced with denying boarding to some passengers. The way in which 'denied boarding' is handled differs from airline to airline and is beyond the scope of this study.

The point was made previously that flight schedules are compiled long in advance (over a year in some cases) of the actual flights and tickets sold long in advance of departure. This commits the airline to providing certain capacity, which sets itself as a fixed cost for the airline. Doganis (2010b:255) states that because the short-term marginal costs for an airline are close to zero, it is logical for the airlines to sell unsold seats shortly before departure at any price above the marginal costs in order to maximise revenues for a flight and thus cover more of the long-term fixed costs. The management of this type of pricing and the determination of the yields to be gained requires carefully planned yield management.

In closing, given the complex nature of airline pricing and all the influencing variables, it is extremely important for airlines to constantly monitor their pricing strategies and tactics as well as those of their competitors. On the supply side, it is important to understand that yields are influenced by the fare structure, traffic mix, the length of sector, competition, and the design of the airline's network (Holloway, 2010:183). From the demand side, this requires an understanding of the nature of demand in their markets, the price sensitivities of the consumer, the characteristics of the consumer, and their needs and preferences (all a key focus of this study). Achieving maximum revenue at full load factors is normally highly unlikely. Gains in yield might result in lower load factors and gains in load factor might lead to lower yields (*see* section 5.2.3.9 for a brief quantification of global passenger yield). Yield and revenue management is about finding the most appropriate pricing combinations at different fare levels to minimise the consumer surplus.

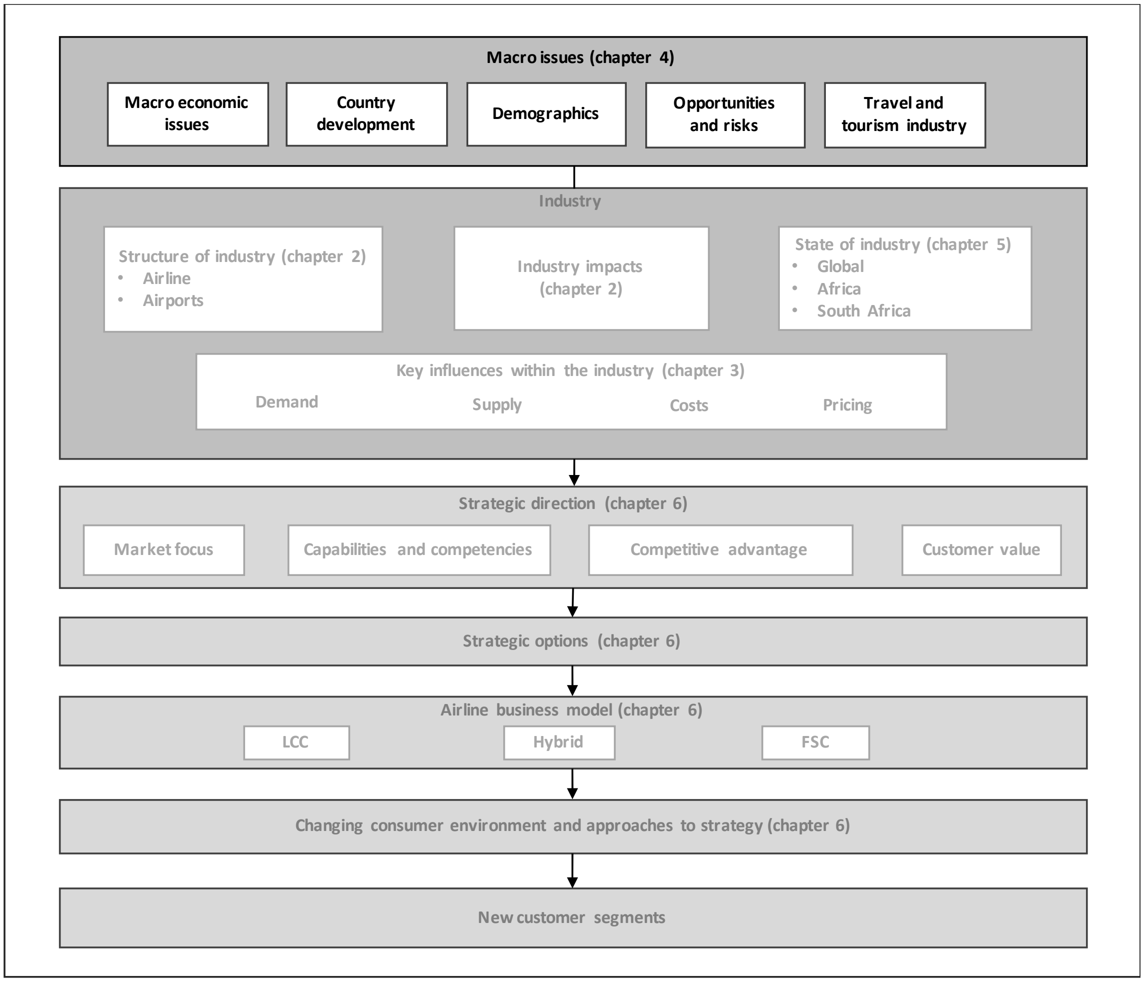
## 3.7 SUMMARY

The airline industry is a complex one that is intricately tied to the extent of economic growth or decline that exists in the general economic environment of the global economy and the individual country economies. With this in mind the important issues of demand, supply, costs, and pricing were the focus of this chapter.

At the core of the discussion of these issues is consumer demand. As the review of the literature on these topics progressed, it became apparent that demand is a pivotal issue that needs to be understood if an airline is to succeed. Indeed, an understanding of demand is crucial when considering the important concept of capacity. As was established, one of the biggest problems facing the industry (and the primary reason for the structural disequilibrium that exists) is the constant state of overcapacity. In order to address this problem, a thorough understanding of the concepts addressed is required. In the context of this research, understanding demand and the drivers behind that demand will feature prominently. Pricing was identified in the chapter as an issue that requires special attention by the airline marketer because it has a significant influence on demand, costs, customer behaviour, competitor's actions, and product/service design. An understanding of the nature of pricing and its link to demand provides insights that will also be invaluable when interpreting the research results relating to consumer perceptions of price and their price sensitivities.

The focus of the next chapter is on selected key factors that affect the business environment in which the air transport industry operates.

# Chapter four in the context of the thesis model



# CHAPTER 4

# MACRO ISSUES AFFECTING THE BUSINESS ENVIRONMENT IN WHICH THE AIR TRANSPORT INDUSTRY OPERATES

> "*If the Wright brothers were alive today, Wilbur would have to fire Orville to reduce costs.*"
>
> *– Herb Kelleher, founder of Southwest Airlines*

## 4.1 INTRODUCTION

The literature review thus far has shown that the airline industry is complex with many factors affecting its operation. As with any other industry, the commercial air transport industry is affected by events and changes in the global and local external environment. One of the key points to be highlighted in this chapter is that an airline's success, and indeed the industry's success as a whole, is strongly determined by the state of affairs in the external environments within a region, a country, a continent, and the globe as a whole. Given that it is a volatile industry that experiences cyclical peaks and troughs, any airline that does not manage its cost metrics will quickly be faced with operational and financial difficulties, as alluded to by Kelleher in the opening quote.

The focus of this chapter moves from the structure and theoretical economics of the airline industry discussed in the previous chapters to the current business environment in which the industry operates. To do this, the chapter is divided into four distinct topics that cover the business environment in which the air transport industry operates. A discussion of just the air transport industry is insufficient as it only considers the events that occurred within the industry and fails to properly contextualise the greater issues in the broader environment that have shaped the circumstances that prevail within the industry itself. The chapter starts with a review of the global economic situation, which includes trends in GDP, inflation, oil, trade, employment, and exchange rate fluctuations. Each of these have a significant impact on the air transport industry. The second topic to be reviewed is the South African economic classification and demographics in order to establish the position of the South African consumer and their ability to engage in air travel. The third topic to be reviewed is the state of the travel and tourism industry (T&T). In this regard, a brief overview is given of the overall global tourism environment followed by a discussion on the South African tourism industry (foreign and domestic). An understanding of the state of travel and tourism is essential in understanding the levels of demand and supply in the air transport industry, and thus essential for future strategic planning by the airlines. Finally, an overview is given on global opportunities and risks that exist in the external environment that need to be heeded by the airlines.

## 4.2 KEY MACRO-ECONOMIC INDICATORS

The turmoil in the world economy starting with the financial crisis in 2008 to the current sluggish growth in 2016 is well known and has presented many challenges for governments and companies on a global scale. Additionally, there have been number of other significant occurrences in the global environment, like the terror attacks in Europe and conflict in Syria, that have had a defined effect on the global economy. Clearly these issues will also have an impact on the air transport industry. It is therefore logical to outline key issues in the macro-environment to highlight some of the events that have affected the air transport industry. In reading the forecast figures given throughout this section, it is important to note that the global economic situation is extremely fluid, with changes appearing on a daily basis that affect the forecasts made by the various economic agencies like the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), and the World Bank. The forecast figures used are those available at the time of writing and do not reflect any subsequent adjustments.

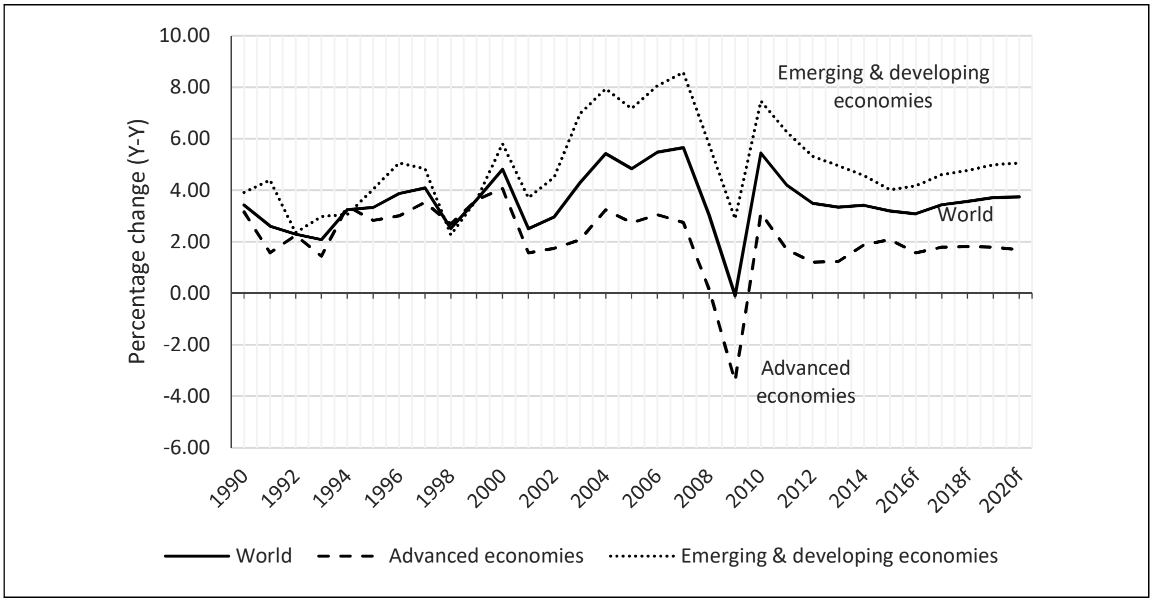
### 4.2.1 Gross Domestic Product

As stated in the introduction to section 3.2 of this study, this section reviews the broader trends in global and South African GDP growth, which serve to highlight the economic environment in which the air transport industry operates. Specific reference is made to the 'emerging economies' and their performance in the context of the 'developed economies'. The key focus of the section however, is on the South African economy, with specific reference to overall GDP growth and growth within the various sectors of the economy. This macro discussion on GDP serves to provide greater context for the discussion on the contribution of aviation to global and South African GDP (*see* sections 2.3.1 and 5.4.3), and the discussion on the link between air travel demand and GDP (*see* section 3.2.1).

This financial crisis at the end of 2007 evolved into a global recession in 2008, which persisted to the latter part of 2010. The speed of recovery from this recession has been very slow when compared to previous recessions (*see* figure 4.1). In 2012, Rowe (2012:9) stated that this slower rate of recovery is not surprising because recessions that arise out of a financial crisis are deeper and the recovery from them takes longer than the recovery from recessions that were not caused by financial collapse.

Figure 4.1 shows the real GDP for three main global economic groupings from 1990 to 2020f. A visual inspection of the line plots represented in figure 4.1 clearly shows that each grouping, with some minor exceptions at a particular point in time, follows roughly the same pattern as the other lines. The key difference is the depth of the downturns and the height of the upswings. From figure 4.1 it can be seen that the years 1990–1993, 1998, 2001–2002, and 2008–2010 indicate where recessions were experienced. The years 2010–2012 indicate an extension to the 2008–2010 recession; a ‘double-dip recession’, for many of the economies. The figure also clearly highlights the slow pace of recovery with only slightly increased growth rates being forecast to 2020. What is noticeable is that shortly before the 2008–2010 recession there was a period between 2003 and 2007 where an extremely high rate of GDP growth was experienced on a global scale.

**Figure 4.1: Real GDP for selected economic groupings (1990–2020f)**




**Source:** IMF (2016a:228) and IMF (2016b).

The emerging and developing countries experienced GDP growth as high as 8.7% per annum at this time. This period of prosperity was followed by a dramatic decline into recession with the major advanced economies experiencing up to 4.2% shrinkage in their economies in 2009. Measured against a 3.6% GDP growth rate in 2007, this represents a dramatic decline. Africa managed to remain relatively unaffected by the crisis compared to other regions. The year 2009 in particular showed a GDP growth of 3.1% for Africa compared to a shrinkage of 4.7% for Europe and a shrinkage of 0.6% for the world as a whole. From figure 4.1, it is noted that in the period preceding the recession, the emerging and developing markets (including South Africa) were experiencing the highest rates of GDP growth and when the recession hit they were impacted the least (IMF, 2016a:228; IMF, 2016b). The trends and extent of the growth and decline in GDP has played a large role in influencing the environment in which the air transport industry operates. As was established in section 3.2.1, the RPK cycles experienced in the air transport industry are closely linked to the changes in GDP.

Global GDP growth for 2016 was slower than initially predicted, with a slight weakening in the second and third quarter over the first quarter. This was attributed to lower growth being expected from the advanced economies after the UK's June 2016 vote to leave the European Union and below expectations growth in the USA. A slowdown in China and in the larger economies on the African continent (Nigeria, South Africa and Angola) also contributed to the lowering of growth forecasts. Growth is expected to slowly pick up in 2017 from a global perspective (World Bank, 2016:4). The World Bank identifies increasing policy related and political uncertainties, geopolitical risks and declining confidence in policy effectiveness as key influences on future GDP growth prospects (World Bank, 2016:5). The IMF identifies political discord, China's continued adjustment, and improving financial conditions in emerging markets as being key factors determining the direction of future GDP growth (IMF, 2016a:xvi).

From an economic grouping perspective, table 4.1 illustrates the GDP growth rates for the main economic clusters for the period 2011–2015 and the projections for 2016–2017. The distinct difference between the growth rates being experienced by the advanced economies and the emerging and developing economies can be seen from this table. Airbus, in their global market forecast, refer to this as a 'two-speed economic world' (Airbus, 2016:6).

**Table 4.1: GDP growth rates and projections per economic grouping (2011–2017f)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016f | 2017f |
|---|---|---|---|---|---|---|---|
| **World output** | **4.2** | **3.5** | **3.3** | **3.4** | **3.2** | **3.1** | **3.4** |
| | | | | | | | |
| **Advanced economies** | **1.7** | **1.2** | **1.2** | **1.9** | **2.1** | **1.6** | **1.8** |
| United states | 1.6 | 2.2 | 1.7 | 2.4 | 2.6 | 1.6 | 2.2 |
| Euro area | 1.5 | -0.9 | -0.3 | 1.1 | 2.0 | 1.7 | 1.5 |
| - Germany | 3.7 | 0.7 | 0.6 | 1.6 | 1.5 | 1.7 | 1.4 |
| - France | 2.1 | 0.2 | 0.6 | 0.6 | 1.3 | 1.3 | 1.3 |
| - Italy | 0.6 | -2.8 | -1.7 | -0.3 | 0.8 | 0.8 | 0.9 |
| - Spain | -1.0 | -2.6 | -1.7 | 1.4 | 3.2 | 3.1 | 2.2 |
| Japan | -0.5 | 1.7 | 1.4 | -0.0 | 0.5 | 0.5 | 0.6 |
| United Kingdom | 1.5 | 1.3 | 1.9 | 3.1 | 2.2 | 1.8 | 1.1 |
| Canada | 3.1 | 1.7 | 2.2 | 2.5 | 1.1 | 1.2 | 1.9 |
| Other advanced economies | 3.4 | 2.1 | 2.3 | 2.8 | 2.0 | 2.0 | 2.3 |
| | | | | | | | |
| **Emerging and developing economies** | **6.3** | **5.3** | **4.9** | **4.6** | **4.0** | **4.2** | **4.6** |
| Commonwealth of independent states | 4.7 | 3.5 | 2.1 | 1.1 | -2.8 | -0.3 | 1.4 |
| - Russia | 4.0 | 3.5 | 1.3 | 0.7 | -3.7 | -0.8 | 1.1 |
| - Excluding Russia | 6.1 | 3.6 | 4.2 | 1.9 | -0.5 | 0.9 | 2.3 |
| Emerging and developing Asia | 7.9 | 7.0 | 6.9 | 6.8 | 6.6 | 6.5 | 6.3 |
| - China | 9.5 | 7.9 | 7.8 | 7.3 | 6.9 | 6.6 | 6.2 |
| - India | 6.6 | 5.6 | 6.6 | 7.2 | 7.6 | 7.6 | 7.6 |
| - ASEAN | 4.7 | 6.2 | 5.1 | 4.6 | 4.8 | 4.8 | 5.1 |
| Emerging and developing Europe | 5.4 | 1.2 | 2.8 | 2.8 | 3.6 | 3.3 | 3.1 |
| Latin America and the Caribbean | 4.6 | 3.0 | 2.9 | 1.0 | -0.0 | -0.6 | 1.6 |
| - Brazil | 3.9 | 1.9 | 3.0 | 0.1 | -3.8 | -3.3 | 0.5 |
| - Mexico | 4.0 | 4.0 | 1.7 | 2.2 | 2.5 | 2.1 | 2.3 |
| Middle East, North Africa, Afghanistan & Pakistan | 4.5 | 5.0 | 2.4 | 2.7 | 2.3 | 3.4 | 3.4 |
| - Saudi Arabia | 10.0 | 5.4 | 2.7 | 3.6 | 3.5 | 1.2 | 2.0 |
| Sub-Saharan Africa | 5.0 | 4.3 | 5.2 | 5.1 | 3.4 | 1.4 | 2.9 |
| - Nigeria | 4.9 | 4.3 | 5.4 | 6.3 | 2.7 | -1.7 | 0.6 |
| - South Africa | 3.3 | 2.2 | 2.3 | 1.6 | 1.3 | 0.1 | 0.8 |

**Source:** Compiled from IMF (2016d).

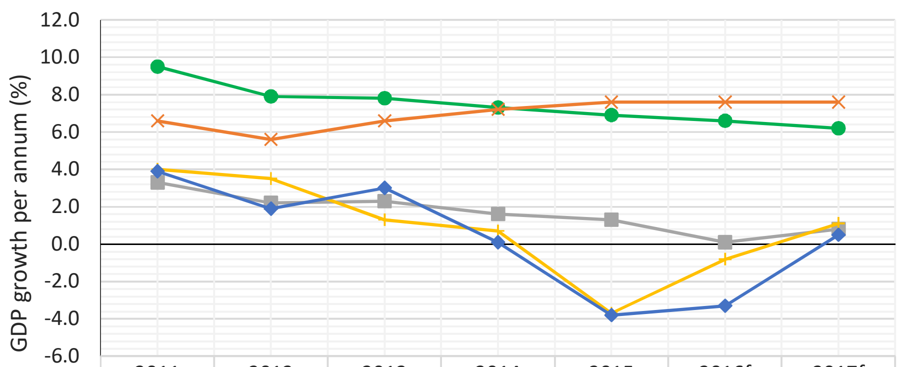
Countries within the advanced economies grouping show relatively weak growth rates with some showing declines for a number of years. The forecasts reflect continued sluggish growth with the expectation that the advanced economies will show a lower growth rate for 2016 than for 2015 (IMF, 2016d). For 2017, it is projected that the non-European advanced economies will achieve slightly improved GDP growth, whilst the European economies will see growth lower than 2016. The key influences on GDP growth in the advanced economies are the political issues surrounding Brexit and the US elections, commodity prices, and stagnation in a low inflation environment. Many of the political issues are concerns relating to foreign competition for jobs and the resultant "appeal of protectionist policy approaches" (IMF, 2016a:xvi).

Further observations from table 4.1 show that in contrast to the low growth experienced in the advanced economies, some of the emerging and developing economies have shown growth rates in excess of 6% per annum for 2014 and 2015. The emerging and developing Asian countries, which include China and India, have shown strong levels of growth since 2011 and it is forecast that annual GDP growth will remain above 6.0% beyond 2016. Economies in the Middle East have also shown good GDP growth, although the rates of growth have slowed since 2011. Russia and Latin America have seen their economies shrinking since 2015 after good growth earlier in the decade. As a whole, projections for the emerging and developing economies indicate that GDP growth will be consistently around 4.0% per annum which far surpasses that of the advanced economies. South Africa, as one of the emerging and developing economies, shows a declining rate of annual GDP growth with forecasts not showing any short-term prospects of significant growth (IMF, 2016d). Key influences affecting the rate of GDP growth in the emerging and developing economies include China, financial stability, exchange rate fluctuations, and fluctuating commodity prices (IMF, 2016a:xvi). Developing economies reliant on revenue from natural resource mining are seeing GDP deceases due to lower commodity prices (Boeing, 2016:15). Numerous non-economic factors also have a strong effect on these economies. Examples include civil wars, droughts, refugee crises arising from regional conflicts, and diseases (Ebola and Zika virus).

Figure 4.2 summarises the GDP growth rates of countries of the BRICS economic grouping. From an annual growth point of view, growth for some of these countries has been relatively turbulent. Much of this is in reaction to specific world events that have impacted upon their economies as well as political turmoil within their countries (Russia, Brazil, and South Africa). Figure 4.2 highlights the disparity between the countries within the economic group, particularly with China and India outperforming the other members by a large margin. China and India show GDP growth beyond that of the advanced economies and this rise is forecast to continue to at least 2050, with Asia accounting for 53% of global GDP (The Economist, 2015:5).

In terms of South Africa, table 4.1 and figure 4.2 show the general trend South Africa has been following regarding GDP growth since 2011 (*see* section 5.4.3 for the discussion on the contribution of aviation to South African GDP). South African GDP growth has been lower than most of the other emerging and developing countries identified in table 4.1. Of concern is that, over the timeframe identified in table 4.1, South Africa's GDP growth performance is well below the average of the emerging and developing countries and significantly, also below the world average for the period. Key problems being experienced in the South African 2016 economy include insufficient infrastructure capacity (electricity generation in particular), frequent and protracted industrial action in key economic sectors, high unemployment (OECD, 2015:9–29), political turmoil, and drought. The World Bank forecasts that this low growth trend will continue for 2016 and 2017 with only a minor improvement forecast for 2018 (Maswanganyi, 2016).

**Figure 4.2: GDP growth rates of BRICS countries 2011–2017f**

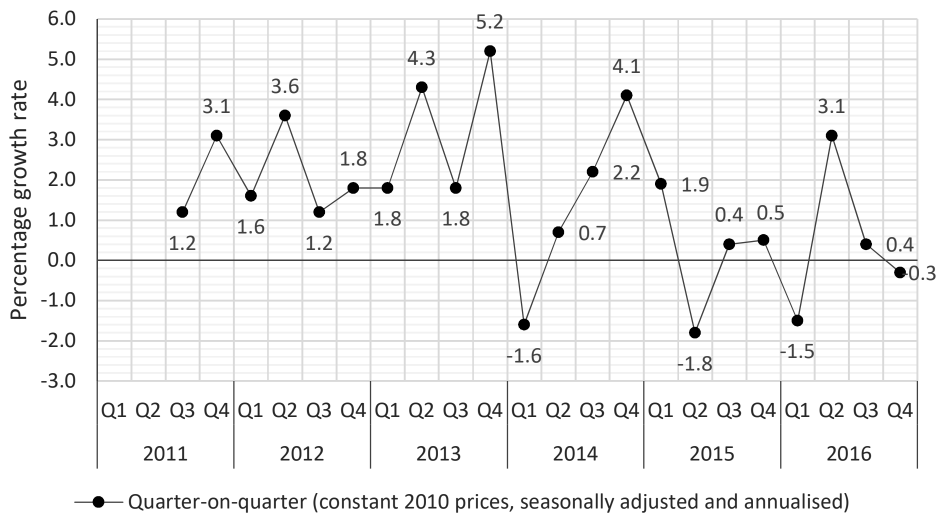



| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016f | 2017f |
|---|---|---|---|---|---|---|---|
| China | 9.5 | 7.9 | 7.8 | 7.3 | 6.9 | 6.6 | 6.2 |
| India | 6.6 | 5.6 | 6.6 | 7.2 | 7.6 | 7.6 | 7.6 |
| South Africa | 3.3 | 2.2 | 2.3 | 1.6 | 1.3 | 0.1 | 0.8 |
| Russia | 4.0 | 3.5 | 1.3 | 0.7 | -3.7 | -0.8 | 1.1 |
| Brazil | 3.9 | 1.9 | 3.0 | 0.1 | -3.8 | -3.3 | 0.5 |

**Source:** Compiled from IMF (2016d).

Figure 4.3 considers the South African quarterly GDP growth for the years 2011–2016. Represented in this figure are the quarter-to-quarter figures seasonally adjusted annualised rates (2010 constant prices). South Africa has not yet regained its strong growth levels that were prevalent shortly before the start of the financial crisis in 2009. It is evident that GDP growth for South Africa is low and erratic. A good quarter is followed by a number of poor quarters resulting in the overall low level of annual GDP growth shown in figure 4.3. The 2nd quarter of 2016 showed good growth compared to the previous five quarters but this was negated by poor growth in the 3rd and 4th quarter.

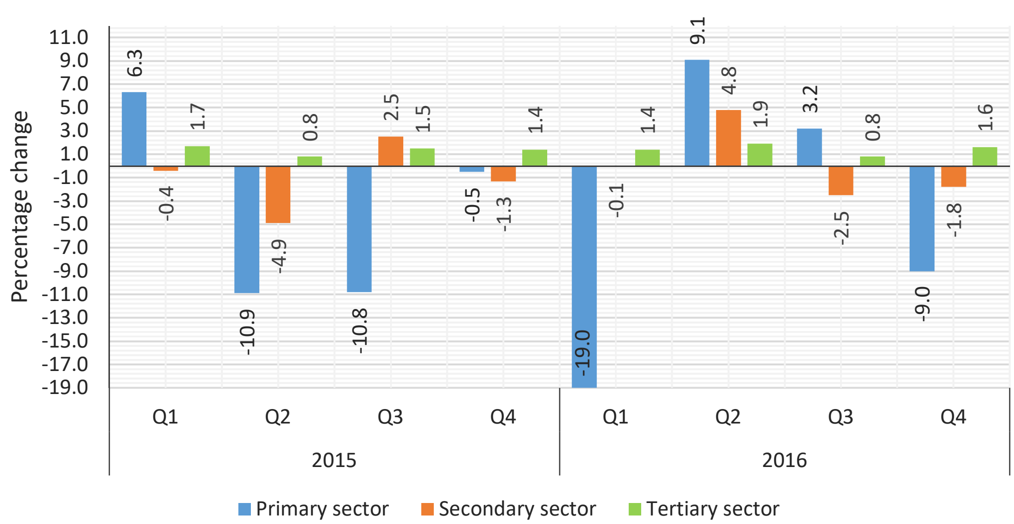
**Figure 4.3:** **South African quarter-on-quarter GDP growth (2011–2016) seasonally adjusted and annualised (constant 2010 prices)**




**Source:** Statistics South Africa (2016:9) and South African Reserve Bank (2017:S–152).

Besides the 2016 Q2 growth that resulted from the mining industry (11.8% increase) and the manufacturing industry (8.1% increase), growth for 2016 was sluggish across all quarters, with overall shrinkage being experienced for the primary sector (Statistics South Africa, 2016:2). Figure 4.4 provides an illustration of the growth rates across the various sectors in the South African economy for 2015 and 2016. It is evident from figure 4.4 that the tertiary sector is the only sector consistently showing growth each quarter. However, this tertiary sector growth is not high and is in need of invigoration to make a more meaningful contribution to the country's overall economic growth.

**Figure 4.4:** **Growth rates in the primary, secondary, and tertiary sectors of the South African economy 2015–2016**




**Source:** South African Reserve Bank (2016a:4) and South African Reserve Bank (2017a:4).

In the primary sector, the agriculture industry experienced severe drought conditions for most of 2016, which negatively affected output from the sector (South African Reserve Bank, 2016a:5). Strike action and low commodity prices also impacted negatively on the mining industry and its GDP contribution. In the secondary sector, growth was seen across a number of industries after a long period of shrinkage. The electricity, gas and water industry has shown shrinkage largely due to the drought conditions and reduced electricity used due to supply problems and usage restrictions. The tertiary sector has shown low level growth for many quarters with the transport, storage, and communication industry showing signs of picking up momentum in the land freight sector. The banking industry and the finance, real estate, and business services industry have shown growth based largely on increased activity in the real estate sector and a recovery in the banking sector (South African Reserve Bank, 2016a:8).

Airbus (2016:10) highlights that in 2015, 31% of the world's private consumption came from the emerging markets. This is forecast to reach 42% by the year 2035. From a South African perspective, the real final consumption expenditure by households for the rest of 2016 was positive after a negative start in the first quarter of 2016 (South African Reserve Bank, 2017a:9). Table 4.2 highlights the expenditure on durable, semi durable, non-durable goods, and services within South Africa for 2015–2016. Important to note in this table is that expenditure on durable goods is shrinking, whilst expenditure on semi-durable and non-durable goods currently shows little growth (Q4 for semi-durable goods being the exception). Consumption expenditure by households on services (which includes air transport) shows consistent growth from quarter to quarter, but still not at a satisfactory level. This has an influence on the air transport industry.

**Table 4.2: Real final consumption expenditure by households**

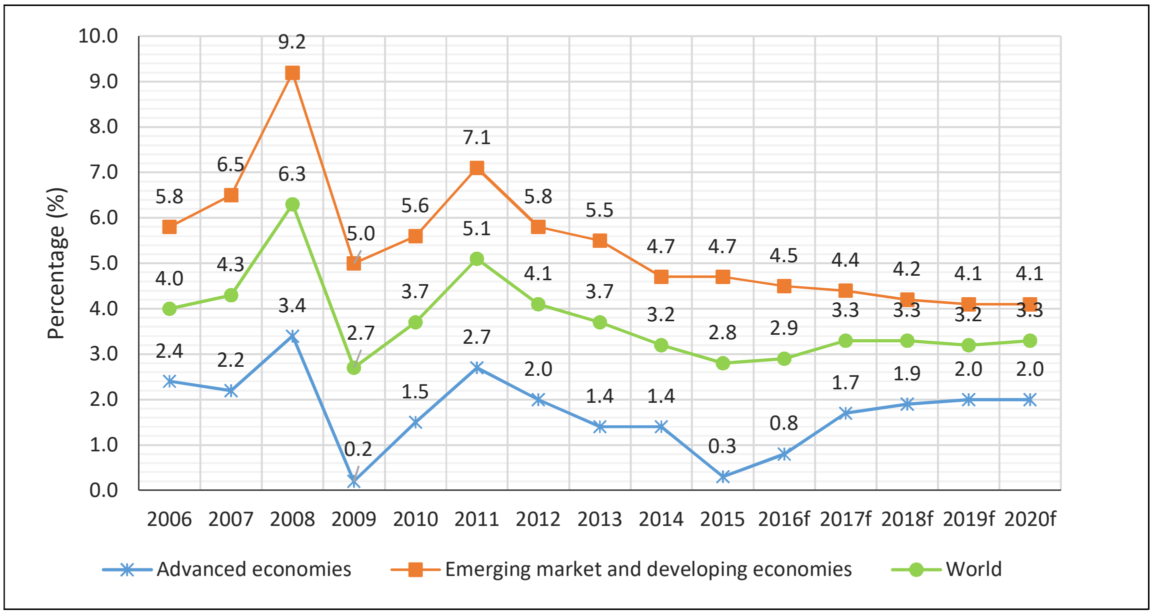
| | **2015** | | | | **2016** | | | |
|---|---|---|---|---|---|---|---|---|
| | *Percentage change at seasonally adjusted annualised rates.* | | | | | | | |
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Durable goods | -1.1 | -11.0 | -3.6 | -5.5 | -15.3 | -5.4 | -3.2 | 0.2 |
| Semi-durable goods | 8.0 | -0.5 | 8.9 | 11.1 | 2.4 | 1.6 | -0.9 | 6.8 |
| Non-durable goods | 1.5 | 1.3 | 1.1 | 3.1 | -1.1 | 0.4 | 1.1 | 0.3 |
| Services | 1.9 | 2.4 | 3.6 | 1.1 | 0.6 | 3.1 | 5.0 | 3.2 |
| **Total** | **2.0** | **0.3** | **2.4** | **2.1** | **-1.5** | **1.2** | **2.2** | **2.2** |

**Source:** South African Reserve Bank (2016a:10), South African Reserve Bank (2017a:9).

### 4.2.2 Inflation

An article in the spring 2011 Economic Outlook Journal (Oxford Economics, 2011a:14) identified inflation as one of the risks to the global economy in its effort to recover from the economic recession. The article emphasised that this risk of inflation was particularly high within the emerging BRICS countries and that they faced a risk of overheating at that stage because they, and other emerging markets, were emerging from the recession quite rapidly which contributed to rising prices and thus inflationary pressures. A specific concern was the rising price of commodities, which make up a large portion of the emerging markets production and consumption. A brief look at figure 4.5 clearly shows that this was the case, with inflation increasing across all economic groupings to a high in 2011. Global inflation has since decreased, and in the year 2015 was at its lowest since the financial crisis of 2008. In many advanced economies, core inflation is currently consistently below the desired targets, with economists referring to a state of disinflation (IMF, 2016a:121). Figure 4.5 shows that the IMF forecasts that overall inflation in the advanced economies will rise over the next four years, whilst it will gradually decrease in the emerging and developing economies (IMF, 2016a:23).

**Figure 4.5: Inflation at annual average consumer prices for selected economic groupings for the period 2006–2020f**




**Source:** Compiled from IMF (2016a:6 & 235).

Figure 4.5 shows that annual the inflation rate for the three economic groupings was rising just before the 2008 recession and then declined significantly across all of the identified economic groupings as they entered the recessionary period. From 2009, as economies saw some return to growth, inflation began to increase again. The key point arising from figure 4.5 is that inflation in the advanced economies is significantly lower than that of the emerging and developing economies. This is the exact opposite of the situation in figure 4.1, which shows GDP growth in emerging and developing economies being higher than that of the advanced economies.

Table 4.3 highlights inflation across various economic groupings and key countries. Quite clearly, the economically advanced countries have experienced low inflation for the past five years and in the case of Japan they have experienced deflation. In contrast to this, the countries that form part of the emerging economies can be seen to have experienced rates of inflation ranging between 4% and 15% for the past five years. As can be seen from table 4.3 (IMF, 2016a:235–239), Russia, Nigeria, and Brazil have been experiencing particularly high levels of inflation which, when coupled with low levels of GDP growth and unemployment, lead to fears of stagflation. These stagflation fears have eased with the fall in the price of oil in 2015 and 2016 (The Economist, 2014:6). The inflationary effect of potential conflicts around the supply of oil is constantly hanging over oil dependant economies and indeed oil dependant industries such as the airline industry.

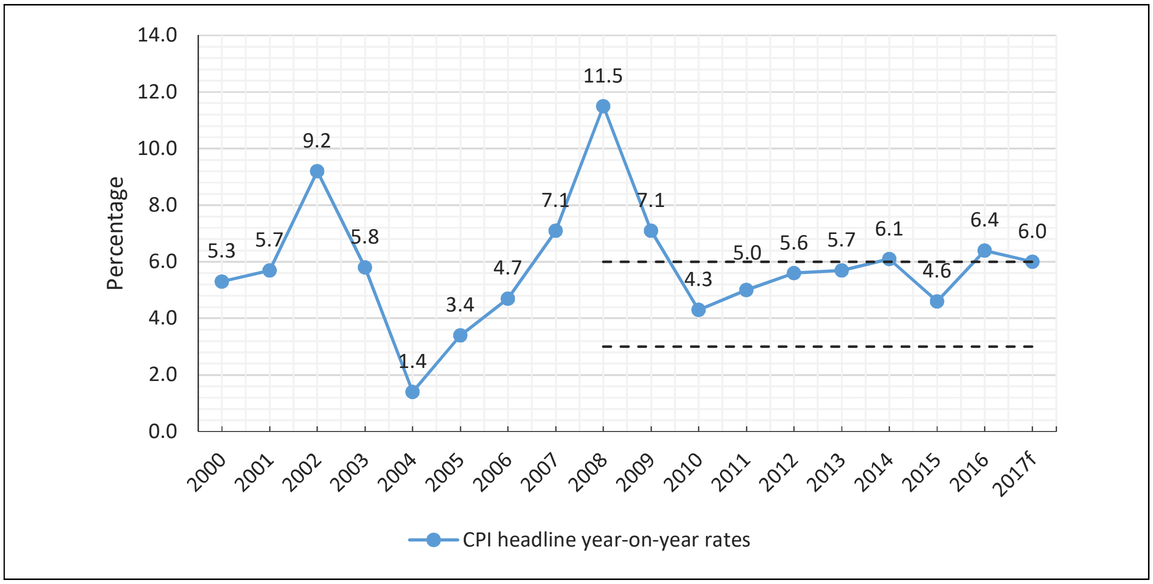
**Table 4.3: Inflation at average consumer prices for selected economic groupings (2011–2017f)**

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016f | 2017f |
|---|---|---|---|---|---|---|---|
| **World average inflation** | **5.1** | **4.1** | **3.7** | **3.2** | **2.8** | **2.9** | **3.3** |
| | | | | | | | |
| **Advanced economies** | **2.7** | **2.0** | **1.4** | **1.4** | **0.3** | **0.8** | **1.7** |
| United states | 3.1 | 2.1 | 1.5 | 1.6 | 0.1 | 1.2 | 2.3 |
| Euro area | 2.7 | 2.5 | 1.3 | 0.4 | 0.0 | 0.3 | 1.1 |
| - Germany | 2.5 | 2.1 | 1.6 | 0.8 | 0.1 | 0.4 | 1.5 |
| - France | 2.3 | 2.2 | 1.0 | 0.6 | 0.1 | 0.3 | 1.0 |
| Japan | -0.3 | -0.1 | 0.3 | 2.8 | 0.8 | -0.2 | 0.5 |
| United Kingdom | 4.5 | 2.8 | 2.6 | 1.5 | 0.1 | 0.7 | 2.5 |
| Other advanced economies | 3.3 | 2.1 | 1.7 | 1.5 | 0.6 | 1.0 | 1.9 |
| | | | | | | | |
| **Emerging and developing economies** | **7.1** | **5.8** | **5.5** | **4.7** | **4.7** | **4.5** | **4.4** |
| Commonwealth of independent states | 9.7 | 6.2 | 6.4 | 8.1 | 15.5 | 8.4 | 6.3 |
| - Russia | 8.4 | 5.1 | 6.8 | 7.8 | 15.5 | 7.2 | 5.0 |
| Emerging and developing Asia | 6.5 | 4.6 | 4.6 | 3.5 | 2.7 | 3.1 | 3.3 |
| - China | 5.4 | 2.6 | 2.6 | 2.0 | 1.4 | 2.1 | 2.3 |
| - India | 9.5 | 9.9 | 9.4 | 5.9 | 4.9 | 5.5 | 5.2 |
| Emerging and developing Europe | 5.4 | 5.9 | 4.3 | 3.8 | 2.9 | 3.1 | 4.2 |
| Latin America and the Caribbean | 5.2 | 4.6 | 4.6 | 4.9 | 5.5 | 5.8 | 4.2 |
| - Brazil | 6.6 | 5.4 | 6.2 | 6.3 | 9.0 | 9.0 | 5.4 |
| Middle East, North Africa, Afghanistan & Pakistan | 9.2 | 9.8 | 9.1 | 6.8 | 5.8 | 5.1 | 6.0 |
| Sub-Saharan Africa | 9.4 | 9.3 | 6.6 | 6.3 | 7.0 | 11.3 | 10.8 |
| - Nigeria | 10.8 | 12.2 | 8.5 | 8.0 | 9.0 | 15.4 | 17.1 |
| - South Africa | 5.0 | 5.7 | 5.8 | 6.1 | 4.6 | 6.4 | 6.0 |

**Source:** Compiled from IMF (2016a:235–239).

Figure 4.6 illustrates the inflation rate for South Africa for the period 2000–2017f. It can be seen that since the introduction of 'inflation targeting' in 2008 the annual rate of inflation has exceeded the upper limit set for inflation targeting on a number of occasions in recent years. 'Inflation targeting' was introduced by the Minister of Finance in his medium-term budget policy statement in 2008 (South African Reserve Bank, 2016b). The target range is set at 3% – 6%. This inflation target range allows a degree of flexibility in absorbing the effects of events that occur in the local or global economy outside the control of the relevant controlling bodies. The average annual inflation for 2014 was beyond the set upper limit. A noticeable decline in inflation was seen in 2015 which is attributed to the falling oil price (OECD, 2015:13). Statistics released by Statistics South Africa in March of 2017 (Statistics South Africa, 2017:5) show that for 2016 the rate of inflation was above 6.0% for every month, except for July (6.0%) and August (5.9%). The figures for the remaining months fell outside the 'inflation target'. This increase was ascribed to food price inflation related to the worsening drought in the country and the depreciation of the Rand at that time (South African Reserve Bank, 2016a:2). The increase in inflationary pressure resulted in the South African Reserve Bank raising interest rates in January 2016 and March 2016. Petrol price decreases and lower service price inflation in July 2016 eased inflationary pressures slightly, resulting in interest rates remaining unchanged for the rest of the year.

**Figure 4.6: South African CPI: 2000–2017f (year-on-year rates)**




**Source:** Compiled from IMF (2016b) and Statistics South Africa (2017a:2).

Predictions regarding inflation for the future all tend to hover at around 5.8% to 6.1% for the next few years. Table 4.4 is an extract from the South African Reserves Bank's quarterly report in March 2017 where the inflation expectations of a number of interest groups are outlined. All groups put annual inflation within the inflation upper target for 2017 and 2018. January 2017 saw inflation being recorded at 6.6% (Statistics South Africa, 2017).

**Table 4.4: Expectations for South African rate of inflation (2016–2018)**

| | Financial analysts | Business representatives | Trade union representatives | All surveyed participants | IMF |
|---|---|---|---|---|---|
| 2016 | 6.3 | 6.0 | 5.8 | 6.0 | 6.4 |
| 2017 | 5.6 | 6.0 | 5.7 | 5.8 | 6.0 |
| 2018 | 5.4 | 6.0 | 5.9 | 5.8 | 5.5 |
| Next 5 years | 5.5 | 6.1 | 5.9 | 5.8 | n/a |

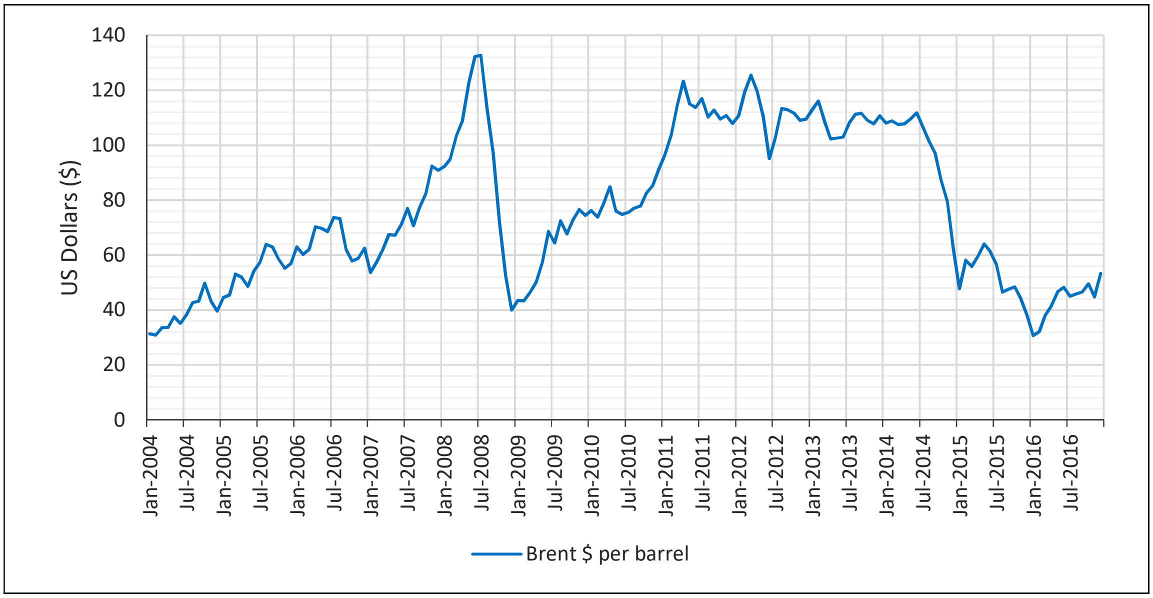
**Source:** IMF (2016b) and South African Reserve Bank (2017a:32).

### 4.2.3 Oil

As was established in section 1.2.1.3, the price of oil is an issue that has a significant bearing on the air transport industry. Section 3.5.3.1 further established that jet fuel, which is derived from oil, is one of the larger costs for most airlines. This was specifically highlighted in table 3.8 in chapter 3, which highlighted the changing price of oil over the past decade and the effect it had on jet fuel and airline costs. Ultimately, there is a direct impact on the consumer in terms of the price of air travel.

Focussing specifically on the overall macro trend in the price of oil in the global context, figure 4.7 shows the price of oil for the period January 2004 to December 2016. The dramatic increase in the price of oil in 2008 is clearly visible. The price per barrel rose rapidly from US $54,30 per barrel in January 2007 to US $133,90 per barrel in 18 months. This was followed by a period of decline to a low of US $41.58 per barrel six months later (December 2008). This was followed by a period of three and a half years (starting February 2011) with the average price of oil per barrel above US $100. It was only towards the end of September 2014 that the price of oil started to drop again reaching a low of US $30.7 in January of 2016. Although the oil price has risen slightly since then, it is still under US $55 per barrel, resulting in airlines experiencing drastically reduced fuel costs as described in section 3.5.3.1 (IATA, 2016f).

**Figure 4.7: Oil price – January 2004 to December 2016**




**Source:** Compiled from EIA (US Energy information administration) (2017).

The fall in the oil price in 2014 was down to strong supply coupled with weak demand caused by slow economic growth in the global economy (The Economist, 2014:2–3). The current (2016/17) lower oil price is viewed by economists as being based on supply-side factors (Boeing, 2016:15). Economists state that the small recovery in the oil price from the beginning of 2016 is due to a weaker US Dollar, strong import demand in China, and disruptions in supply from countries like Nigeria, Iraq, and the UAE, and a decline in US oil production (World Bank, 2016:14). Overall, a large range of geopolitical and economic factors drive the price of oil, including political instability and currency fluctuations against the US Dollar.

Economists at the IMF have estimated that a 10% change in the price of oil boosts global economic growth by 0.2% (The Economist, 2014:4). The oil price can thus have a significant impact on an economy and industries within an economy. It has the ability to disrupt the global economy, particularly the emerging and developing economies where oil price increases have greater inflationary effects or if the economy is reliant on oil exports (Berger, 2016:13). A Carlson Wagonlit Travel report (2016:6) highlights that in conditions where the oil price is low oil revenue dependant countries need to seek other forms of revenue to make up for the shortfall in oil exports. Conversely, countries that are net importers of oil benefit in terms of higher household disposable income and lower business costs. South Africa is identified as a net importer of oil that should be benefiting from the lower oil price (The Economist, 2014:4). However, simultaneous weak economic growth, low employment, current account deficits, rising inflation, and a weak currency have limited the benefits that could be obtained from a low oil price. So, whilst there is some relief, South African carriers do not derive as much of a benefit from the low oil price as other carriers that operate in stable or advanced economies.

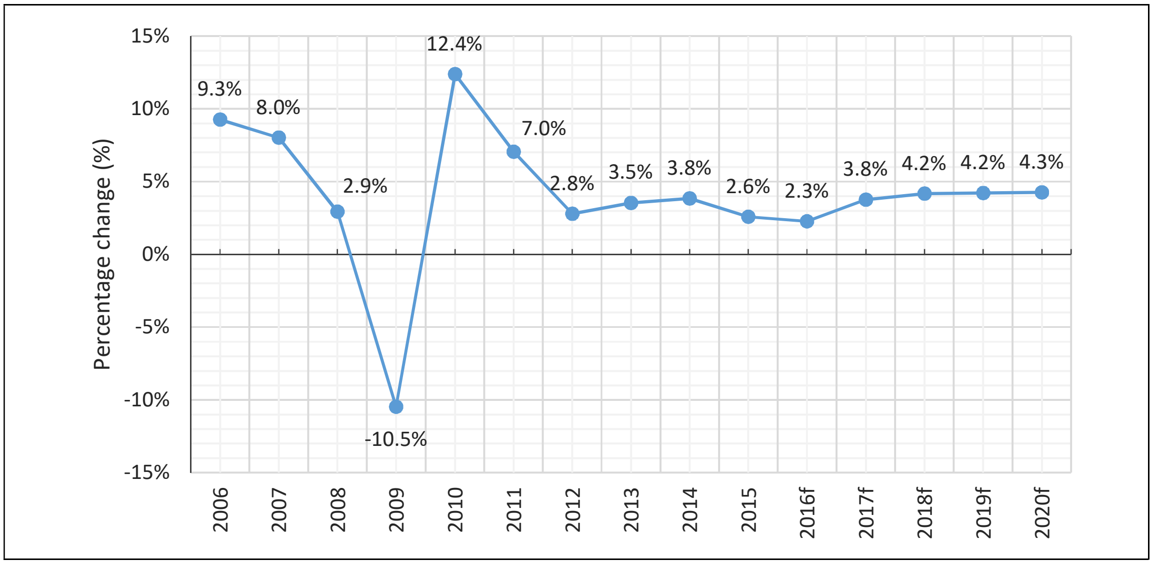
From an airline's perspective, the future of the oil price is an important metric to understand and forecast. The industry is a large consumer of jet fuel, consuming 294 billion litres globally, worth US $181 billion, in 2015 (ATAG, 2016:7). Aircraft manufacturers all acknowledge that the expectations airline have regarding the price of oil have a direct influence on their decision to grow/upgrade their fleet or to maintain the status quo (Bombardier, 2015:4). In times of high oil prices airlines are 'forced' to seek aircraft that are more fuel efficient and productive. In times of low oil prices, there is less incentive to seek out new and expensive aircraft as the lower oil price leads to lower overall costs (Flight Global, 2016:4). Oil price changes provide airlines with additional risks in cases where their fuel price has been hedged against rises or falls in the oil prices, particularly if they hedged before a sharp fall in the oil price (*see* section 3.5.3.1). As stated in the previous paragraph, lower oil prices (*ceteris paribus*) should lead to overall higher disposable income in an economy which leads to higher air travel demand.

The general consensus is that oil prices will increase once again over the longer term. IATA forecast that the oil price would average US $44.60 per barrel at the end of 2016 (IATA, 2016f:1), whilst the World Bank forecasts an average price of US $41.0 per barrel for 2016 and US $50.0 for 2017 (World Bank, 2016:14). The South African Reserve Bank (2016a:31) identifies that in September 2016 futures were trading at US $51.0 for mid 2017 delivery. Boeing, in their aviation policy and geopolitics report (Boeing, 2012a:5), speculate that future oil demand will be determined by growth in the emerging and developing economies, transportation requirements, and the growth of oil as a petrochemical feedstock.

### 4.2.4 Trade

In line with the GDP collapse, world trade also collapsed during the recession in 2009 (figure 4.8). World trade has since recovered from the slump with the emerging and developing economies seeing trade return at a pace faster than the advanced economies (Kose et al., 2012:11). Airlines are extremely important to world trade on two basic levels. Firstly, airlines play a role in the transportation of many of the items traded (cargo), and secondly, airlines transport people when they travel to negotiate and facilitate the trades. Airlines transported approximately 35.0% of world trade by value (US $6.4 trillion) in 2014 (ATAG, 2016:9). The figure declined slightly in 2015 to US $5.6 trillion (IATA, 2016e:2).

**Figure 4.8: World trade volume of goods and services; 2006–2020f (yearly % change)**




**Source:** IMF (2016d).

Figure 4.8 illustrates the actual and forecast rate of global trade growth from 2006 to 2020f. The effect of the 2008/9 global recession on world trade is clearly identifiable. The recovery in 2010 from the sudden decline in 2009 is also clearly identifiable. Since 2012 it can be seen that the overall rate of growth in world trade has stabilised with the forecasts for the end of 2016 to 2020 showing moderate annual improvements. Figure 4.8 is based on the IMF's October 2016 *World Economic Update* publication (IMF, 2016a:241; IMF, 2016d).

Table 4.5 is a representation of global growth rates for exports and imports for the period 2011–2017f. The purpose of this table is to provide a representation of the different rates of trade growth experienced between emerging and developed economies in terms of imports and exports. In terms of imports, the emerging and developing economies have seen their imports (i) grow at a rate faster than the advanced economies, and (ii) faster than their exports. Whilst the emerging economies have largely grown their exports at a rate faster than the advanced economies, it is off a much lower base.

For 2015, global trade grew at 2.6%, which represented a slowdown from the previous year (2014) where global trade grew at 3.8%. The World Trade Organisation (WTO) reports that the 2015 slowdown was largely influenced by the decline in commodity prices economic slowdown in China, and recession in Brazil. (WTO, 2016:18). Another point highlighted by the WTO is that the emerging and developing economies showed increased growth in terms of the overall share of global trade, achieving a market share of 42.0% for merchandise exports in 2015 compared to only 33.0% in 2005. An additional influence on the rate of world trade growth in 2015 was currency volatility. Many emerging economy currencies weakened during 2015 and early 2016 making US and European imports more expensive but also making it cheaper to export to the advanced economies. Services trade performed better than goods trade in 2015 with the result that services trade continues to grow in size in terms of world trade. Services trade now accounts for around 20% of world trade and it is expected to continuing growing in size and importance in the global economy (World Bank, 2016:16).

**Table 4.5: Growth in value of imports and exports for selected economic groupings (% change, 2011–2017f)**

| | Annual percentage change | | | | | | |
|---|---|---|---|---|---|---|---|
| | **2011** | **2012** | **2013** | **2014** | **2015** | **2016f** | **2017f** |
| **Growth in volume of imports of goods & services** | | | | | | | |
| - World | 7.1% | 2.7% | 3.4% | 4.0% | 2.4% | 2.3% | 4.0% |
| - Advanced economies | 5.1% | 1.2% | 2.3% | 3.8% | 4.2% | 2.4% | 3.9% |
| - Emerging and developing economies | 11.0% | 5.5% | 5.3% | 4.5% | -0.6% | 2.3% | 4.1% |
| - South Africa | 11.9% | 4.2% | 5.0% | -0.5% | 5.3% | -0.4% | 1.4% |
| | | | | | | | |
| **Growth in volume of exports of goods & services** | | | | | | | |
| - World | 7.0% | 2.9% | 3.7% | 3.7% | 2.7% | 2.2% | 3.5% |
| - Advanced economies | 5.9% | 2.3% | 3.2% | 3.8% | 3.6% | 1.8% | 3.5% |
| - Emerging and developing economies | 9.0% | 3.8% | 4.5% | 3.5% | 1.3% | 2.9% | 3.6% |
| - South Africa | 3.5% | 0.8% | 3.6% | 3.3% | 4.1% | 0.7% | 2.7% |

**Source:** IMF (2016d).

In 2016, world trade growth stabilised marginally in the first quarter but was still expected to remain weak for the remainder of 2016 (World Bank, 2016:16). The WTO, in September 2016, downgraded its world trade expansion forecast for 2016 to 1.7% from 2.8% in April 2016. At the same time the organisation downgraded the 2017 forecast from 3.6% for the year to between 1.8% and 3.1% (WTO, 2016a).

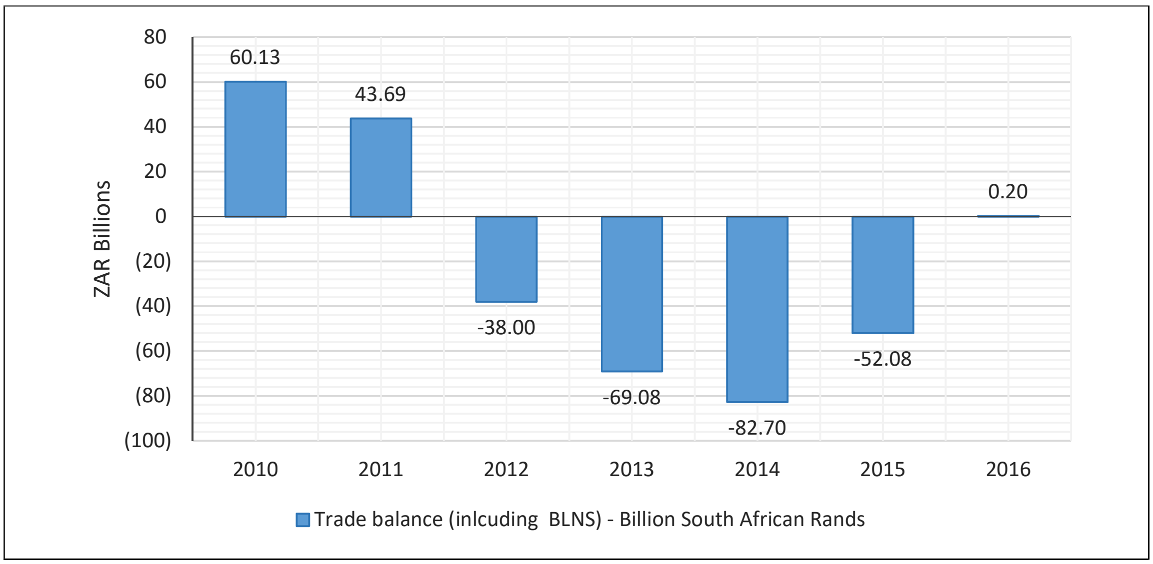
Shifting the focus to South Africa, the problems identified in the previous paragraph also impacted on South African trade. From a broad perspective, trade accounted for 31.8% of South African GDP for 2013–2015. In the global context, South Africa ranked at positions 37 and 44 in world export trade for 'merchandise trade' and 'services trade' respectively in 2015. When looking at imports for 2015, South Africa ranked at positions 33 and 47 in world import trade for 'merchandise trade' and 'services trade' respectively (WTO, 2016b:326). Figure 4.9, published by the South African Revenue Service (SARS, 2016), represents South Africa's trade performance for the years 2010–2016. South Africa's largest destination and origin for merchandise imports and exports is the European Union followed by China and the USA.

Figure 4.9 highlights the fact that South Africa recorded a trade deficit for 2012–2015, with only a minor trade surplus recorded in 2016. The trade surplus recorded in 2016 was with BNLS[1] countries included.

[1] BNLS refers to Botswana, Lesotho, Namibia, Swaziland.

If the BNLS countries are excluded, then South Africa recorded a deficit of ZAR 100.56 billion for 2016. The year 2014 was a particularly bad year in terms of the trade deficit. The South African Reserve Bank, in their Quarterly Economic Review for the second quarter 2016 (South African Reserve Bank, 2016a:2), state that after a poor first quarter to 2016, which saw trade deficits being realised for each month, the second quarter saw exports surge across most categories and imports decline with the result that trade surpluses were realised. The South African Reserve Bank cites the lagging effect of the depreciation of the Rand exchange rate as the key reason behind the improved trade performance. The third quarter saw exports remaining high, but offset marginally by increasing imports (particularly in August) to show a net trade deficit for the quarter (SARS, 2016). The 4th quarter saw a trade surplus, with the value of merchandise exports increasing and commodity prices rising (South African Reserve Bank, 2017a:2). In the short term however, South Africa's trade growth is forecast to be limited by sluggish global growth and low commodity prices (Laing, 2016).

**Figure 4.9: South African trade balance – Including BNLS (2010–2016)**



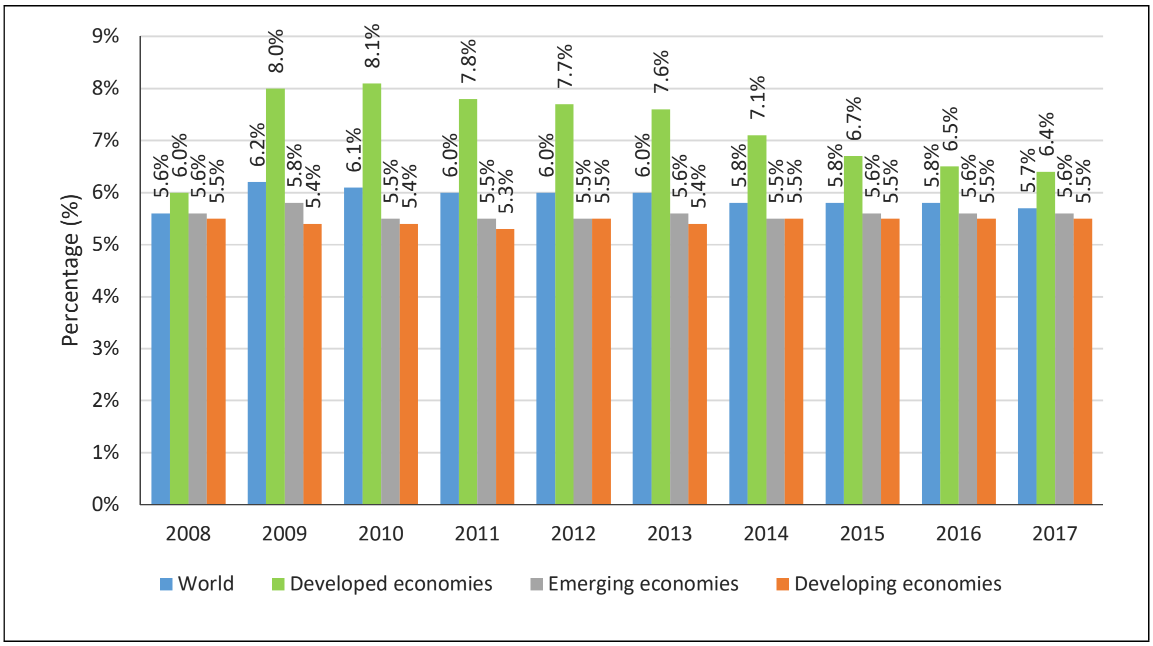

**Source:** SARS (2017).

### 4.2.5 Employment

The purpose of this brief section is to highlight the current employment environment situation within South Africa as the level of employment has an influence on the level of air travel demand.

Figure 4.10 highlights the general trend regarding global unemployment and highlights the distinction between the developed economies, the emerging economies, and the developing economies. The figure indicates that since 2009, unemployment in the developed economies has been declining at a rate faster than in the emerging economies and in the developing economies. From figure 4.10 it can also be observed that the unemployment rate is lower in the emerging and developing countries than in the developed economies. Whilst a few struggling European economies have unemployment rates in excess of 25%, the main explanation is accounted for in terms of how employment is recorded and the quality, or vulnerability[2], of the employment in an economy. In the developed economies, only 10.4% of the employment was classified as 'vulnerable employment' in 2015. In contrast to this, employment classified as vulnerable employment in the emerging economies and the developing economies was recorded as 52.9% and 76.7% respectively in 2015 (ILO, 2016:17). The global trend is that unemployment rates are still high and are expected to remain high into 2017 and 2018. The global number of unemployed in 2015 was recorded at 197.1 million and was projected to rise to 199.4 million at the end of 2016 with emerging economies shedding the bulk of the jobs.

**Figure 4.10: Global unemployment rates across economic groupings**




**Source:** ILO (International Labour Organisation) (2015) and ILO (2016:13 & data sets).

Table 4.6 and figure 4.11 show that South Africa is a country with a high unemployment rate. The quarterly labour force survey by Statistics South Africa (2017b:1) shows that for Q4 2016, 16.1 million people out of a labour force of 21.8 million people were employed in the South African economy. This means that there were 5.8 million people who were unemployed, representing an unemployment rate of 26.5%. Unlike other emerging economies whose level of vulnerable employment stood at 52.9% for 2015, South Africa's level of vulnerable employment stood at 9.2% for the same period and was forecast to remain unchanged for 2016 (ILO, 2015). This is in line with the developed economies.

[2] Vulnerable employment is defined as the sum of the employment status groups of own-account workers and contributing family workers. They are less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and 'voice' through effective representation by trade unions and similar organisations. Vulnerable employment is often characterised by inadequate earnings, low productivity and difficult conditions of work that undermine workers' fundamental rights.

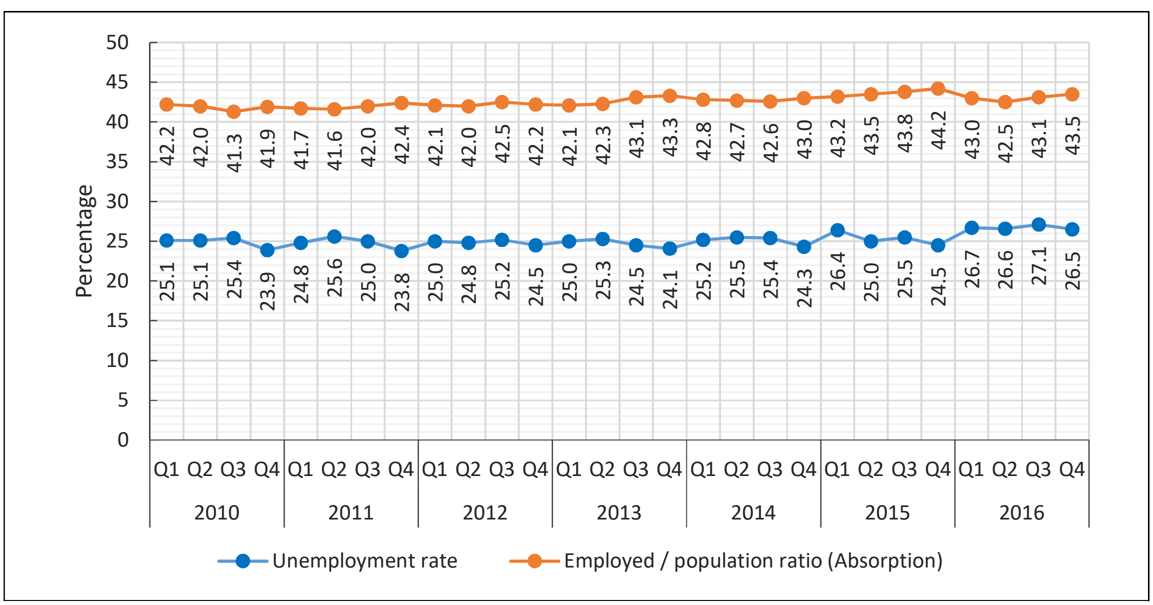
**Table 4.6: South African labour statistics (Q4 2015, Q3 2016, and Q4 2016)**

| | Q4 2015 | Q3 2016 | Q4 2016 | Quarter-to-quarter change | Year-on-year change | Quarter-to-quarter change | Year-on-year change |
|---|---|---|---|---|---|---|---|
| | Thousands | | | | | Percentage | |
| **Population 15 - 64 years** | **36 272** | **36 750** | **36 905** | **155** | **633** | **0.4%** | **1.7%** |
| **Labour force** | 21 211 | 21 706 | 21 849 | 143 | 638 | 0.7% | 3.0% |
| **Employed** | 16 018 | 15 833 | 16 069 | 235 | 51 | 1.5% | 0.3% |
| - Formal sector (non-agriculture) | 11 180 | 11 029 | 11 156 | 127 | -24 | 1.2% | -0.2% |
| - Informal sector (non-agriculture) | 2 684 | 2 641 | 2 695 | 53 | 11 | 2.0% | 0.4% |
| - Agriculture | 860 | 881 | 919 | 38 | 59 | 4.3% | 6.9% |
| - Private households | 1 294 | 1 281 | 1 299 | 17 | 5 | 1.3% | 0.4% |
| **Unemployed** | **5 193** | **5 873** | **5 781** | **-92** | **588** | **-1.6%** | **11.3%** |
| **Not economically active** | **15 061** | **15 044** | **15 055** | **12** | **-6** | **0.1%** | **0.0%** |
| - Discouraged work seekers | 2 279 | 2 291 | 2 292 | 1 | 14 | 0.1% | 0.6% |
| - Other (not economically active) | 12 782 | 12 753 | 12 763 | 10 | -19 | 0.1% | -0.2% |
| | | | | | | | |
| **Rates (%)** | | | | | | | |
| - Unemployment rates | 24.5% | 27.1% | 26.5% | -0.6% | 2.0% | | |
| - Employment/population ratio (absorption) | 44.2% | 43.1% | 43.5% | 0.4% | -0.7% | | |
| - Labour force participation rate | 58.5% | 59.1% | 59.2% | 0.1% | 0.7% | | |

**Source:** Statistics South Africa (2017b:1).

Figure 4.11 shows the quarterly trend of the employment-to-population ratio and unemployment rate in South Africa over an extended period. Since Q1 2010 there have been some quarters where the number of unemployed reduced but the overall trend is an increase in the number of the unemployed with a noticeable increase being experienced since Q1 2015. The IMF forecasts that the unemployment rate for South Africa at the end of 2016 will be 26.3%, rising to 27.0% in 2017 (IMF, 2016a:47). As an indication of the extent of the employment problems in the country, the number of unemployed people with tertiary qualifications has risen by 16 000 from Q1 to Q4 of 2016, representing 7.8% of the unemployed people in the country for Q4 2016 (Statistics South Africa, 2017b:59).

**Figure 4.11: South African quarterly unemployment and employment figures (2010–2016)**




**Source:** Statistics South Africa (2017b:1) and Statistics South Africa (2017c).

The actual number of unemployed persons remains worryingly high. Most worrying is the rate of unemployment amongst the country's youth (ages 15–24 and 25–34), which stood at 50.9% and 31.9% respectively in the 4th quarter of 2016 (Statistics South Africa, 2017b:Appendix 1 pg. 6; Statistics South Africa, 2017c:table 2.2). This is a significant economic problem for the country to solve if it is to improve its competitiveness and social standing in the global arena. The high levels of unemployment also have a large effect on the levels of income in the country and thus the affordability of high priced goods and services like air travel.

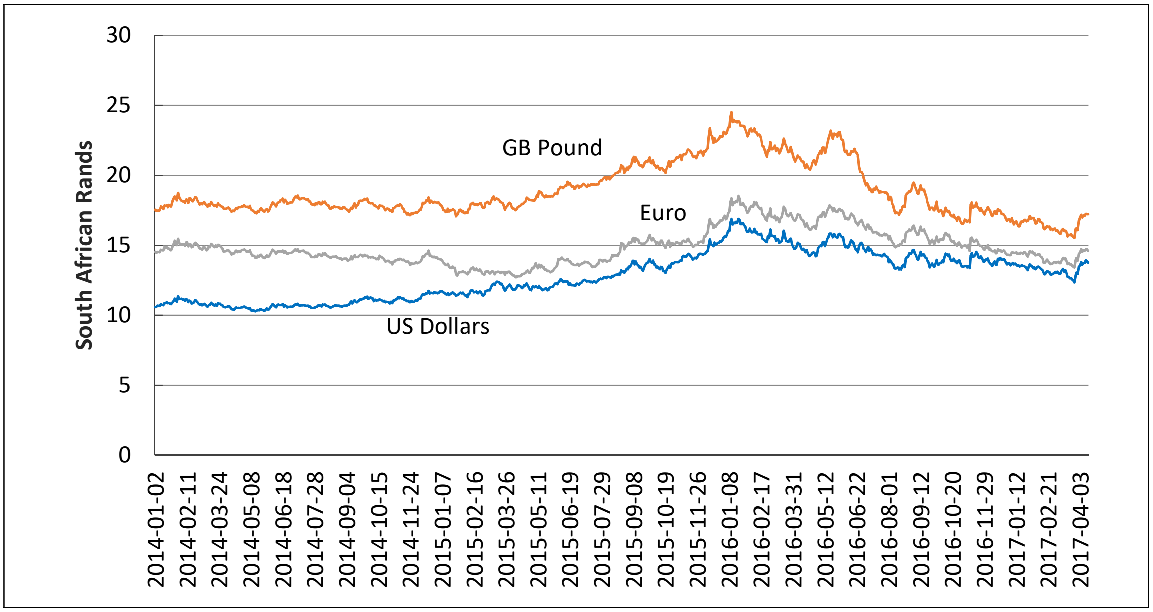
### 4.2.6 Exchange rate fluctuations

Exchange rate fluctuations are influenced by a number of factors and have a significant influence on the commercial air transport industry. Many of the costs within the air transport industry, especially jet fuel and aircraft purchasing, are denominated in US dollars because it is a global industry with many global suppliers throughout the value chain. Fluctuating currencies can mean that a decrease in a cost (fuel for example), can be negated by a weakening against the US Dollar (Carlson Wagonlit Travel, 2016:5).

With reference to figure 4.12, the curves of the South African Rand against the US Dollar, the Euro, and the British Pound follow a very similar path even though they are at different price levels (South African Reserve Bank, 2017b). Noticeable is how the US Dollar and Euro exchange rates against the Rand drew closer together whilst the British Pound rate grew further apart. It is only in the last few months of 2016 that the differences between the exchange rates between the Rand and the three currencies grew smaller. The Rand experienced significant volatility against the three currencies at about August 2015 and this continued to the latter part of 2016. The currency then strengthened until another sharp decline in April 2017. Whilst the overall trend for 2016 was a downward one, there is still significant volatility in the exchange rate which reflects a large number of events and turmoil occurring in the South African and global economy.

Focussing on 2016, figure 4.12 clearly highlights that this was a tumultuous year for the Rand with the currency repeatedly strengthening and weakening against the three identified currencies. This period was characterised by a number of significant events in the domestic and foreign environment. An article on Fin24 (Le Cordeur, 2016) provided a summary of the events affecting the South African Rand during this period. Amongst others, the events included the replacements of the minister of finance, US rate hikes, emerging market concerns, growth outlook revisions, pressure on the Dollar, the fallout from the Brexit vote in Great Britain, and political infighting in South Africa. Even the presidential elections in the USA saw the Rand fall by almost 5% against the US Dollar on the news of Donald Trump's victory before a slight recovery later in the day (Mahlangu, 2016). Two days later, an article in the Business Day newspaper noted that the Rand again plummeted against the US Dollar due to concerns over Donald Trump's 'possible' policies and their impact on emerging economies (Mittner, 2016).

**Figure 4.12: South African Rand medium-term performance against US Dollar, British Pound, and Euro (Jan 2014–March 2017)**




**Source:** South African Reserve Bank (2017b).

The volatility of the Rand has significant impacts on the economic activity of the county and this includes air travel. A review of the financial literature identifies a number of key reasons beyond individual events for the Rand's volatility. Mavee, Perrelli, and Schimmelpfennig (2016:2 & 17) conducted research on this matter and identified three main reasons behind the Rand's volatility; (i) increased commodity price volatility, (ii) US economic surprises, and (iii) local political uncertainty. An article on the Bidvest Bank (2016) website succinctly summarises the various reasons for the Rand volatility into external and internal reasons:

**External reasons:**

- South Africa is an emerging economy and has a commodity currency (the economy relies on commodity exports).
- Federal rate normalisation in the USA.
- China slowdown and Yuan rate manipulation.
- Extremely low interest rates in Europe that are not achieving the desired result of boosting their economies.

**Internal reasons:**

- The threat of rating agencies downgrading South Africa and the downwards revision of South African growth forecasts by these agencies cause currency declines.
- Business confidence in South Africa is low and this influences the currency.

- Overall growth projections for South Africa are being cut to their lowest levels ever.
- Tax collections getting smaller resulting in less revenue to cover growing debts. A weaker currency also makes debt repayment more expensive.

Despite the gradual strengthening of the Rand in the latter part of 2016, current forecasts are predicting that the Rand will still experience a difficult period for the remainder of the year and into 2017. A Business Day article highlights the continued threat of a ratings downgrade to junk status (now realised), low economic growth, and potential political problems arising from the 2017 ANC leadership elections as reasons for this negative outlook (Ndaba, 2016).

## 4.3 SOUTH AFRICAN ECONOMIC CLASSIFICATION AND DEMOGRAPHICS

The focus of this section is to give context to South Africa as a country and outline some of the key characteristics that define the country in which the local airlines have to operate. Each of the issues addressed have an influence on the nature of the industry and the level of demand for commercial air travel services.

### 4.3.1 South African economic classification

South Africa is a multi-cultured society with 11 official languages. It operates on a constitutional multiparty, three-tiered (local, provincial, national) democracy with an independent judiciary (South African Government, 2016). The country has a business environment that is generally open to conducting business, but suffers from a lack of public sector capacity, with divisions within the ruling party presenting potential risks to the country. The country still has huge problems related to poverty, inequality, and crime.

The IMF acknowledges the economic and social progress made by South Africa since 1995 but highlight key problems like infrastructure bottlenecks, insufficient skills, and political in-fighting as preventing the country from achieving growth and reducing inequality and unemployment (IMF, 2016e:6). Whilst the South African private business environment is one of the better in Africa (3$^{rd}$), it only ranks 74$^{th}$ out of 190 economies in terms of 'ease of conducting business' in the annual '*Doing Business 2017'* report by the World Bank (World Bank, 2016b:8). This report ranks South Africa 139$^{th}$ out of 190 countries in terms of 'trading across borders' (time and costs associated with the process of importing or exporting goods). Labour laws are perceived to be restrictive and a deterrent to many potential investors. An important issue for business in South Africa is Broad-Based Black Economic Empowerment (B-BBEE) which has its aim of monitoring and evaluating black economic empowerment as a means of ensuring equality and wealth distribution within the country (Department of Trade and Industry, 2018). Poverty is a key issue to be addressed in the country. In 2015, the percentage of individuals that benefited from some form of social grant stood at 30.1% (approximately 16 million people). The percentage of households that received some form of social benefit payment stood at 45.5% (Statistics South Africa, 2016e:28). Whilst the number of people living in extreme poverty has been reduced by 3.6 million people, South Africa remains a country with one of the largest income gaps between the rich and the poor. The South African poverty rate (US $1.9/day PPP[3]) was reported as 15.7% in 2015 and is forecast to increase to 15.9% in 2016 and 16.0% in 2017 (World Bank, 2016c:2). The Gini coefficient[4] for South Africa is 0.634 (63.4%), with 2011 figures showing that the income share of the top 10% of the population is 51.3%, whilst that of the lowest 20% stands at only 2.5% (IMF, 2016e:46).

South Africa is generally classified as a developing or emerging economy. With it being recognised as part of the BRICS economic grouping it has theoretically aligned itself with a group of emerging economies of the future. Increased trade and partnerships with the BRIC countries links the country to a large number of potential consumers in terms of counter-trade and can provide the other BRIC countries with a 'gateway' into the rest of the African continent.

The World Economic Forum (WEF) in its 2016–2017 global competitiveness report (World Economic Forum, 2016:38) classifies South Africa stage of development as 'stage 2: efficiency driven'. This groups the country with other countries like China, Indonesia, Brazil, and Tunisia for example. Table 4.7 highlights South Africa's ranking on each of the 12 pillars used in ranking a country's global competitiveness. On the overall global competitiveness ranking, South Africa has achieved an overall ranking of 47th on the list of 138 ranked countries – a climb of two places from previous report. The country is the second highest ranking African country (Mauritius ranked 45th) and fourth amongst the BRICS countries. In terms of the sub-indexes that make up the overall ranking, South Africa was ranked as 84th in terms of basic requirements, 35th in terms of efficiency enhancers, and 31st in terms of innovation and sophistication factors. South Africa ranks extremely well on a number of the pillars of competitiveness used in the ranking. In terms of financial market development, the country ranks 11th on the list outranking many of the major developed economies. Within the various pillars the country also scores well on a number of categories including first in three finance-related sub-categories. The country ranks 10th in terms of the 'quality of air transport infrastructure' (World Economic Forum, 2016:38). 'Quality of management schools' (21st) and 'extent of marketing' (16th) add to the overall competitiveness of the country. On the negative side, labour market efficiency is ranked 97th with 'cooperation in labour-employer relations' ranked in last position (138th). Quality of overall infrastructure is ranked 59th. Crime and violence are also identified as a major negative in affecting the country's competitiveness.

3 PPP = Purchasing Power Parity

4 The Gini coefficient is a measure of statistical dispersion intended to represent the income distribution of a nation's residents, and is the most commonly used measure of inequality. Values moving towards 1 represent inequality whilst values moving towards 0 represent equality.

**Table 4.7: South Africa's global competitive ranking (2016–2017)**

| | Rank (out of 138) | Score (1 – 7) |
|---|---|---|
| **2016 – 2017 overall ranking** | **47** | **4.5** |
| GCI 2015–2016 (out of 140) | 49 | 4.4 |
| GCI 2014–2015 (out of 144) | 56 | 4.4 |
| | | |
| **Basic requirements** | **84** | **4.4** |
| Institutions | 40 | 4.5 |
| Infrastructure | 64 | 4.2 |
| Macroeconomic environment | 79 | 4.5 |
| Health and primary education | 123 | 4.3 |
| | | |
| **Efficiency enhancers** | **35** | **4.6** |
| Higher education and training | 77 | 4.2 |
| Goods market efficiency | 28 | 4.8 |
| Labour market efficiency | 97 | 3.9 |
| Financial market development | 11 | 5.2 |
| Technological readiness | 49 | 4.7 |
| Market size | 30 | 4.9 |
| | | |
| **Innovation and sophistication** | **31** | **4.2** |
| Business sophistication | 30 | 4.5 |
| Innovation | 35 | 3.8 |

**Source:** World Economic Forum (2016:324–325).

### 4.3.2 Broad South African demographics

Population estimates by Statistics South Africa (2016f:3) show that in 2016 there were 55,9 million people in South Africa with 51.03% being female and 48.97% male. The breakdown of the population according to the four main population groups is illustrated in table 4.8. The Black population group form the majority at 80.7%, with the remainder making up the difference.

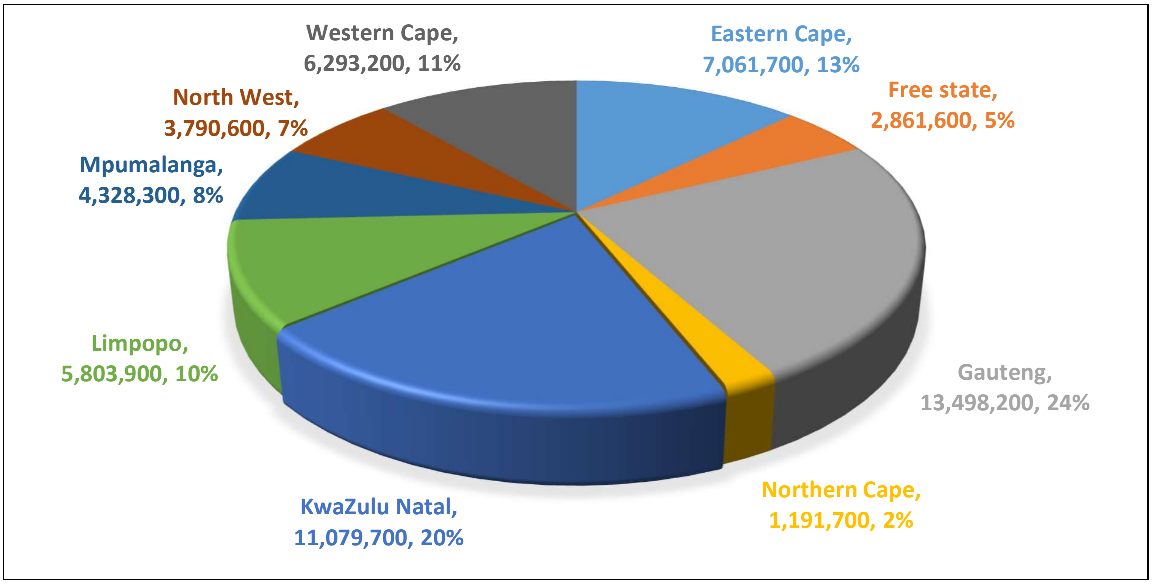
**Table 4.8: South African population sub-divided by population group (2016)**

| | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| **Population group** | **Number** | **% of total** | **Number** | **% of total** | **Number** | **% of total** |
| Black | 22 119 200 | 80.8% | 22 990 700 | 80.6% | 45 109 900 | 80.7% |
| Coloured | 2 368 000 | 8.6% | 2 529 200 | 8.9% | 4 897 200 | 8.8% |
| Indian/Asian | 701 900 | 2.6% | 684 100 | 2.4% | 1 386 000 | 2.5% |
| White | 2 190 700 | 8.0% | 2 325 100 | 8.1% | 4 515 800 | 8.1% |
| **TOTAL** | **27 379 800** | **100.0%** | **28 529 100** | **100.0%** | **55 908 900** | **100.0%** |

**Source:** Statistics South Africa (2016f:2).

On a provincial level the population is focussed around a number of main centres where most of the business activities occur. In the case of Gauteng, Kwa-Zulu Natal, Eastern Cape, and the Western Cape, these provinces have the highest concentration of the population and form part of the most frequently served in terms of airlines (Statistics South Africa, 2016f:12). The Western Cape, Kwa-Zulu Natal, and Gauteng are responsible for the most traffic and are referred to as the Golden Triangle. Figure 4.13 shows the dispersion of the South African population across the provinces. (*see* section 4.5.2 for the discussion on the dispersion of the South African population across cities and urbanisation).

**Figure 4.13: Dispersion of South African population – provinces**




**Source:** Statistics South Africa (2016f:2).

Figures from Statistics South Africa show that the overall population growth rate in the country is slowly increasing. In 2002–2003 the population growth rate (including birth rates and immigration) was estimated at 1.22% per annum and by 2010–2011 it had increased to a rate of 1.46% per annum. The population growth rate for 2015–2016 is estimated at 1.62% per annum (Statistics South Africa, 2016f:8). The Department of Social Development shows that South Africa has a fertility rate of 2.4 births per woman, which is the 3rd lowest in sub-Saharan Africa (South Africa, 2016:1). World Bank (2016d) figures show that this fertility rate is slowly declining. South Africa is also a country that has a high number of AIDS-related deaths with statistics for the year 2015 reflecting that 28.2% of the recorded deaths were AIDS-related deaths. It is estimated that in 2016, 12.7% of the South African population are living with HIV (Statistics South Africa, 2016f:6). The effect of HIV/AIDS has been that the life expectancy in South Africa in the past was relatively low compared to other countries but has been increasing in the past decade. Life expectancy at birth in 2016 is estimated at 59.7 years for males and 65.1 years for females (Statistics South Africa, 2016f:5–7). The age distribution of the South African population for 2016 indicates that 30.1% are under the age of 15 years, 61.9% are between the ages of 15 and 59, and 8.0% are older than 60 years (Statistics South Africa, 2016f:9).

A declining population birth rate, a relatively low life expectancy, fertility decline, and deaths resulting from AIDS, is forming a 'youth bulge' (current 15–35 years old) in the spread of the population across the age ranges. Over the course of the next 10–20 years this bulge will rise through the age ranges, forming a disproportionate percentage of the population at each level (South Africa, 2012:1). The implications of this are significant in terms of dependency, education requirements, and eventually employment opportunities and tax burdens.

## 4.4 THE TRAVEL AND TOURISM INDUSTRY

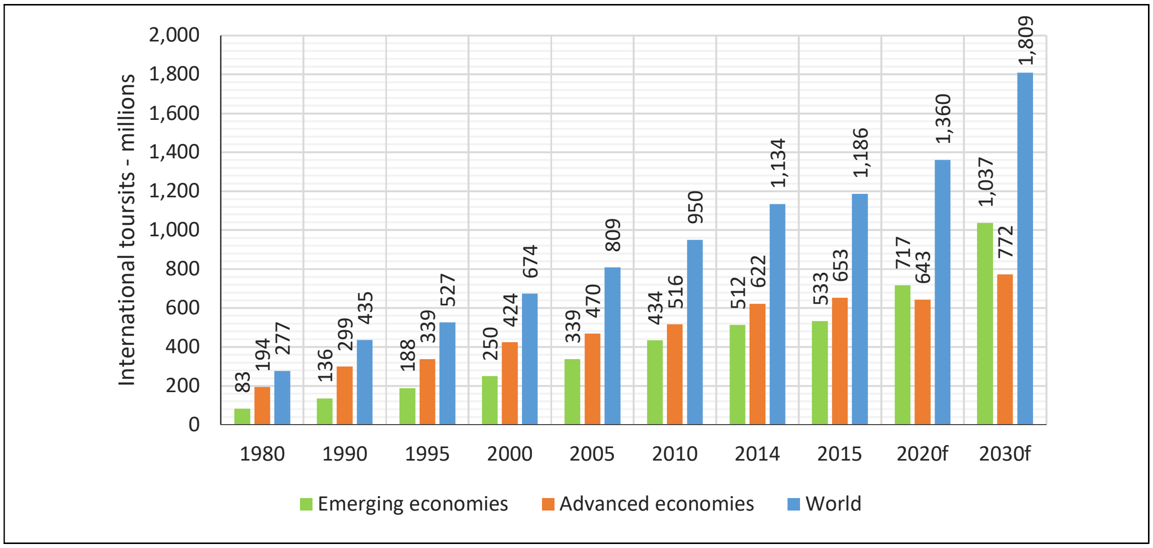
Air travel is intimately linked to travel and tourism with both industries reliant on each other for their existence. Before embarking on a review of the current air travel industry, it is important to understand the size and nature of the travel and tourism industry because it plays a large role in contextualising air travel demand. The focus of this section is therefore to provide an overview of the global tourism environment with a few brief comments given on tourism on the African continent. The focus them moves to an outline of the South African tourism industry.

### 4.4.1 The global tourism environment

Tourism has long been recognised as a strong contributor to an economy through employment creation and a whole range of trickle down effects. Air travel clearly has a large role to play in facilitating tourism, with over 54% of international tourists currently choosing air transport as their mode of travel (ATAG, 2016:16). The presence of air travel is therefore clearly a facilitator and stimulator of tourism. Tourism is recognised as a key industry for development in the emerging and developing economies. The reasons for this were outlined in a 2009 report by Oxford Economics (2009:32) which stated that tourism offers developing countries the opportunity to diversify their economies beyond “traditional agriculture and natural resources exploitation”. Many developing countries have seen the benefit of the tourism industry to such an extent that in 2016 tourism is now their primary export sector.

The travel and tourism industry has been experiencing strong growth since the 2008–2009 economic recession. The World Tourism Organisation highlights that 2015 marked the 6th consecutive year that the industry has achieved above-average growth, recording a total of 1.18 billion international tourists (World Tourism Organisation, 2016:4). Since 2010, the number of international tourists has increased by over 4% per annum and now represents 7% of the world’s exports in goods and services (World Tourism Organisation, 2016a:15). Tourism has grown faster than world trade for the past four years. Figure 4.14 highlights that international tourism has grown from 277 million tourists in 1980 to 1.18 billion in 2015 (World Tourism Organisation, 2016:4). At current growth rates, it is expected to reach 1.36 billion by 2020. International tourism receipts in 1980 totalled US $104 billion and has grown to US $ 1 260 billion in 2015 (World Tourism Organisation, 2016:2). Domestic tourism is estimated at 6 billion domestic tourists. The biggest influences on the tourism industry in 2015 were fluctuating currencies, the decline in the fuel price, and increased safety and security concerns relating to terror attacks. These factors were negative influences for some countries and positive for others (terror attacks in Egypt reduced tourism to Egypt but benefited Greece when tourists diverted their holidays from Egypt). A further contributing factor to the growth of global tourism is the growing size of the middle classes (Airbus, 2016d:20) (*see* section 4.5.2), resulting in more people with income available for use on travel purchases. Globalisation and migration have also been identified as enhancing the amount of tourism that takes place. The air transport industry is a beneficiary of these factors as well.

**Figure 4.14: International tourist arrival growth pattern since 1980**




**Source:** World Tourism Organisation (2016:4 &15).

Taking the economic concerns and crises of the past decade into account, it can be seen that the tourism industry was relatively resilient to the negative environment of the global financial crisis and recession. An analysis by Accenture in early 2008 stated that despite the economic crisis, tourism was still expected to grow at an average of 4% per annum for the next decade (Accenture, 2008:2). This forecast was based on the growing Chinese middle-class and growth in the emerging and developing economies. This forecast proved to be correct. Oxford Economics and Amadeus released a report in 2010 where they commented on how the tourism industry fared during the recession and future industry trends. They noted that the industry was making an "uneven recovery from the recession" (Oxford Economics, 2010:5). The report reinforced the 2008 Accenture report by stating that Asia, including China, will be responsible for 22% of tourist arrivals by the year 2020 and contribute 32% of tourism spend. This trend is clearly visible from figure 4.14 where it is seen that up until 2015 the developing and emerging economies received fewer international tourists than the advanced economies, but their numbers were catching up at a fast rate. World Tourism Organisation figures forecast that by 2020 the emerging and developing economies will receive more international tourists than the advanced economies (World Tourism Organisation, 2016:15).

The recent solid growth in the travel and tourism has however not been evenly spread across the globe. The Americas (north, south, and central), Oceania, and Asia (South-east and South Asia in particular) have shown the showed the highest rate of annual growth (over 6%). Europe as a whole showed satisfactory overall growth (around 5% overall), largely due to Northern and Southern Europe. Europe dominates the actual number of international tourist arrival at 609 million arrivals and a global market share of 51% followed in a distant second by Asia and the Pacific at 23.5% (World Tourism Organisation, 2016a:15). The regions that are underperforming in recent years are the Middle East

(1.2%) and Africa, which recorded a decline of 3.3% for 2015. The remainder of the regions grew at around the global average of 4% per annum. At the individual country level, table 4.10 highlights the top 10 countries in terms of international tourists received. In comparison with France, which attracted 84.5 million international tourists in 2015, South Africa only received 8.9 million international tourists. The difference is significant and shows that whilst South Africa might have a strong position on the African continent, it has a lot more to do to become a major player in the global context.

Statistics for the first half of 2016 show that global international tourist numbers increased by 4% compared to the first half of 2015 (World Tourism Organisation, 2016b). This growth is once again being seen in the Asia Pacific and the Americas with Europe showing stable, but slower growth. The Middle East and Africa are lagging behind in 2016 with many regions showing declining numbers. Data for Africa reflects a vast difference between North Africa (9% decline) and Sub-Saharan Africa (5% increase). The key problems with the Middle East (-9%) and North Africa (-9%) relate largely to the continued disruptions of terror-related events and regional instability. In the longer term the global forecast is positive with growth of over 3.3% per annum forecast until 2030 (World Tourism Organisation, 2016:3).

Section 2.3.1 highlighted the economic impact of air transport on GDP. The importance of the travel and tourism industry to the global economy is summarised in table 4.9. The direct contribution of tourism to global GDP in 2016 was US $2 306.0 billion which represented 3.1% of global GDP. The long-range forecast for 2027 is that tourism will directly contribute US $3 537.1 billion to global GDP (3.5% of global GDP). In terms of total contribution to global GDP in 2016, tourism contributed US $7 613.3 billion to the global economy. This contribution is expected to reach US $11 512.9 billion by the year 2027. In terms of employment, travel and tourism was responsible for 108.7 million direct jobs and 292.2 million total jobs (direct, indirect, and induced) in 2016. By 2027 it is expected that tourism will be responsible for a total of 381.7 million jobs in the industry (WTTC, 2017:7).

**Table 4.9: Global travel and tourism economic impact – 2016**

| World | 2016 | 2016 | 2017 | 2027 | | |
|---|---|---|---|---|---|---|
| | US $ bn [1] | % of total | Growth [2] | US $ bn [1] | % of total | Growth[3] |
| Direct contribution to GDP | 2 306.0 | 3.1 | 3.8 | 3 537.1 | 3.5 | 4.0 |
| Total contribution to GDP | 7 613.3 | 10.2 | 6.3 | 11 512.9 | 11.4 | 3.9 |
| Direct contribution to employment [4] | 108 741 000 | 3.6 | 2.1 | 138 086 000 | 4.0 | 2.2 |
| Total contribution to employment [4] | 292 220 000 | 9.6 | 1.9 | 381 700 000 | 11.1 | 2.5 |
| Visitor exports | 1 401.5 | 6.6 | 4.5 | 2 221.0 | 7.2 | 4.3 |
| Domestic spending | 3 574.6 | 4.8 | 3.7 | 5 414.1 | 3.9 | 3.9 |
| Leisure spending | 3 822.5 | 2.3 | 3.9 | 5 917.7 | 2.7 | 4.1 |
| Business spending | 1 153.6 | 0.7 | 4.0 | 1 719.9 | 0.8 | 3.7 |
| Capital investment | 806.5 | 4.4 | 4.1 | 1 307.1 | 5.0 | 4.5 |

[1]Constant prices and exchange rates. [2]Real growth adjusted for inflation (%). [3]2017 – 2027 annualised growth adjusted for inflation (%). [4]Job numbers not US $ billion.

**Source:** WTTC (2017:7).

Table 4.9 clearly highlights the contribution of leisure travel spending and business travel spending to the global economy. Leisure travel spending contributed 76.8% of direct travel and tourism GDP in 2016 compared with only 23.2% by business travel spending (WTTC, 2017:6). Similarly, it is seen that global domestic tourism generates more spend than foreign visitor spending (exports). In this case, domestic travel spending was responsible for generating 71.8% of direct Travel and Tourism GDP with foreign visitors making up the balance of only 28.2% (WTTC, 2017:6). The projections for 2027 show that leisure spending and domestic tourism spend are increasing at a faster rate. Individual countries that benefit the most in terms of the contribution of tourism to GDP includes countries like the USA, China, Japan, the UK, Germany, France, Spain, and Italy, as seen in table 4.10.

**Table 4.10: Global tourism-related rankings**

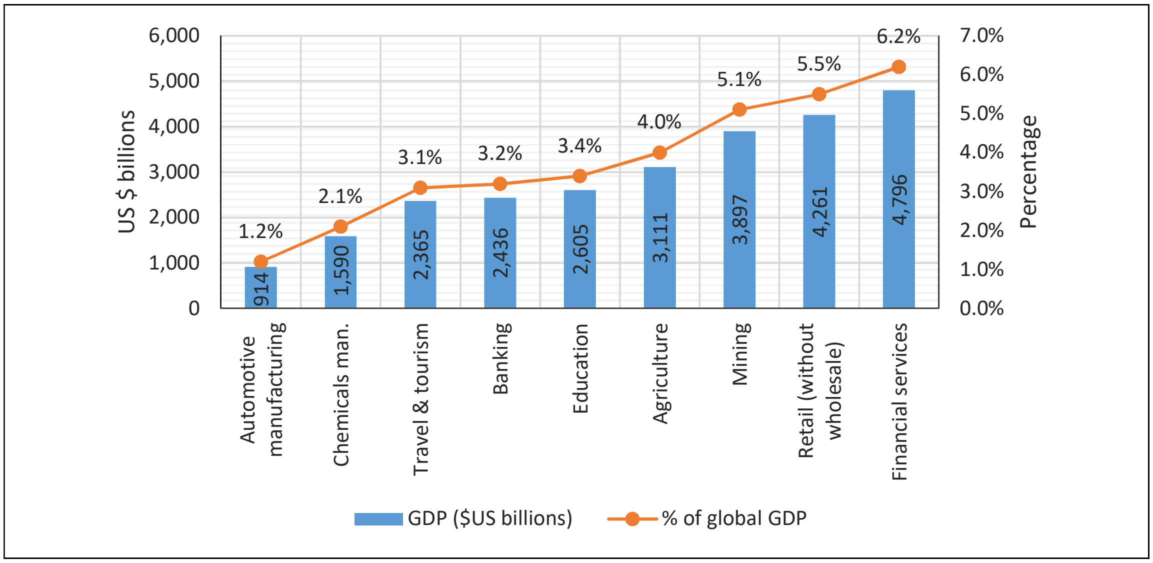
| | GDP contribution 2016 (US $ billion) | | | International tourist arrivals (million) | | | WEF competitiveness ranking 2016–2017 score (out of 7) |
|---|---|---|---|---|---|---|---|
| | Direct | Total | | 2014 | 2015 | | |
| USA | 503.7 | 1 509.2 | France | 83.7 | 84.5 | Spain | 5.43 |
| China | 275.2 | 1 000.7 | USA | 75.0 | 77.5 | France | 5.32 |
| Germany | 138.1 | 376.7 | Spain | 64.9 | 68.2 | Germany | 5.28 |
| Japan | 110.5 | 343.2 | China | 55.6 | 56.9 | Japan | 5.26 |
| UK | 89.8 | 283.2 | Italy | 48.6 | 50.7 | UK | 5.20 |
| France | 90.0 | 221.3 | Turkey | 39.8 | 39.5 | USA | 5.12 |
| India | 71.7 | 208.9 | Germany | 33.0 | 35.0 | Australia | 5.10 |
| Italy | 86.2 | 207.6 | UK | 32.6 | 34.4 | Italy | 4.99 |
| Spain | 63.7 | 177.2 | Mexico | 29.3 | 32.1 | Canada | 4.97 |
| Mexico | 76.7 | 165.9 | Russian Fed | 29.8 | 31.3 | Switzerland | 4.94 |

**Source:** Compiled from World Tourism Organisation (2016:6), WTTC (2017a:1 & 2), and World Economic Forum (2017:9).

The World Economic Forum's 2017 travel and tourism competitiveness report ranks individual countries competitiveness according to their performance on four key measures; (1) enabling environment, (2) Travel and Tourism policy and enabling conditions, (3) Infrastructure, and (4) natural and cultural resources (World Economic Forum, 2017:7). According to this 2017 report, Spain is the most competitive country in terms of travel and tourism. South Africa ranks 53rd, which is a decline from 48th in the 2015 report. Overall, table 4.10 highlights the point that across the three indexes, compiled by three different organisations, the same countries seem to dominate the top ten positions. This establishes a clear link between travel and tourism success and the need for a clear focus and commitment to the industry in order to be and remain competitive. The key differences between the three rankings seem to emanate from the WEF competitiveness ratings where emerging and developing countries like China, Brazil, Turkey and Mexico fall down the list due to infrastructure deficiencies.

A 2015 report by the WTTC (2015:1–5) showed that the travel and tourism sector is one of the key sectors in the global economy by putting it in context with other sectors that have a "similar breadth and global presence as Travel and Tourism". Whilst the travel and tourism sector is not the biggest sector when compared to those identified in figure 4.15, it is clearly a large component of the global economy in terms of GDP contribution and therefore a key industry in the global context.

**Figure 4.15: Travel & Tourism compared to similar sectors – global direct GDP**




**Source:** WTTC (2015:1).

In figure 4.15, the US $ contribution to global direct GDP for each sector is represented by the left axis whilst the percentage of global GDP is on the right axis. Travel and tourism contributed US $2 365 billion to global GDP in 2014. In terms of global GDP impact for 2014, Travel and Tourism's direct GDP contribution was 3.1% of global GDP and total GDP contribution was 9.8% of global GDP (WTTC, 2015:1–3). This compares favourably with the other industries where it ranks higher than automotive and chemical manufacturing but well below the big sectors of retailing and financial services. In terms of contribution to global employment for 2014, travel and tourism had a total impact of 9.4% of world employment or 277 million jobs (WTTC, 2015:4). The role and importance of the commercial air transport industry in supporting travel and tourism is invaluable.

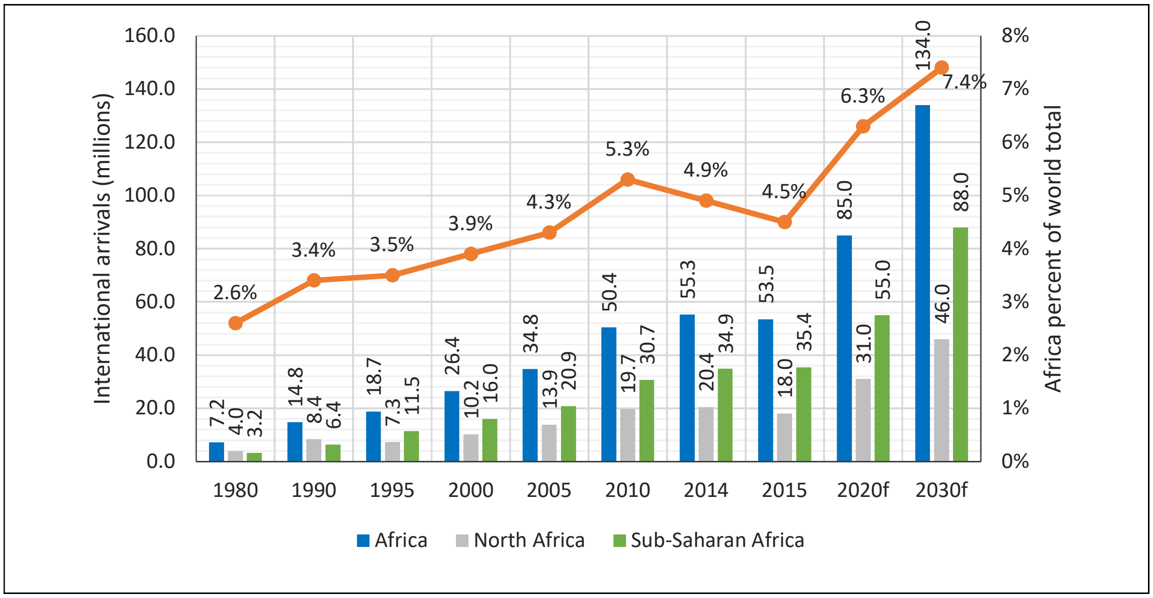
### 4.4.2 Africa and Southern Africa (SADC[5])

The focus in this section narrows from the global perspective addressed in section 4.4.1 to give an overall perspective on North Africa and sub-Saharan Africa with some comments on the Southern African Development Community (SADC). The SADC is an important market to South Africa as it provides the most number of international visitors to the country during the year (73.8% in 2015). Statistics provided in this section are based on the figures provided by a variety of organisations that collect their data in slightly different ways from various sources. In some countries, data collection is less regular, resulting in the unavailability of reported data. Data from the more developed African economies are relatively reliable and give an accurate reflection of the current situation. Overall, the different sources do however provide the same patterns to show a picture of the prevailing situation.

[5] Comprises Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.

Africa is a minor player in the global travel and tourism industry attracting only 4.5% of the total number of international tourist arrivals in 2015 (World Tourism Organisation, 2016:4). This translates into a total of 53.5 million international tourist arrivals for 2015. Table 4.10 highlighted the top 10 countries in terms of foreign tourist arrivals. To put Africa's international tourist arrivals into context, the top four individual countries (France, Spain, USA, and China) attract more visitors to their country in a year on their own than the entire continent of Africa combined. Figure 4.16 shows the overall growth trend of tourism on the African continent from 1980 to 2015 as well as projections to 2030. There is a clear growth trend but it is from a small base and is not keeping track with the overall global growth rate.

**Figure 4.16: African international tourist arrivals (1980–2030f)**




**Source:** World Tourism Organisation (2016:6).

In figure 4.16, a distinction is made between North Africa and sub-Saharan Africa (which includes South Africa), with Sub-Saharan Africa attracting the greater number of international tourists and showing the greater rate of growth. In the past four years, North Africa has been severely hampered by numerous terror-related attacks resulting in drastic reductions in the number of international tourists (11.7% decline in 2015). Data for 2015 shows that North Africa has a global international tourist market share of 1.5% and sub-Saharan Africa 3.0% (World Tourism Organisation, 2016:4). This translates into 18.0 million international visitors to North Africa and 35.4 million international visitors to sub-Saharan Africa. Indicators released for the first half of 2016 showed international tourist growth for Africa of 5%. North Africa recorded a 9.0% decline and sub-Saharan recorded a 12.0% increase (World Tourism Organisation, 2016b). The decline in countries like Tunisia has been so high that it drastically drags down the average figure for the rest of the region. The 2016 decline in North Africa is still a reflection of the security concerns relating to terror-related incidents. Africa's international tourism receipts (in US $) for 2015 stood at 33.1 billion, which is sub-divided into 8.6 billion for North Africa and 24.5

billion for sub-Saharan Africa (World Tourism Organisation, 2016:5). These figures all showed declines from the previous year's results.

From an economic perspective, the travel and tourism industry in Africa is extremely small when compared to other continents and even countries. A simple comparison of the figures contained in table 4.9 (*see* section 4.4.1), which identified the global economic impact of travel and tourism, with those in table 4.11, which focusses on Africa and the SADC, will serve to reinforce the difference in scale.

**Table 4.11: Travel and tourism economic impact for Africa and the SADC – 2016**

| Africa | 2016 | 2016 | 2017 | 2027 | | |
|---|---|---|---|---|---|---|
| | US $ bn [1] | % of total | Growth % [2] | US $ bn [1] | % of total | Growth % [3] |
| Direct contribution to GDP | 66.4 | 3.1 | 3.7 | 106.8 | 3.2 | 4.5 |
| Total contribution to GDP | 165.6 | 7.8 | 2.9 | 268.2 | 7.9 | 4.6 |
| Direct contribution to employment [4] | 8 359 000 | 2.6 | 2.1 | 11 618 000 | 2.7 | 3.1 |
| Total contribution to employment [4] | 20 704 000 | 6.5 | 1.9 | 28 727 000 | 6.7 | 3.1 |
| Visitor exports | 40.7 | 9.2 | 5.3 | 76.0 | 8.4 | 5.9 |
| Domestic spending | 71.3 | 3.4 | 2.8 | 104.4 | 2.4 | 3.6 |
| Leisure spending | 76.8 | 2.2 | 3.7 | 125.6 | 2.2 | 4.7 |
| Business spending | 35.2 | 1.0 | 3.7 | 54.8 | 1.0 | 4.1 |
| Capital investment | 28.5 | 6.2 | 2.6 | 47.1 | 6.1 | 4.9 |
| | | | | | | |
| **SADC** | **2016** | **2016** | **2017** | **2027** | | |
| | USD bn [1] | % of total | Growth [2] | USD bn [1] | % of total | Growth [3] |
| Direct contribution to GDP | 17.4 | 3.0 | 3.8 | 28.9 | 3.3 | 4.8 |
| Total contribution to GDP | 51.0 | 8.8 | 3.4 | 83.1 | 9.4 | 4.7 |
| Direct contribution to employment [4] | 2 583 000 | 2.5 | 3.6 | 3 790 000 | 2.7 | 3.5 |
| Total contribution to employment [4] | 6 636 000 | 6.4 | 3.5 | 9 497 000 | 6.9 | 3.3 |
| Visitor exports | 17.4 | 9.4 | 5.0 | 33.3 | 10.5 | 6.2 |
| Domestic spending | 18.2 | 3.2 | 2.2 | 25.4 | 2.2 | 3.1 |
| Leisure spending | 23.9 | 2.0 | 3.8 | 41.5 | 2.3 | 5.3 |
| Business spending | 11.6 | 1.0 | 3.2 | 17.2 | 1.0 | 3.7 |
| Capital investment | 8.2 | 7.1 | 1.9 | 13.1 | 7.4 | 4.6 |

[1] – constant prices and exchange rates. [2] – real growth adjusted for inflation (%). [3] – 2017–2027 annualised growth adjusted for inflation (%). [4] – job numbers not US $ billion.

**Source:** Compiled from: WTTC (2017b:7) and WTTC (2017c:7).

The importance of the Travel and Tourism (T&T) sector to the African economy, and the potential that it offers, lies in its contribution to GDP and the employment it provides. The total GDP contribution to the 2016 African economy was US $165.6 billion which is a substantial number but is only 10.9% of the figure for the European Union. From the SADC's perspective, the T&T sector contributed US $51.0 billion to the total SADC economy in 2016, which is a number that is well below what could be achieved in an area of such high tourism potential. The weakness of this figure is highlighted by the fact that South Africa accounts for US $27.3 billion of this figure, leaving the remaining US $23.7 billion split across the remaining 14 SADC countries. In 2016, the T&T sector's total contribution to jobs stood at 20.7 million jobs for Africa as a whole (6.5% of total employment) (WTTC, 2017b:1) and 6.6 million jobs in the SADC (6.4% of total employment) (WTTC, 2017c:1).

Leisure spending dominates over business travel spending on the continent. Leisure spending generated 68.6% of Africa's direct travel and tourism GDP in 2016. For the SADC, leisure spending generated

67.3% of direct travel and tourism GDP. The gap between leisure and business spending is expected to increase over the next decade (WTTC, 2017b:6; WTTC, 2017c:6). Table 4.11 also considers the differences between foreign visitor spending and domestic spending. Domestic spending exceeds that of foreign visitors – mainly because more domestic tourism takes place than foreign arrivals. For Africa, domestic travel spending generated 63.7% of direct travel and tourism GDP in 2016. Surprisingly, foreign visitor spending is a lot more important to the SADC economy compared to Africa, with domestic spending only generating 51.20% of direct travel and tourism GDP in 2016 (WTTC, 2017c:6).

At the country level, table 4.12 identifies tourist numbers and rankings for the top ten international tourism countries in Africa. In terms of international tourist arrivals, the top four positions are still dominated by North African countries, despite the terror-related attacks that have occurred in recent years. The full impact of these attacks is still filtering through and the 2016 numbers are declining even further. In 2010, Egypt's international tourist arrivals were recorded at 14.1 million, which was considerably higher than the 2015 figure (World Tourism Organisation, 2016:12). Tunisia's decline was equally noticeable (World Tourism Organisation, 2016:11). South Africa dominates international tourist arrivals in sub-Saharan Africa even though the 2015 figure declined by 6.8% for the year. It is noticeable from table 4.12 that only the top four African countries attract over 5 million international visitors. The drop-off in international tourist arrivals from position three to four is large with the country occupying position number 10 only just managing to attract a million international visitors per annum (World Tourism Organisation, 2016:11).

**Table 4.12: African tourism-related rankings**

| | | International tourist arrivals (000)* | | | | WEF tourism competitiveness ranking 2016/17 | |
|---|---|---|---|---|---|---|---|
| | | 2014 | 2015 | | | Position | Score (out of 7) |
| 1 | Morocco | 10 283 | 10 177 | | South Africa | 53 | 4.01 |
| 2 | Egypt# | 9 628 | 9 139 | | Mauritius | 55 | 3.92 |
| 3 | South Africa | 9 549 | 8 904 | | Morocco | 65 | 3.81 |
| 4 | Tunisia | 7 163 | 5 359 | | Egypt | 74 | 3.64 |
| 5 | Algeria | 2 301 | 1 710 | | Kenya | 80 | 3.59 |
| 6 | Botswana | 1 966 | n/a | | Namibia | 82 | 3.59 |
| 7 | Zimbabwe | 1 880 | 2 057 | | Cape Verde | 83 | 3.55 |
| 8 | Mozambique | 1 661 | 1 552 | | Botswana | 85 | 3.52 |
| 9 | Namibia | 1 320 | n/a | | Tunisia | 87 | 3.50 |
| 10 | Uganda | 1 266 | n/a | | Tanzania | 91 | 3.45 |

# Egypt is classified under the Middle East by the World Tourism Organisation.
* Take note that many 2015 tourism figures for African countries were not available for the UNWTO report. Only the top 5 countries figures are complete. Countries are ordered according to 2014 figures.

**Source:** Compiled from: World Tourism Organisation (2016:11–12) and World Economic Forum (2017:9, 16, & 20)

With reference to the World Economic Forum's 2017 travel and tourism competitiveness report identified in section 4.4.1 (table 4.10) which highlighted the top performing global countries, table 4.12 shows a compilation of the top performing African countries in terms of the WEF tourism competitiveness report. The African continent performed relatively poorly and is probably indicative of the low international tourist arrivals. The highest ranked African country is South Africa at position 53 with an overall score of 4.01 out of seven. The North African countries have moved down the list after dominating the top five positions in previous decades. Countries that appeared in the African top ten for international tourist arrivals for Africa like Uganda, Zimbabwe, Algeria, Mozambique, Algeria, and Uganda were rated significantly lower in the WEF competitiveness report (positions 106, 114, 118, and 122 respectively). These four destinations clearly have something to offer the tourism market but need to drastically improve their industry competitiveness. Air connectivity, affordability, and security concerns are identified as key limiting factors to tourism competitiveness on the continent (World Economic Forum, 2017:16–19). (*see* sections 5.3.1 and 5.3.4 for the discussion on African connectivity and Africa's air connectivity deficit). Overall, the SADC countries rank poorly on the competitiveness index with the vast majority ranking close to or below position 100 (World Economic Forum, 2017:9, 16, & 20). This is a concern for the region and particularly for the airlines of South Africa. The countries within the SADC are mostly short-haul flights for the South African airline operators but with inadequate tourism infrastructure and resources coupled with economic and social problems, the market is currently severely limited.

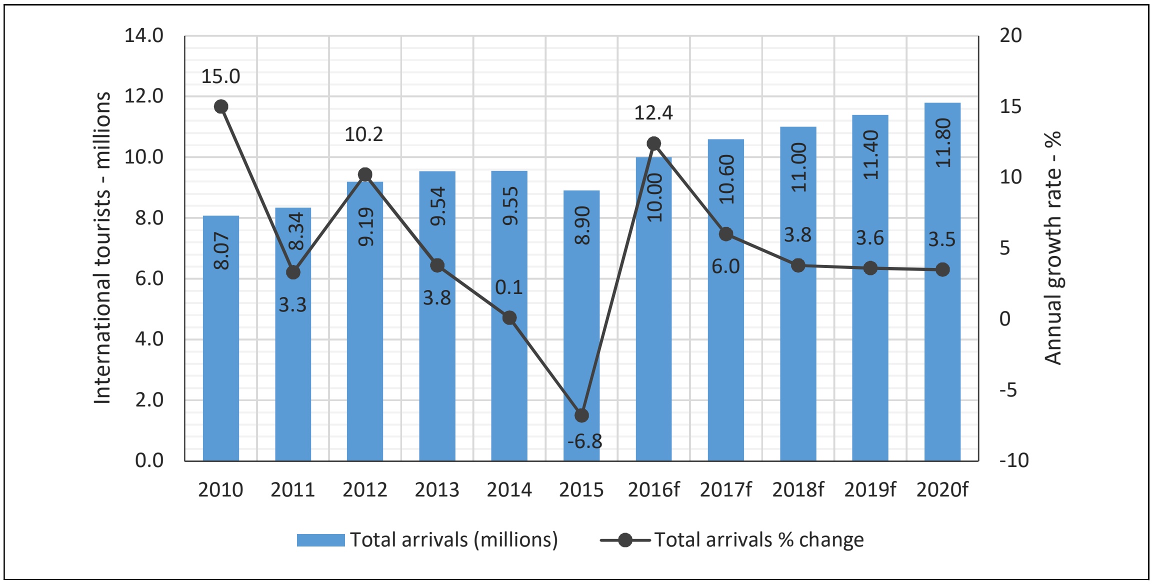
### 4.4.3 The South African tourism environment

Sections 4.4.1 and 4.4.2 considered the global and the African tourism environment. The focus now narrows to the South African tourism environment. South Africa, as already established in section 4.4.2, is one of the top three countries on the continent in terms of travel and tourism. The South African government has long recognised the importance of a strong tourism industry and has a number of initiatives in place to secure the country's strong position on the continent. Equally, the Department of Tourism recognises that whilst it is an industry with a lot of potential, there are a number of factors that are currently limiting the growth of the industry. These factors include South Africa's remote location, the number and availability of transport modes to the country, visa regulations, and a shortage of skills required to work in the industry (Department of Tourism, 2016:22). A report on South African tourism by BMI Research identifies social inequality, poverty, security concerns, high levels of unemployment, and political instability as the main impediments to growth in the industry (BMI Research, 2016:9). The discussion of the South African tourism environment is divided into international tourist arrivals and domestic tourism.

#### 4.4.3.1 International tourist arrivals

In table 4.12, South Africa was identified as ranking 3rd on the African continent with 8.9 million international tourist arrivals. Figure 4.17 provides an overview of the number of international arrivals to South Africa for the period 2010–2020f. The purpose of this figure is to show the overall trend of international tourist arrival growth over the identified period.

**Figure 4.17: South African international tourist arrivals (2010–2020f)**




**Source:** Compiled from World Tourism Organisation (2014:11), World Tourism Organisation (2015:11), World Tourism Organisation (2016:11) and PWC (2016:9).

The 15.0% increase in international tourist arrivals in 2010 was mainly as a result of visitors that arrived to watch matches in the FIFA football World Cup, but also represented good growth from the African continent (Business Monitor International, 2012:10). This event was a catalyst for the growth that was experienced for the next few years. It is clear that the growth rate in international tourist arrivals since 2010 has been inconsistent but there was an increasing number of international tourist arrivals each year. A noticeable dip occurred in 2015 with international tourist arrivals declining by 6.8% from 2014 to 8.9 million arrivals. The decline in arriving international tourists was across all the main regions with minor increases being realised from two minor regions (Middle East and Indian Ocean Islands). Focussing on the main regions, the declines experienced for 2015 were as follows (South African Tourism, 2016:20):

- North America – 4.4% decline
- Central & South America – 22.7% down
- Europe – 3.5% down
- Asia – 6.7% down
- Australasia – 10.0% down
- Africa – 7.4% down

Of importance to note is that the decline of 7.4% (534 920 arrivals) from African markets is a particular concern given that the majority of tourist visits to South Africa come from this market. Even more of a concern was that there was a 7.5% decline in tourist arrivals from African land markets (arrive via car, bus, taxi, train). African land markets represent approximately 75% of all tourist arrivals to South Africa (South African Tourism, 2016:19). According to the statistics provided in the South African Tourism 2015 annual tourism report, the largest source markets for South Africa are from the SADC and include Zimbabwe, Lesotho, Mozambique, and Swaziland (South African Tourism, 2016:47). The decline of arrivals from these four countries accounted for 95.9% (512 819) of the arrivals decline from Africa. South Africa's biggest source markets beyond Africa are the UK (407 486), USA (297 226), Germany (256 646), and France (128 438). Declining tourist arrivals were recoded from all of the top 10 source markets outside Africa, except from the UK and China which saw a modest 1.4% and 2.2% increase respectively. Despite an initial decline earlier in 2015, arrivals from China increased by 2.2% by year-end but the arrivals are still 45% below the 2013 levels (PWC, 2016:4).

Whilst the decline in international tourist arrivals can be put down to a number of factors like poor economic conditions in the originating country or health and safety concerns, the key reason for the decline in 2015 is given as the introduction of two new restrictive visa regulations in June of 2015. The first regulation required that all children under the age of 18 entering the Republic must have an unabridged birth certificate detailing both parent's particulars, a passport, and a visa (when applicable) with them in order to enter the country (Department of Home Affairs, 2015). Secondly, a requirement was introduced that stated that tourists from countries that need South African visas need to appear in person to supply biometric data when making the application. This placed a heavy burden on potential tourists in terms of time and money to make a visa application, especially in larger countries where application centres were limited and in many cases involved trips of over a 1000 kilometres just to apply for the visa (China and India for example). Many potential visitors simply decided to visit other countries that did not have such stringent requirements. Prior to the introduction of the new regulations in June of 2015 predictions were being made that tourism would grow by 3.4% for 2015. Instead, a 6.8% decline was recorded (Ensor, 2016a). An article in the Business Day newspaper (Dlamini, 2016) identifies that the Tourism Business Council of South Africa calculated that 13 246 people were denied boarding flights to South Africa between June 2015 and July 2016 due to not having the necessary birth certificates. This cost the South African economy approximately ZAR 7.51 billion (Dlamini, 2016). In October of 2015 a decision was taken by cabinet to 'relax' (not abolish) the visa rules and implement a number of measures to make the process easier for potential tourists (PWC, 2016:4). The damage was however already done with some of the biggest international tourist declines being recorded from South Africa's fastest growing markets – China and India.

Despite the overall decline in international tourist arrivals, total foreign direct spend by tourists increased to ZAR 68,2 billion (6.2% increase) (South African Tourism, 2016:17) due, in part, to the weakening of the South African Rand, thus making the country a cheaper destination (Ensor, 2016a). The increase in spend is mainly coming from air-market arrivals, particularly African air-markets and Europe. The trend is also for international tourists to stay longer on their trip with the average trip in 2015 lasting 9.5 nights, which is one day longer than recorded in 2014 (South African Tourism, 2016:17). Leisure tourism (65.1%) is the dominant reason for visiting South Africa with 'Visiting friends/relatives' being the main reason for visits (37.4%). Business travel to South Africa increased during 2015 to 23.8% of arrivals (South African Tourism, 2016:21). A concerning statistic for the South African tourism industry is that the average number of provinces visited by international tourists is only 1.18 (South African Tourism, 2016:30). Whilst it is acknowledged that this number is skewed by SADC visitors who mainly engage in short term cross border shopping, the figures for overseas source markets like the Americas or Europe still only show that they visit 1.61 and 1.50 provinces respectively. It is clear that a strong and growing tourism industry needs to ensure the spread of the visitors across more provinces. Not only will this be beneficial to the economies of the provinces, but also to the airlines due to increased demand for routes and flights to cities beyond the main airports. From a transport perspective, 28.5% of international tourists arrive by air, 71.4% by road, and 0.1% by sea (Statistics South Africa, 2016g:15). From a domestic airline perspective, it is important that overseas and African (excluding the SADC) tourism markets be developed because tourists from these markets are most likely to arrive by air and potentially require connecting domestic flights. Visitors from many of the SADC countries arrive mainly by road (Statistics South Africa, 2016g:29) and are not in need of domestic flights. The gender of the international tourist arrivals shows a ratio of 55.7% males to 44.3% females with the Central and North African arrivals accounting for the male bias. With regard to age, 89.5% of arrivals are between the ages of 15 and 64 years. An important growing segment to be noted is the overseas 65+ age group (the silver economy – *see* section 4.5.1) which make up 13.0% of the tourists from overseas markets compared to only 2.4% from the SADC (Statistics South Africa, 2016g:21).

The year 2016 was positive in terms of foreign tourist arrivals for South Africa. Figures from South African Tourism (2016a) for the first six months of 2016 (H1) showed that international tourist arrivals have grown by 14.0% over the first six months of 2016, with overseas tourist arrivals (i.e. Africa excluded) rising by 24%. Stated in actual tourist arrivals, this translated into growth from 4.3 million tourists for the 1st half of 2015 to 5 million tourists for the 1st half of 2016. It is also estimated that the 1st half of 2016 saw foreign tourist direct spend increase by 24.8% from 2015 to ZAR 39 billion. The growth is being achieved across all regions including Asia (40.7%), Australasia (10.8%), the Americas (17.5%), Europe (14.5%), and Africa (14.5%) (South African Tourism, 2016a). Tourist arrivals from China and India have also shown a dramatic increase for the year. This is seen as particularly important given that it is estimated that 65 million Chinese are expected to travel overseas in 2016 (Traveller24, 2016) and South Africa only welcomed 84 878 tourists from China in 2015 (essentially only attracting 1.3% of the Chinese tourist market). Significant growth in this market will create significant demand for domestic air travel. Figure 4.17 showed that international tourist growth is expected at 12.4% for 2016 and 6.0% in 2017. Figures released by the Department of Tourism (South Africa, 2017) in February 2017 show that the strong H1 growth continued for the rest of 2016. Overall, in 2016, South Africa recorded a total of 10 044 163 international tourist arrivals, which is a 13% increase from 2015. This figure is broken down into 2 531 046 overseas tourist arrivals (18% growth) and 7 501 512 Africa tourist arrivals (11% growth). The UK, USA, and Germany were the leading source markets, but exceptional growth was experienced from China (38%) and India (22%). Zimbabwe, Lesotho, and Mozambique were the leading African source markets (South Africa, 2017).

Despite the positive growth in tourist arrivals, there are still a number of problems that exist. The visa regulations addressed previously, whilst relaxed, are still in place and discouraging potential tourists from visiting South Africa. Additionally, tourists that do not present their child's birth certificate are still being prohibited from boarding flights. Another problem is the extended amount of time arriving international tourists have to wait at the ports of entry whilst their biometric data is processed by customs officials. Research by the Tourism Business Council of SA at ORTIA from the 1st to the 18th of October 2016 showed that as a result of limited staff capacity (on average only 40% of the counters were staffed), some arriving tourists had to endure queues of between 90 minutes to four hours, resulting in 800 missed connections and delayed flights, at a cost of R1.6 million to the airlines (Ensor, 2016a). These problems result in significant negative word-of-mouth not only to friends and family, but to tour operators in the source markets who simply divert potential tourists to alternative destinations. From an airline cost and demand perspective it is essential that these issues are resolved.

#### 4.4.3.2 Contribution of travel and tourism to South African economy

Table 4.9 and table 4.11 outlined the travel and tourism economic impacts on the global and African economies respectively. Travel and tourism also contributes significantly to the South African economy. The WTTC, in its 2017 travel and tourism economic impact report for South Africa, presents a positive outline of the contribution that tourism makes to South Africa economy. Table 4.13 highlights the key contributions of the travel and tourism industry to the South African economy in terms of the direct and total contributions. (*see* section 5.4.3 for the discussion on the contribution of the air transport industry to the South African economy).

**Table 4.13: Travel and tourism economic impact for South Africa (2016)**

| South Africa | 2016 | 2016 | 2017 | 2027 | | |
|---|---|---|---|---|---|---|
| | US $ bn [1] | % of total | Growth % [2] | US $ bn [1] | % of total | Growth % [3] |
| Direct contribution to GDP | 8.7 | 3.0 | 2.7 | 13.9 | 3.8 | 4.5 |
| Total contribution to GDP | 27.3 | 9.3 | 2.5 | 42.4 | 11.5 | 4.2 |
| Direct contribution to employment [4] | 716 000 | 4.6 | 3.6 | 1 110 000 | 6.0 | 4.1 |
| Total contribution to employment [4] | 1 553 000 | 9.8 | 6.7 | 2 459 000 | 13.2 | 4.2 |
| Visitor exports | 8.7 | 10.1 | 4.4 | 18.4 | 14.4 | 7.3 |
| Domestic spending | 10.2 | 3.5 | 1.0 | 12.2 | 3.3 | 1.7 |
| Leisure spending | 12.5 | 2.0 | 3.1 | 22.2 | 2.7 | 5.6 |
| Business spending | 6.4 | 1.0 | 1.6 | 8.4 | 1.0 | 2.6 |
| Capital investment | 4.7 | 8.1 | 0.6 | 7.0 | 9.6 | 4.0 |

[1] Constant prices and exchange rates. [2] Real growth adjusted for inflation (%). [3] 2017–2027 annualised real growth adjusted for inflation (%). [4] Actual job numbers not US $ million.

**Source:** WTTC (2017d:11).

In terms of direct contribution, travel and tourism contributed ZAR 127.9 billion to South Africa's GDP in 2016 (US $8.7 billion). This figure represents 3.0% of South Africa's total GDP for the year. The WTTC forecasts that this direct contribution will rise by 2.7% in 2016 (WTTC, 2017d:1). In the longer term, it is forecast that direct GDP contribution will reach ZAR 204.4 billion by 2027. The total contribution (direct, indirect and induced contribution) of travel and tourism to South Africa's GDP for 2016 was put at ZAR 402.2 billion (US $27.3 billion). This represents 9.3% of South Africa's total

GDP for the year. Forecasts estimate that the total contribution of travel and tourism to South Africa's GDP in 2027 will rise to ZAR 624.2 billion (US $42.4 billion) (WTTC, 2017d:11). Airline connectivity has an impact on the GDP of a country. As an example of this connectivity impact, a report for Emirates Airlines established that the total contribution to South African GDP because of the presence of Emirates Airlines flying to South Africa was US $417 million (ZAR 4.5 billion) in 2014 (Emirates, 2016:32).

South Africa's 'new growth path' programme plans to achieve growth in the number of jobs in the economy in an attempt to reduce poverty and inequality. Key job drivers identified in the plan include agriculture, mining, manufacturing, the green economy, and tourism (South African Government, 2016a). Table 4.13 identifies that travel and tourism was responsible for 716 500 direct jobs and 1 533 000 million total jobs in the South Africa economy for 2016. This represents 4.6% and 9.8% respectively of jobs in the economy. For 2017, the WTTC (2017d:11) forecasts expect the number of direct tourism jobs to rise to 742 300 and total jobs to 1 636 500. By the year 2027, the WTTC (2017d:11) expects that this will equate to 1.11 million direct jobs and 2.46 million total jobs. Given the importance of job creation in the South African government's growth plans, the importance of the tourism sector can be appreciated. However, shock declines in tourist numbers, as experienced in 2015 due to the introduction of the new visa regulations (Ensor, 2016a), can seriously hamper job creation and cause the economy to shed jobs.

In terms of 2016, direct travel and tourism GDP for South Africa, 66.2% was generated by leisure travel spending and 33.8% by business spending (WTTC, 2017d:6). Future estimates predict a slight widening of the gap with leisure tourism spending generating a larger proportion of travel & tourism GDP. A comparison of the South African figures with the world and Africa's figures shows a noticeable difference in the ratio of leisure spending and business spending (*see* table 4.9 and table 4.11). Business spending proportionately plays a larger role in the tourism economy of South Africa than the global and African average, indicating the importance of this market to the South African tourism industry.

For South Africa, foreign visitor spending makes up 46.1% of travel and tourism's contribution to GDP, with domestic spending making up the balance of 53.9% % (WTTC, 2016d:6). In the global context, foreign visitor spending makes up 28.2% of travel and tourism's contribution to global GDP, with domestic spending contributing 71.8% (WTTC, 2016d:6). This indicates that South Africa is more reliant on foreign visitor spending than many other economies. It might also indicate that the South African domestic travel and tourism market is under-developed and needs to be expanded upon. South Africa generates a lot of visitors from the SADC countries who tend to be lower spending tourists *(see* section 4.4.3.1). In this regard, it is acknowledged that whilst the SADC is an important source market, a lot more needs to be done to attract tourists from more affluent and higher-spending countries if the country is to grow the industry and associated revenues (Department of Tourism, 2016:22).

#### 4.4.3.3 South Africa's travel and tourism competitiveness ranking

Referring again to the WEF's travel and tourism competitiveness report for 2017 addressed in section 4.4.1 (global) and 4.4.2 (African), this section focusses on the competitiveness ranking of the South African travel and tourism industry. The four measures identified in section 4.4.1 are further subdivided into 14 pillars of travel and tourism competitiveness (World Economic Forum, 2017:7). South Africa's ranking on each pillar is given in table 4.14. South Africa's overall ranking is 53 out of 136 countries, with rankings ranging from 19$^{th}$ to 120$^{th}$ across the various pillars. Whilst the country can be proud of the fact that they are the highest ranked African country, in order to be a larger player on the global stage a lot more needs to be done to improve the country's global travel and tourism competitiveness. In the context of its BRICS partners, South Africa was ranked below China (15$^{th}$), Brazil (27$^{th}$), India (40$^{th}$), and Russia (43$^{rd}$) (World Economic Forum, 2017:9). South Africa is competitive but there is clear scope for improvement.

**Table 4.14: South Africa's WEF travel and tourism competitiveness rankings (2016/7)**

| WEF pillars of travel and tourism competitiveness | WEF tourism competitive ranking 2016/7 | |
|---|---|---|
| | **Position (out of 136)** | **Score (out of 7)** |
| **Enabling environment** | | |
| • Business environment | 21 | 5.3 |
| • Safety and security | 120 | 3.9 |
| • Health and hygiene | 113 | 3.8 |
| • Human resources and labour market | 63 | 4.6 |
| • ICT readiness | 68 | 4.4 |
| **Travel and tourism policy and enabling conditions** | | |
| • Prioritisation of travel and tourism | 59 | 4.7 |
| • International openness | 110 | 2.4 |
| • Price competitiveness | 43 | 5.2 |
| • Environmental sustainability | 117 | 3.6 |
| **Infrastructure** | | |
| • Air transport infrastructure | 46 | 3.4 |
| • Ground and port infrastructure | 59 | 3.4 |
| • Tourist service infrastructure | 59 | 4.4 |
| **Natural and cultural resources** | | |
| • Natural resources | 23 | 4.4 |
| • Cultural resources and business travel | 19 | 3.4 |
| **Overall 2016 index rank** | **53** | **4.01** |

**Source:** World Economic Forum (2017:305).

South Africa performs best in terms of its natural (23$^{rd}$) and cultural resources (19$^{th}$). This is the mainstay of any tourism industry and provides the platform around which the industry should be built. Regarding travel and tourism infrastructure, South Africa is ranked 46$^{th}$ in terms of air transport infrastructure. As a sub-section to this, air transport infrastructure has a particularly strong global ranking of 10$^{th}$. The developments at the key airports in the country are world-class, although attention should be given to the speed of passenger handling and connectivity beyond the main centres. Regarding Travel and Tourism policy and enabling conditions, the country received a low ranking of 117$^{th}$ for environmental sustainability. This is problematic given that a lot of South Africa's tourism is based on its environment.

The country is ranked 43rd for price competitiveness with the main drag on the ranking being high ticket taxes and airport charges. Given the high contribution of foreign tourist arrivals to total spending in the country, prices have shown a steady climb to take advantage of the higher-valued foreign income. Highlighting this point, the 2015 South African Tourism annual report (South African Tourism, 2016:1) identifies that total foreign direct spend in South Africa (excluding capital expenditure) for 2015 was ZAR 68.2 billion whilst total direct domestic spend was ZAR 23.063 billion. South Africa is ranked relatively low in terms of visa requirements, which given the debacle addressed in section 4.4.3.1, is not surprising. The enabling environment is where South Africa has the weakest overall rankings within the sub-sections. In particular, low rankings were achieved on the pillars of health and hygiene (113th), and safety and security (120th). Of particular concern is the low rankings relating to ease of finding skilled employees (99th), and pay and productivity (96th). Overcoming these deficiencies is an extreme challenge for the government, the tourism sector, and the educational institutions.

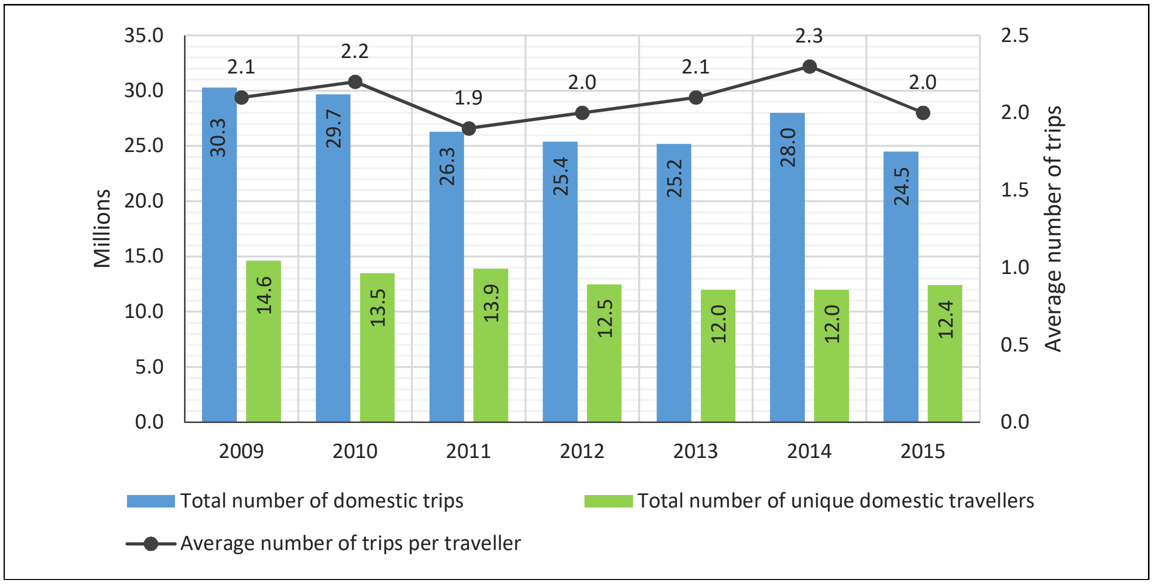
#### 4.4.3.4 Domestic tourism

Domestic tourism is divided into overnight domestic trips and day trips and is inclusive of all forms of transport available to the visitor – not just air travel. The importance of domestic tourism to South Africa is recognised by the Department of Tourism and they have developed various programmes aimed at increasing the amount of domestic tourism in the country (e.g. the *#TourismForAll* and *Sho't left* campaign). The Department of Tourism does however also recognise that growth in South African domestic tourism is severely affected by issues such as low levels of disposable income on the part of a large proportion of the population coupled with a shortage of tourism products that aimed at the low-income sector of the market (Department of Tourism, 2016:22). A report by BMI Research (2016:18) also recognises the low levels of disposable income as a significant barrier to domestic tourism growth and highlights that the advent of low-cost carriers has however made domestic travel more appealing to a middle-class that is beginning to emerge. Poor economic growth, coupled with a cycle of rising interest rates, is however placing pressure on the South African consumer, which will affect the level of domestic tourism (South African Tourism, 2016:8).

***Overnight domestic trips***

Reviewing the South African domestic tourism market for the past seven years shows a picture of stagnation, if not slight decline. This is shown in figure 4.18. The 2015 South African Tourism annual report (South African Tourism, 2016:9) shows that the total number of domestic overnight trips declined by $\pm$3.5 million trips from 2014 and prior to that there was a steady decline between 2010 and 2013. There has been an overall decline of 15.2% since 2009. The total number of unique travellers has also declined over the past seven years, with 2015 showing a slight improvement. In terms of the average number of trips per traveller, this figure has fluctuated between 1.9 and 2.3 trips for the identified period. Total direct domestic spending by domestic travellers was ZAR 23,6 billion in 2015, which is a decline of 11.9% from 2014 and is lower than 2013 spend (South African Tourism, 2016:15). The South African Tourism 2015 annual report reports that domestic tourists are spending less on trips and tourism-related expenditure, with the bulk of trip expenses being for transportation and accommodation (South African Tourism, 2016:15).

**Figure 4.18: Total domestic trips and trips per traveller (2009–2015)**

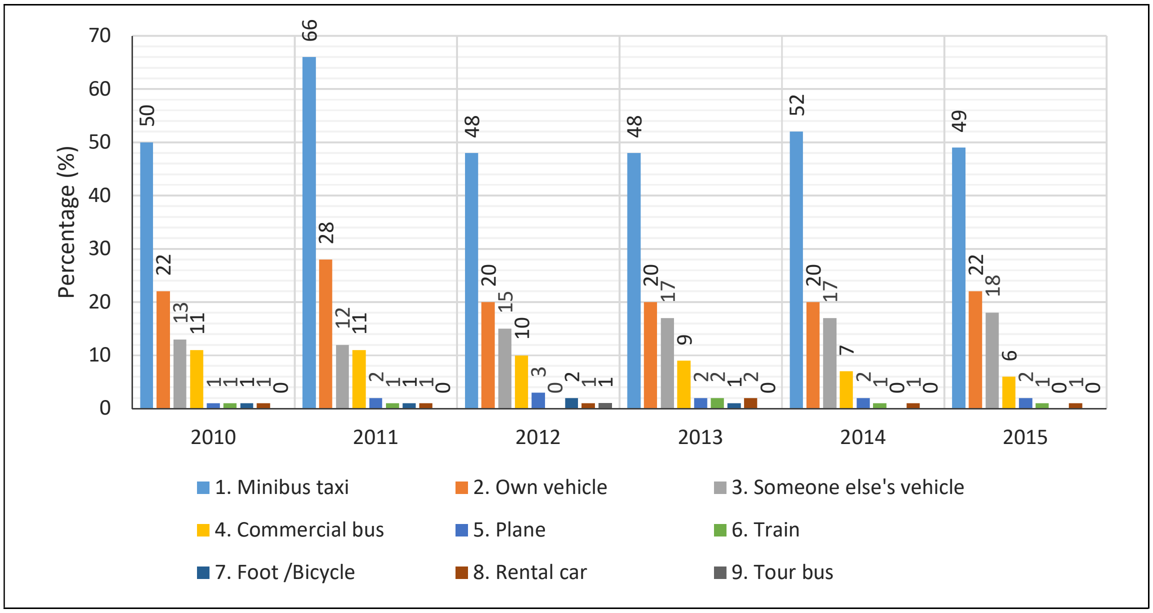



**Source:** South African Tourism (2013:63), South African Tourism (2016:110), and OECD (2016:383).

Domestic tourism in South Africa is dominated by the Visiting Friends and Relatives market (VFR) followed by the holiday market, the business market, and the religious travel market. To put the size of the 2015 VFR market into context with the other type of trips, VFR trips accounted for 17.4 million trips (70.5%), whilst second placed holiday trips accounted for 2.7 million trips (10.9%) (South African Tourism, 2016:9). The total number of VFR trips for 2015 declined by 15.8% (3.3 million trips) from 2014. Business trips increased by 7.4% to account for 9.7% of all domestic trips. This is positive for the air transport sector. Whilst the VFR market accounts for 70.5% of the domestic tourists, it only accounts for 50% of the revenue (South African Tourism, 2016:15). The holiday travellers market (10.9% of domestic tourist) accounts for 25% of the total revenue.

Figure 4.19 shows that road transport dominates the mode of transport used to get to the traveller's destination. The totals of minibus taxi, own vehicle, someone else's vehicle, rental cars, and commercial bus make up close to 97% of all travel. Air travel is only used by 2% of domestic tourists (South African Tourism, 2016:103). This leaves a lot of scope for the air transport industry to achieve future growth. However, slow economic growth coupled with low levels of disposable income make this a difficult prospect. The use of the minibus taxi is the transport of the masses in South Africa, who use this mode of transport for domestic short and long distance travel, as they are typically unable to afford the fares on offer by the airlines.

**Figure 4.19: Mode of transport to destination – South African domestic travel (2010–2015)**




**Source:** South African Tourism (2013:72) and South African Tourism (2016:103).

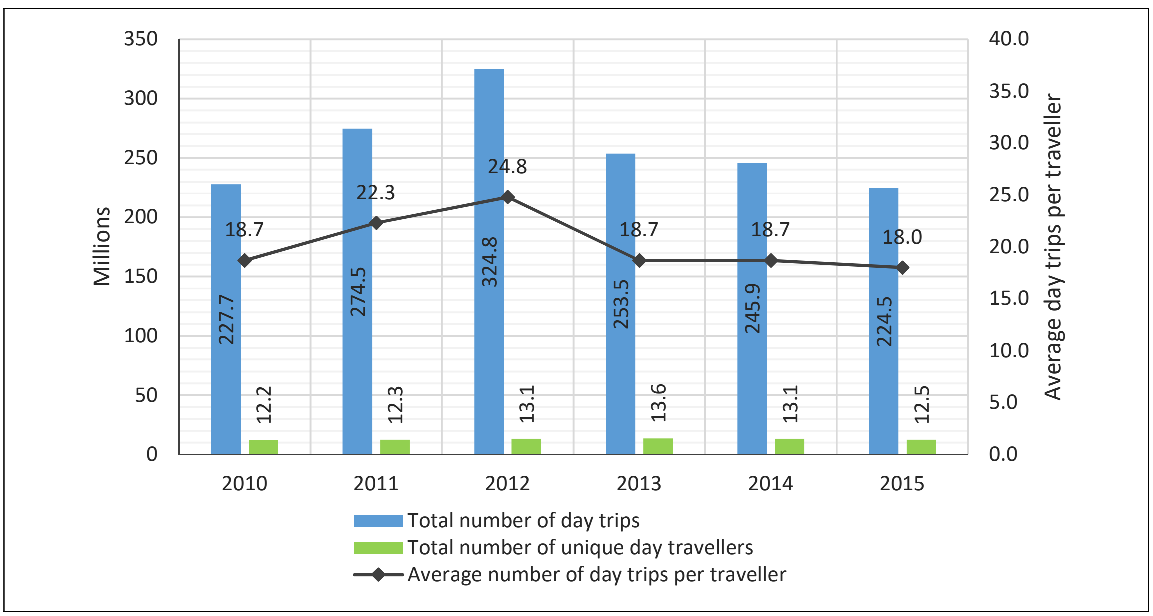
According to the South African Tourism *2015 Annual Tourism Report*, Gauteng is the biggest source market of South African domestic overnight travellers at 35% for 2015 and has been the biggest source market for many years (South African Tourism, 2016:10 & 95). Limpopo province is the second biggest source market at 19.4% followed by Kwa-Zulu Natal (14.9%), the Eastern Cape (10.7%), and the Western Cape (6.6%) (South African Tourism, 2016:95). In terms of destinations visited, Limpopo is the most visited destination for 2013, 2014, and 2015 in terms of domestic overnight travellers receiving 22.6% of the travellers in 2015. Kwa-Zulu Natal was the second most popular destination (19.8%) with Gauteng in third position at 15.1% of travellers being received. The Western Cape managed 6th position in 2015 with 7.1% of domestic overnight travellers. Viewing the destination markets in conjunction with purposes of visit shows that Limpopo attracts the largest portion of the VFR market followed by Kwa-Zulu Natal. In terms of travelling for the purpose of a holiday, the Western Cape and Kwa-Zulu Natal attract the largest portion of the holiday market (South African Tourism, 2016:96).

The figures released by South African Tourism show that 12,7 million domestic trips were undertaken in the first half of 2016 which represents an increase of 23% from the 2015 figures (South African Tourism, 2016a). The figures also reflected that domestic tourism spend increased from ZAR 9.1 billion in the first half of 2015 to ZAR 15.3 billion in the first half of 2016 with 25% of this figure being generated by holiday trips. Many negative economic factors still prevail in the second half of 2016 leading to many in the industry still expressing cautious optimism year end numbers. The South African Tourism 2015 annual report identified the need to monitor the 'emerging budget-conscious young adults' and the 'wealthy seniors' as markets to pursue to grow the domestic tourism market (South African Tourism, 2016:8). From a domestic airline's perspective, a growing travel and tourism industry, both international and domestic, offers huge opportunities to grow their business. It should be clear that the air transport industry needs to work with the tourism industry as a strong travel and tourism industry is mutually beneficial to both industries.

***Day trips***[6]

Regarding day trips, there was a steady increase in the number of trips made from 2009 to 2012 followed by a decline each year to end 2015. Figure 4.20 highlights this pattern and shows that there were 224,5 million day trips undertaken by South Africans within South Africa in 2015 which is the lowest number over the six-year period. The total number of unique day trippers was also down for 2015 with the result that the average number of day trips per traveller declined to 18.0 for the year (South African Tourism, 2016:104). These figures are substantially down from the figures recorded in 2012. Gauteng had the highest monthly travel incidence for day trips (47%) of the nine provinces in South Africa and is responsible for the highest level of spending by day-trippers. Kwa-Zulu Natal occupies the second position in terms of monthly travel incidence for daytrips (45%) and day-tripper spending. The Free State and the North-West province significantly lag behind the rest of the country in the monthly incidence of day trips (14% and 9% respectively) and the number of day trips per province.

**Figure 4.20: Day trips (2010–2015)**




**Source:** South African Tourism (2013:74), South African Tourism (2016:104), and OECD (2016:383).

[6] Defined as a journey undertaken by one or more South Africans that lasted only a day, where a person did not spend a night. This trip should not be at the person's usual environment, i.e. this place should not be visited more than once a week and there should be no remuneration received at the destination.

The global travel and tourism industry is one that is extremely important to the economies of all countries and can serve to be a provider of many jobs in this labour-intensive industry. It is an industry that relies on transportation.

## 4.5 GROWTH OPPORTUNITIES AND GLOBAL RISKS

To conclude this chapter on the global and South African environment in which the air transport industry operates, a number of points will be made on some issues that will be of increasing importance into the future. This includes opportunities, urbanisation, and risks.

### 4.5.1 Growth opportunities

In 2011, Oxford Economics compiled a report in which they looked at some of the major growth opportunities that exist for both developed and developing economies once they have resolved the issues currently restraining them from growth. In the report (Oxford Economics, 2011b:7–21), they focus on four specific opportunities, each of which will have implications for the commercial air transport market and industry operators:

- **The silver economy.** Statistics have shown that the global population is aging and the under-15 age group declining. The over 60 age group will thus present opportunities to be exploited for those businesses that prepare for and accommodate the aging population. Travel is one of the industries identified that will benefit from this trend. Companies must prepare for this opportunity and adapt their offerings to meet the silver economy's needs.
- **The resource economy.** Resources are becoming scarcer, are geographically limited, and in many cases subject to local regulation. Opportunities exist in areas such as intelligent energy, green infrastructure, alternative energy sources, eco-ethical products, and carbon finance and investment. The airline industry is definitely one that will be impacted by this opportunity and could take a leading role in this area.
- **The multi-technology future.** Technology is the key to a successful future. Productivity improvements are a critical outcome of technological development, which can enhance economic development. Core technologies and ancillary technologies are key to this multi-technology future. The development of technology-enabled business models will help organisations reach and develop their core markets through a variety of 'technology-led innovations'. This is a particularly relevant opportunity for the airline industry.
- **The emerging markets surge.** Growth in some of the lesser developed economies like China, Brazil, and India is opening up a new range of trade and investment opportunities. These economies are experiencing significant growth in terms of their levels of development. Resultantly, they are experiencing growth in their middle-class population and an increase in demand for goods and

services. Demand for low-cost business models in these markets is booming. From an airline operator's perspective, the growing middle class, and accompanying increase in discretionary income, is creating demand for luxury goods and services like travel for example. Opportunities in this area need to be explored and products/services adapted to match the needs of these large growing markets.

Research by the McKinsey Global Institute in 2016 (Dobbs, Remes, Manyika, Woetzel, Perrey, Kelly, Pattabiraman, & Sharma, 2016:4–5) identified nine important urban consumer groups that will be responsible for generating about 75% of global consumer consumption growth from 2015 to 2030. The research suggests that the first three, "have the spending power to reshape global demand and the world economy". These include (i) developed elderly and retiring, (ii) China's working-age consumers (15–59), (iii) North America's working-age consumers (15–59), (iv) Western Europe's working-age consumers, (v) Latin America's working-age consumers, (vi) North-east Asia's working-age consumers, (vii) South East Asia's working-age consumers, (viii) South Asia's working-age consumers, and (ix) China's 60-plus. These groups of consumers offer significant growth opportunities for both developed and emerging economies and represent important segments for international and domestic airlines to understand and capture. (*see* section 6.4 for the discussion on emerging segments).

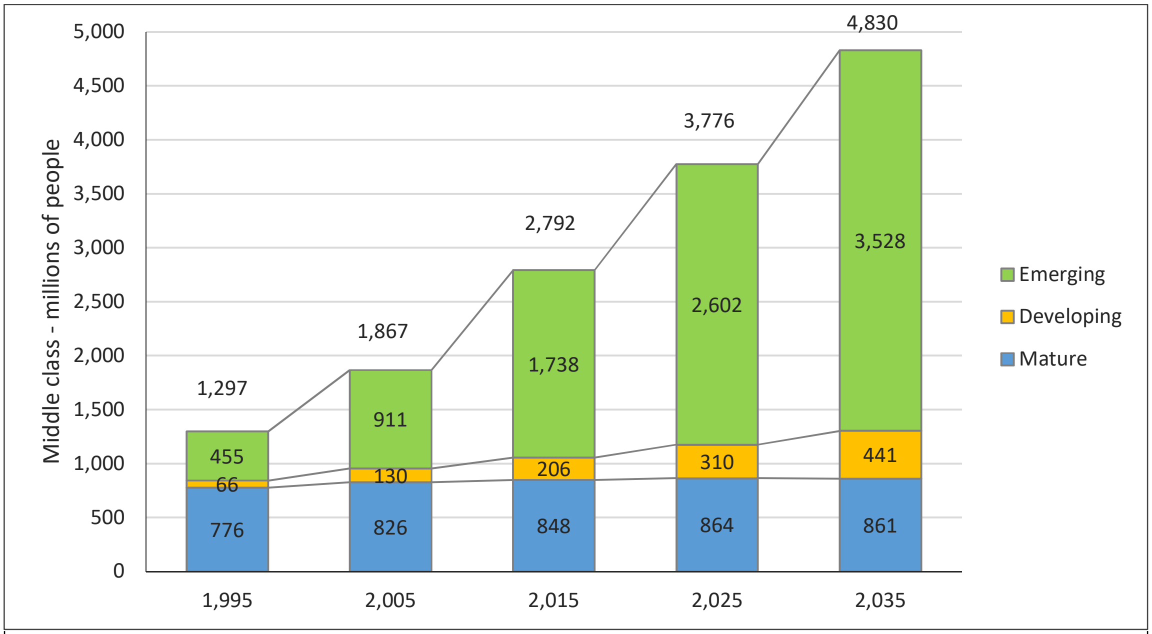
### 4.5.2 Middle-class growth, urbanisation and the growth of cities

Urbanisation is a trend that will play a large role in the future of many economies. Airbus (2016d:16) identify it as one of the key drivers of economic growth and as a result it has an effect on the propensity of people to fly. Linked to this, growth in the size of the middle classes[7] also adds to economic growth and, as stated above, has an effect on the propensity of people to fly. The Airbus Global Market Forecast for 2016–2035 reports that 38% of the population can be classified as middle class but this figure is expected to rise to 55% by 2035 (Airbus, 2016d:20). This rate of growth in the size of the middle class is shown in figure 4.21.

As can be seen in figure 4.21, the growth in the size of the middle-class will be dominated by the emerging markets. Most of this growth will occur in the Asian pacific region, which includes China. The mature economies, which include North America and Europe, show minimal growth and by 2050 it is forecast that the size of the middle-class will decline. Research by the McKinsey Global Institute states that growth of this nature means that by 2025 emerging market cities will have more higher-end middle-income households than in the cities in developed economies (Dobbs, Smit, Remes, Manyika, Roxburgh & Restrepo, 2011:25).

[7] Middle class is defined as households with yearly income between US $20 000 and US $150 000 at purchasing power parity in 2015 constant prices.

**Figure 4.21: Growth in the middle classes (2005–2035f)**

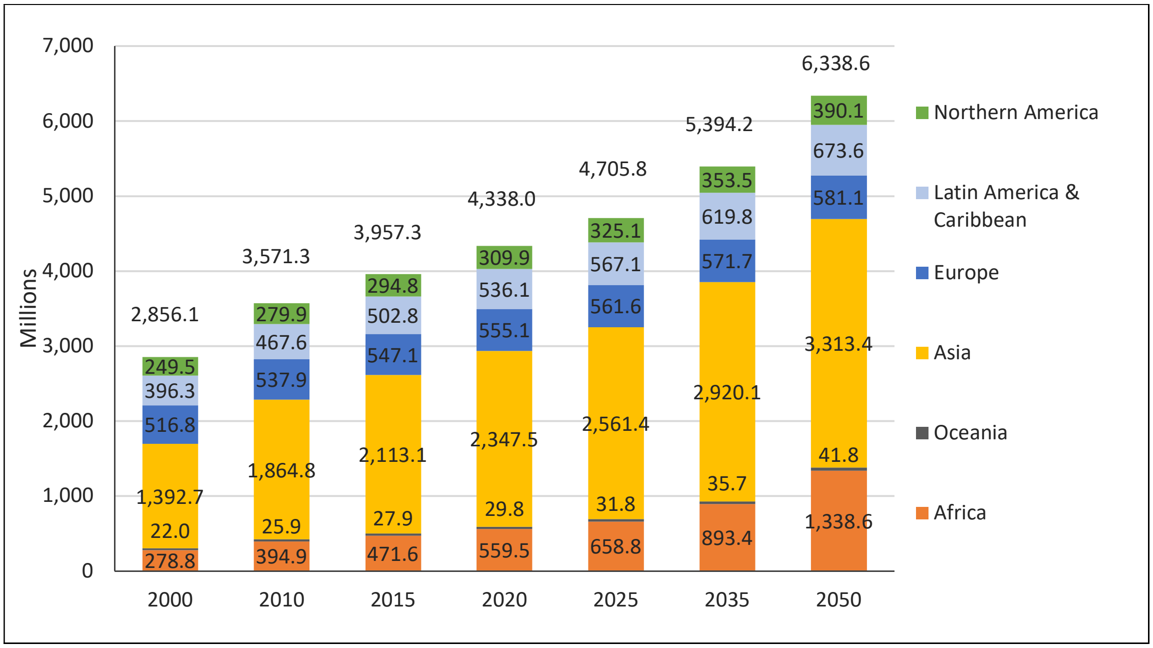



| | | | | | |
|---|---|---|---|---|---|
| 5.7 bn | 6.5 bn | 7.2 bn | 8.1 bn | 8.8 bn | World population (Bn) |
| 23% | 29% | 38% | 46% | 55% | % of world population |

**Source:** Airbus (2016d:20).

The United Nation's Department of Economic and Social Affairs report titled 'World urbanisation prospects – highlights (2014 revision)' estimates that 3.9 billion people live in urban areas (United Nations, 2014:12). This accounts for over 54% of the human population. Asia and Africa are currently the least urbanised but are urbanising at the fastest rate as they catch up to the other continents. Asia currently stands at 48% urbanised and is expected to reach 64% by 2050. Africa also lags behind the global figure at 40% urbanisation but is expected to reach 56% urbanisation by 2050 (United Nations, 2015:7). The report further states that the percentage of the world's urban population is expected to increase to 66% by 2050, which translates into an urban population of 6.3 billion people. The rate of growth in urban areas includes growth of human populations within the urban areas as well as people migrating from the rural communities to urban areas. Figure 4.22 reflects the size of the urban populations for the various continents for a number of selected years. The figure clearly highlights the faster rate of urban growth in Africa and Asia. This is largely due to the fact that the developed economies urbanised many years earlier.

**Figure 4.22: Urbanisation per continent – selected years**

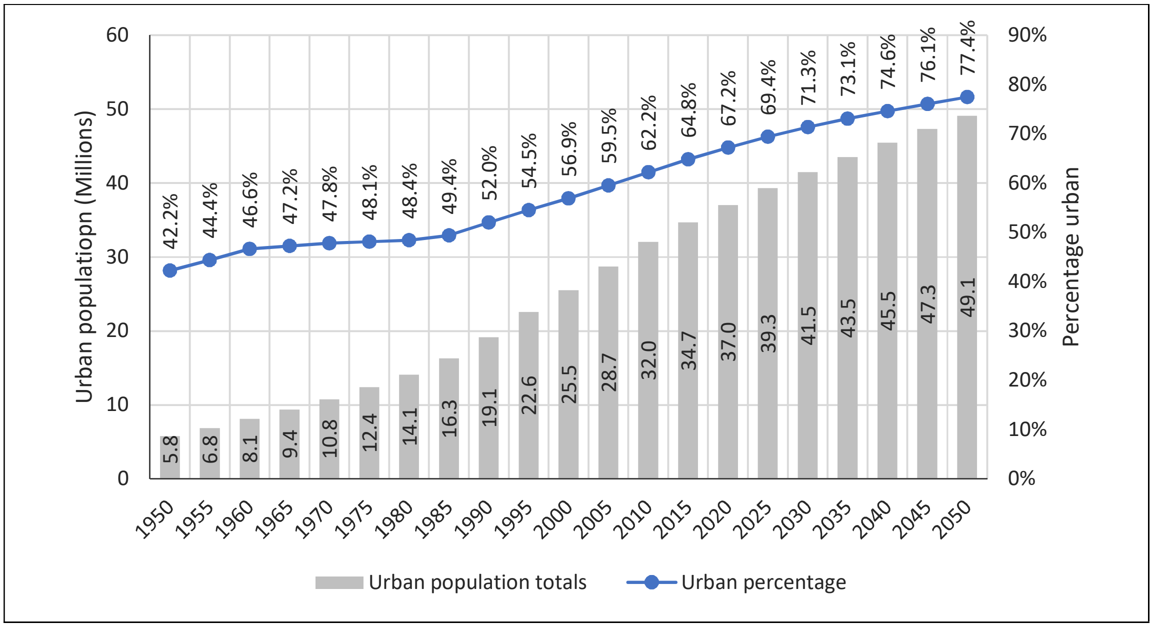



**Source:** United Nations (2014).

From a South African perspective, figure 4.23 shows that South Africa reached 50% urban population around 1990. Since then there has been a steady increase in the urban population, reaching 64.8% in 2015 and an expected 77.4% in 2050. World Bank figures show that the urban population in South Africa has been growing at 2.4% for the past 5 years (World Bank, 2016d). The current trend in South Africa sees over two-thirds of South African youths living in urban areas. Employment in South African metros is much higher than in towns or rural areas and the average income about 40% higher (South African Cities Network, 2016:98–99). *(see* section 4.3.2 for the South African population statistics).

The result of growing urbanisation is that cities have become bigger and important drivers of economic growth. The concentration of people has led to the concentration of opportunities and the prospect of a better standard of living. As people flock to the cities, and from city-to-city, economic activity increases and the cities grow. This has resulted in some cities growing so large that they are now classified as mega-cities, which are cities with a population of over 10 million inhabitants (United Nations, 2016:2). The importance of cities is highlighted by research by the McKinsey Global Institute which shows that, "large cities will account for 81% of global consumption and generate 91% of global consumption growth from 2015 to 2030" (Dobbs, Remes, Manyika, Woetzel, Perrey, Kelly, Pattabiraman, & Sharma, 2016:vi). Growing cities, through their growth and increased trade and tourism for example, need better connections to other cities to facilitate and enhance the increased economic activity. Opportunities exists for airlines to add connections between these cities to meet the increased demand for air transport.

**Figure 4.23: South Africa urban population (1950–2050f)**

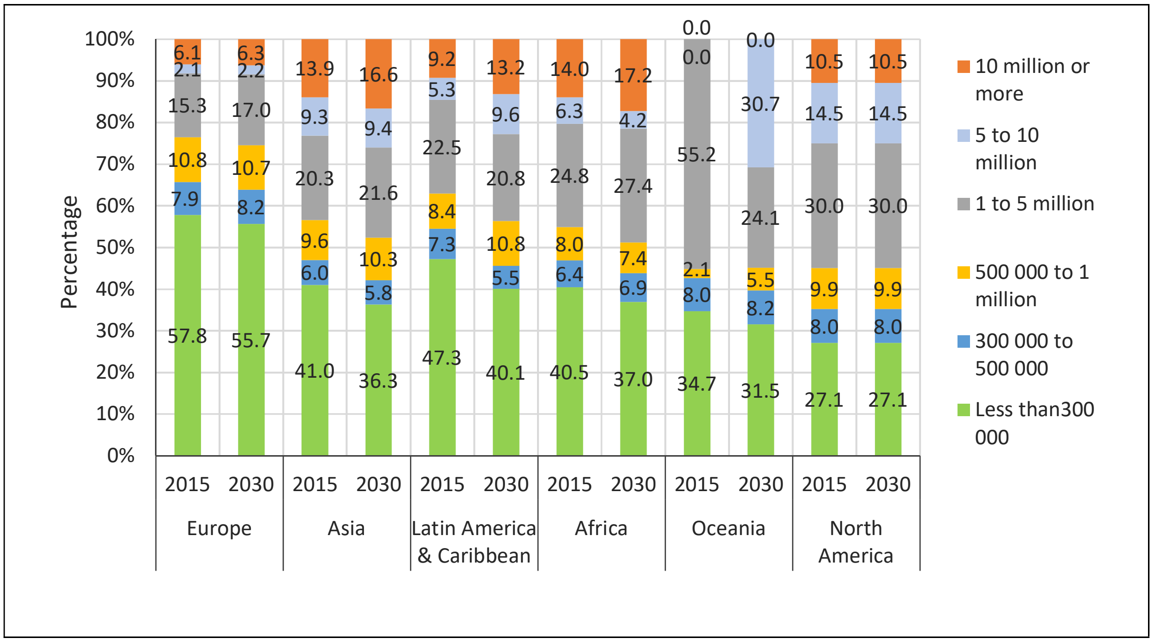



**Source:** Compiled from United Nations (2014).

The size and growth rate of cities is an important metric for an airline seeking to grow or enter new markets. A report by the United Nation's Department of Economic and Social affairs identified that there were 512 cities with over a million inhabitants in 2016 (United Nations, 2016:2). This figure is forecast to rise to 662 cities in 2030. In 2016, there were 31 cities identified as 'mega-cities' globally and this figure is forecast to rise to 41 by 2030. Whilst these mega-cities are massive in terms of population numbers and economic activity, they only account for 11.9% of the global population living in urban areas, which is about 453 million people (United Nations, 2015:13). There were 45 cities in 2016 with populations between 5–10 million inhabitants and this number is projected to rise to 63 in 2030. Many of the new cities in this category will come from Asia and Africa. Cities with between 1–5 million residents numbered 436 in 2016 and this number is forecast to increase to 559 by the year 2030. The report shows that 20% of global urban dwellers live in cities with 1–5 million inhabitants, whilst about 49.5 % of the global urban population live in cities with less than 500 000 inhabitants.

Figure 4.24 illustrates the percentage of the urban population per city size within the various continents across the globe. The overall growth in the size of cities is readily observed from the figure, particularly relating to the growing number of larger cities in Asia and Africa, as well as the relative shrinkage in the number of cities with less than 300 000 inhabitants.

**Figure 4.24: Percentage of urban population per city size across continental groupings**




**Source:** United Nations (2014).

From a South African perspective, the number of large cities is relatively small compared to other countries. Metropolitan Johannesburg is the largest South African city with a population of 8.65 million inhabitants. The cities of Johannesburg, Cape Town, Ekurhuleni, Tshwane, and eThekwini have shown the largest growth in population, with some smaller cities like Polokwane, Mbombela, and Richard's Bay showing strong growth as well (South African Cities Network, 2016:31–33). Table 4.15 summarises the South African city in terms of the spread across city sizes. Johannesburg, Cape Town, Ekurhuleni, Tshwane, and eThekwini are the dominant cities in terms of South African economic activity and account for 35% of the South African population (South African Cities Network, 2016:93). These cities are extensively covered by the South African domestic air carriers and make up the 'golden triangle'. (*see* section 4.3.2 for the discussion on the dispersion of the South African population across the provinces).

**Table 4.15: South African cities – figures per city-size category**

| Number of inhabitants | 2015 | | 2020 | | 2030 | |
|---|---|---|---|---|---|---|
| | Percentage of cities | Number of cities | Percentage of cities | Number of cities | Percentage of cities | Number of cities |
| 10 million or more | 0.0% | 0 | 28.0% | 1 | 27.9% | 1 |
| 5 to 10 million | 27.1% | 1 | 0.0% | 0 | 0.0% | 0 |
| 1 to 5 million | 31.6% | 5 | 31.4% | 5 | 31.7% | 5 |
| 500 000 to 1 million | 3.7% | 2 | 5.1% | 3 | 7.7% | 5 |
| 300 000 to 500 000 | 4.5% | 4 | 4.2% | 4 | 3.5% | 4 |
| Fewer than 300 000 | 33.1% | | 31.3% | | 29.2% | |

**Source:** Adapted from United Nations (2014) and South African Cities Network (2016: chapter 1).

Mega-cities are a focus of economic activity and are therefore generally well-served or over-served by the airlines. Research by the McKinsey Global Institute showed that mid-sized to small middleweight-sized cities are growing and will contribute significantly to GDP growth (Dobbs et al., 2011:9–11). A recommendation from the research is that countries and companies looking for growth should go beyond just the mega-cities and consider the medium-sized and smaller cities. Embraer, the airframe manufacturer of smaller regional type aircraft, in their 2012–2031 market forecast (Embraer, 2012:12) recognised that airlines have been allocating their capacity to the hub airports located in the mega and large cities. However, with the growing importance of the mid-sized and smaller cities, they state that consideration needs to be given to utilising smaller regional airports in these evolving cities. The potential opportunity of utilising the secondary airports will require infrastructure investment to improve facilities and the addition of additional air services which in turn will contribute to economic growth in the region. The Embraer 2016 market outlook report reiterates that airlines will be exposed to more opportunities to develop previously neglected air markets in mid-sized and smaller cities as they grow in size (Embraer, 2016). From an airline perspective, the McKinsey Global Institute research (Dobbs et al., 2011:32) suggests that companies should look for opportunities in clusters of cities that are optimally located to be linked for business and leisure purposes and will therefore require air travel connections.

### 4.5.3 Global risks

A review of the current situation would not be complete without reference to the future. The future is largely uncertain and forward thinking is required to anticipate future risks that could affect an economy and other aspects of human life. These risks will ultimately have a direct or indirect impact on the level of air travel demanded. The World Economic Forum's annual 'global risks report' for 2017 identifies the risks facing the world in terms of their likelihood and potential impact (World Economic Forum, 2017a). In this report, the risks are categorised into five global risk categories. The main risks within each risk category are as follows:

- **Economic risks.** High structural unemployment or under-employment and illicit trade are viewed as being the most likely risks to occur. Fiscal crises in key economies and high structural unemployment or under-employment are risks likely to have the biggest impact. Asset bubbles in major economies are also seen as a significant risk. The key economic risks for sub-Saharan Africa are structural unemployment or under-employment and failure of critical infrastructure.
- **Environmental risks.** Extreme weather events, natural disasters, and man-made environmental disasters feature in the top 10 most likely global risks. Failure of climate change mitigation and adaptation, extreme weather events, and natural disasters have the risk of the greatest impact. Biodiversity loss and ecosystem collapse pose strong risks.
- **Geopolitical risks.** This category identified a number of differing risks and levels of likeliness but key amongst the likely risks were terrorist attacks, interstate conflicts, and failure of national

governance (failure of rule of law and corruption). Weapons of mass destruction are seen as the risk with the largest impact, followed by terrorist attacks. Failure of national governance is seen as the greatest risk to the African continent.

- **Societal risks.** Two clear risks were identified in this category. These were large scale involuntary migration and water supply crisis. Their impact and likeliness of occurring were rated as extremely high. Other societal risks identified as having a large impact are profound social instability, food crises, and rapid spread of infectious diseases. In terms of South Africa, the water crises risk and risk of social instability is high.
- **Technological risks.** By far the biggest overall technological risks are the mass incident of data fraud or theft and cyberattacks. Other concerns include the adverse effect of technological advances and the breakdown of critical information infrastructure. The risk of cyber-attacks is seen as a concern for South Africa.

Of all the risks identified across all five categories, the risk of extreme weather events was seen as the most likely to occur, followed closely by large scale involuntary migration. The 2017 Global Risks report indicates that weapons of mass destruction and extreme weather events have the largest potential impact overall followed by water crises (World Economic Forum, 2017a:ii–iii & 61–62). The report also identifies a number of trends that were identified in 2016. The most noticeable of these include an aging population, a changing landscape of international governance, a growing middle class in emerging economies, the increasing polarisation of societies, the rise of cyber dependency, rising income and wealth disparity, and urbanisation (World Economic Forum, 2017a:63). These potential risks, impacts, and trends will have an impact on the air transport industry. This requires that airlines take cognisance of them and ensure that their future strategies incorporate plans to mitigate the impacts.

## 4.6 SUMMARY

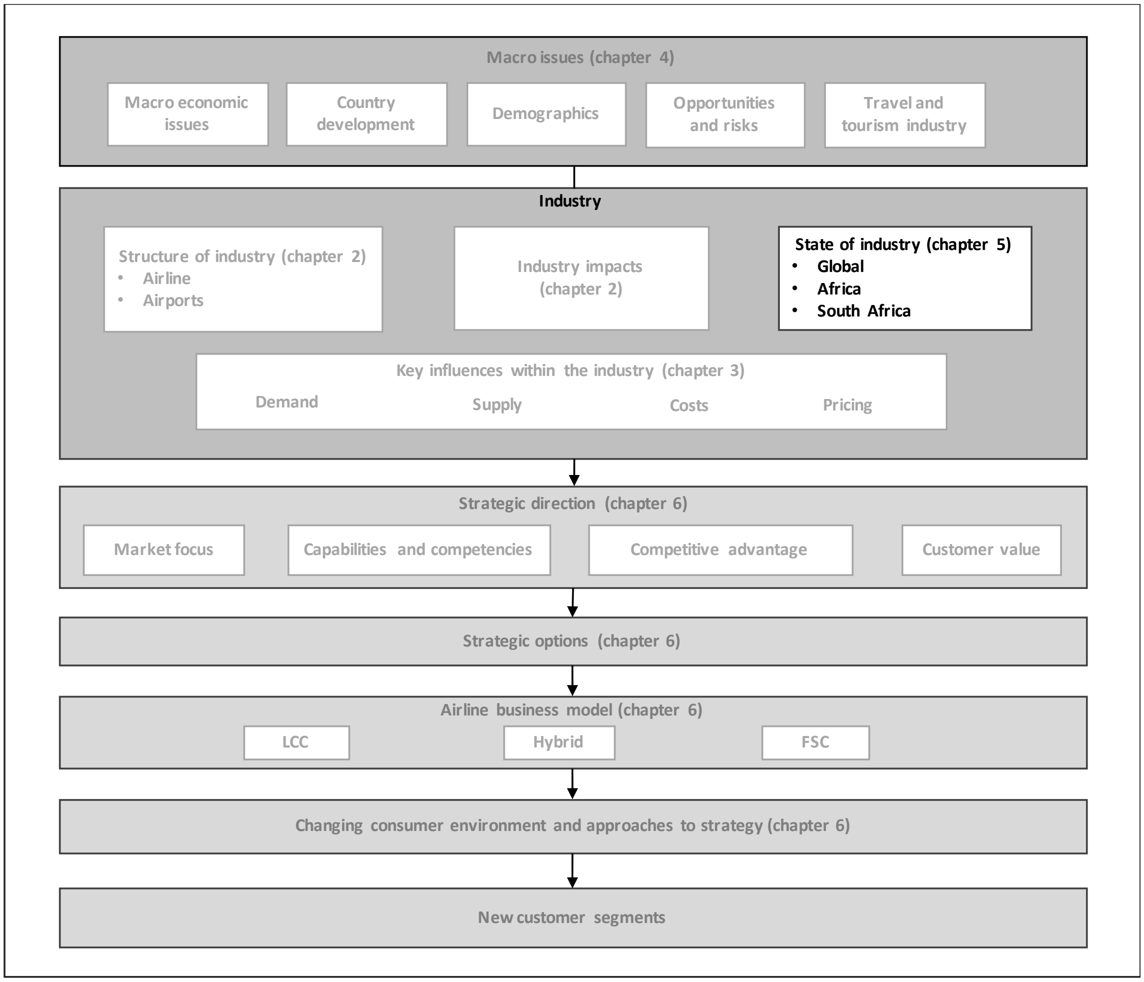
The chapter focussed on outlining key issues in the broader business environment in which the air transport industry operates. Each of these areas plays a significant role in establishing the business environment faced by the airlines and ultimately affects the level of consumer demand. The section addressing the key macro-environmental indictors reviewed a number of significant aspects that have a particular impact on the operations of the air transport industry, including GDP growth, inflation, oil price volatility, levels of trade, employment, and exchange rate fluctuations. Each of these components were viewed from the global perspective to provide a foundation of comparison to the South African context. There are many concerns regarding South Africa’s performance when compared to most emerging markets, especially compared to fellow BRICS members and other fast developing African nations. A brief outline was given of South Africa’s economic classification and competitiveness followed by an outline of the demographic make-up of the country in terms of age, gender, race, and geographic dispersion. The outline of the demographic make-up of the country provides necessary inputs into the segmentation of the passenger market.

A review was given of the size and trends in the travel and tourism industry. The section further put travel and tourism in South Africa into context with the global picture to highlight the importance of the industry and show the untapped potential that exists. The competitiveness of the industry was identified, with attention given to the specific aspects relating to the state of South African domestic travel and tourism. From this review, it is apparent that the South African tourism industry is experiencing a turbulent period, with numerous factors affecting its growth performance. There are however, many growth opportunities for the South African tourism industry given that the overall global travel and tourism economy is experiencing strong growth. An understanding of the travel and tourism industry in the country is important in the context of the air transport industry and serves to highlight areas of opportunity and saturation.

The chapter concluded with a brief look at some of the broader growth opportunities that exist in the external market, specifically in relation to emerging market segments. Consideration was given to the global phenomenon of urbanisation and changing nature of cities in the global context. Growth in the middle-classes and urbanisation was identified as a key feature of emerging economies. The chapter also highlighted that growing cities in emerging markets will require increased air transport connectivity if they are to facilitate and enhance the increased economic activity. The chapter closes with a few notes given on the key global risks that are perceived to pose a threat to global and individual nation prosperity.

Chapter 5 addresses the state of the global and South African air transport industry. This will help understand the industry's competitive framework and the nature of consumer demand.

# Chapter five in the context of the thesis model



# CHAPTER 5

# THE BUSINESS ENVIRONMENT OF THE AIR TRANSPORT INDUSTRY

> *"Our world is changing very rapidly. Each day brings something new - at times it's a challenge, other times it's an opportunity. The key to success is being able to respond quickly."*
>
> *– Alexandre de Juniac, IATA director general and CEO (2016)*

## 5.1 INTRODUCTION

The focus of this chapter moves from the broader macro environment addressed in the previous chapter to the specific environment in which the air transport industry operates. As the opening quote indicates, the air transport industry operates in a rapidly changing environment and this necessitates that airlines have an intimate understanding of the conditions within the industry in order to remain competitive. The chapter focusses on quantifying the air transport industry from a global (section 5.2), African (section 5.3), and a South African perspective (section 5.4). Key industry indictors (including capacity, fleet, passengers, load factors, revenue, profit, and yields) are quantified at each level. Where appropriate, a distinction is made between FSCs and LCCs. Included in the global overview are comments on globalisation and the liberalisation of air travel markets, which has resulted in greater levels of connectivity and the emergence of the low-cost model. Brief contextual comments are given on the resilience of the industry to external crises. The review of air travel on the African continent includes a discussion on the Yamoussoukro Decision, which was aimed at the liberalisation of the continent's skies for air travel. Finally, the chapter provides a review of the South African air transport industry and the key issues shaping the industry. Take note that the focus of this study is on scheduled commercial air services and therefore the discussions do not address air cargo or chartered services.

## 5.2 THE STATE OF THE GLOBAL AIR TRANSPORT INDUSTRY

The air transport industry is a very different to what it was 20 years ago. Rapid advances in technology have made the industry more efficient, and globalisation and liberalisation of the skies have made air travel, quicker, cheaper, and safer (Bottini & Morphet, 2016:20). Sorahan, the chief financial officer of Ryanair, sums up the nature of the air transport industry and what it takes to survive in modern times.

He states that, "every year in the aviation industry there is a crisis, whether it's a volcano going off in your backyard, SARS, foot and mouth, or this year, Brexit. But if you've got low costs and a pretty strong balance sheet, like we have, then you are in a strong position" (Harper, 2016:12).

### 5.2.1 An industry of change: globalisation and liberalisation

Growth in the air transport industry has seen RPKs more than double in the past 20 years (IATA, 2016n:2). Much of this has been attributed to increasing globalisation and air transport liberalisation. The dynamic nature of globalisation means that not only does growth in global economies benefit the air transportation industry, but also that developments in the air transportation industry can benefit the global economy through better connectivity and speedier service delivery (Button, 2008:5). In terms of the service it provides, air transport contributes to ensuring the global economy moves forward by facilitating the flow of goods and people. The industry benefits from globalisation in that as growth occurs the demand for additional services and flows of people increases. Whilst globalisation seems to hold the most benefits for international air services, the benefits to domestic air travel have also been significant. Button (2008:15) identifies two key ways in which domestic air services have benefited from globalisation:

- **Trade generated benefits.** Increased demand for exports and imports requires the distribution of products within a country (especially larger countries).
- **Income generated benefits.** Increased global economic activity generally leads to increased income and consumption within a country. This increased income is used for a number of things including increased domestic travel, which includes domestic air travel.

In the early days of its development, the strategic importance of the air transportation industry was quickly recognised. This resulted in a highly regulated and protected industry within an airline's home country. In this environment, there was no real competition between the national carriers of different countries with prices being determined through bilateral agreements between the origin and destination countries (ELFAA, 2004:3). One of the implications of a protected industry was that the airlines were protected by their governments from economic cycles and competitors through financial bailouts, mergers, and other means to ensure the survival of the strategically important airlines (Airline Leader, 2010:27). Over time, these protectionist measures have gradually been revised and, whilst not the case in all countries, the overall industry is a lot more liberalised and deregulated with open sky agreements being implemented around the globe (Doganis, 2010b:43; Wensveen, 2015:4–5). The industry is still not 'fully liberalised' with many countries and continents still in the process of negotiating agreements to further liberalise aviation.

Liberalisation has as its goal the removal of restrictions on capacity, frequency, and pricing in order to enable market expansion (Embraer, 2016:22). The effect of this liberalisation and deregulation has had a profound effect on the commercial air transport industry not only in terms of demand but also in terms of the way in which an airline is managed, the overall complexity of the industry, and the interaction with other stakeholders. Airlines operating in liberalised markets are no longer fully protected from economic downturns and are subject to normal market forces (Airline Leader, 2010:27). This has placed increased pressure on the airlines to find their own business solutions to economic and financial pressures to ensure their competitive survival in the market (Airline Leader, 2010:27). The early effects of liberalisation saw the following:

- an increase in the number of airline liquidations as weak airlines cease operating,
- an increase in the number of airline restructurings,
- an increase in the number of airline mergers to fight off closure,
- an increase in the number of joint ventures,
- an increase in alliance membership (Carlson Wagonlit Travel, 2011:9).

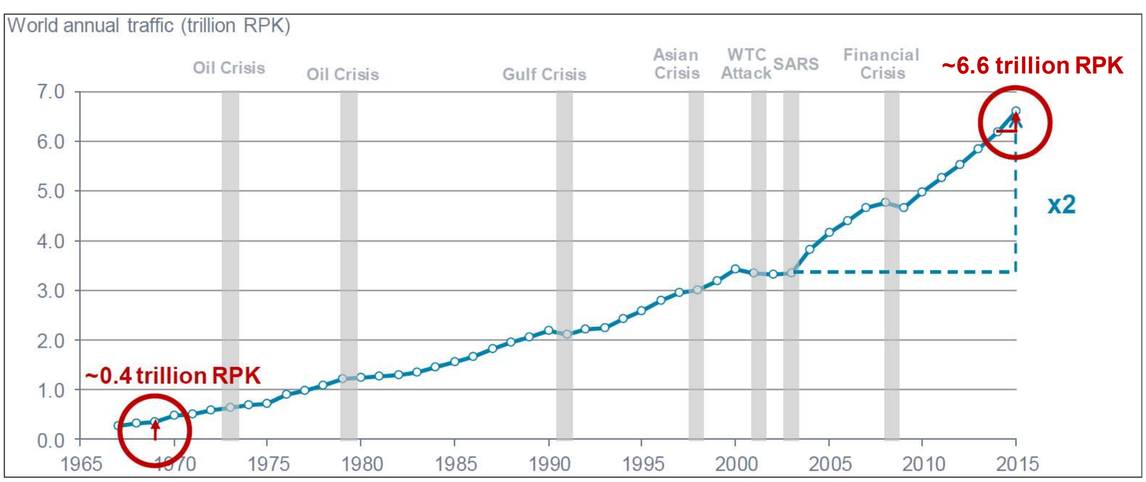
One of the main benefits of liberalisation is improved connectivity, which is to the benefit of the home and global economy. Research by the Air Transport Action Group (ATAG) has shown that a 10% improvement in connectivity has the effect of increasing GDP by 0.07% annually (Embraer, 2016:22). Connectivity offers countries the ability to attract investment and human capital (Bottini & Morphet, 2016:20). Additionally, connectivity enhances tourism, offers consumers more choices in terms of networks and frequencies, reduces air travel times, and makes it easier to conduct business in remote areas of the globe (*see* sections 5.3.1 and 5.3.4 for the discussion on African connectivity and the connectivity deficit). Another key benefit arising from liberalisation is the lowering of barriers to entry to the industry. Research has shown that traffic growth between the origin-destination markets grew between 12 to 35 percent after liberalisation (Boeing, 2012a:10). This subsequent increase in competition in the market lead to an overall lowering of fares and the emergence of a new business model: the LCC (ELFAA, 2004:1). Whilst the gradual liberalisation of the industry did lower the industry entry barriers, the sudden influx of start-ups to the market resulted in excess market capacity. Many of these start-ups, however, did not have the appropriate business model and tried to flood the market with extremely low fares and compete head-on with the larger established airlines. As a result, there were also a lot of failures with many of the start-ups collapsing in a relatively short period of time.

### 5.2.2 An industry of unpredictable predictability

As identified in section 1.2.1, global turbulence and unanticipated events over the past decade or two have resulted in a tumultuous time for the global economy and the airline industry. Economic downturns and financial crises have been particularly troubling for the global air transport industry because it is intimately tied to the prosperity or decline of the global economy. A 2002 McKinsey article (Costa et al., 2002) called for a rethink in the air transport industry so that airlines are in a better position when emerging from a recession/crisis and can more effectively manage the difficulties experienced in future. A general review of the forecasts, research, and the writings of IATA over the past seven years illustrates the unpredictability of the air transport industry. Whilst the forecasts are grounded in sound economic and business principles, the forecasts/articles/research could not foresee the scale of the crises or recessionary influences that the industry was to face. (Section 1.2.1.2 briefly outlined the mixed impact of the recession on the industry).

The past few decades have seen a number of crises or events that have had a significant impact on the air transport industry. Figure 5.1 highlights some of the more notable crises that have been experienced. Occurrences that revolve around economic recessions and financial meltdowns tend to have an impact over a number of years and form part of the normal economic cycles (large or small). There are however a number of unique events that have also had an impact on the industry. Whilst they tended to be short-term in nature, they did have an impact on air travel within a particular region and, in some cases, the global air transport market. These unexpected events placed greater strain on an industry already battling tough economic conditions. Specific unpredicted events that arose include the 2001 9/11 twin towers terror attack, the three outbreaks of Severe Acute Respiratory Syndrome (SARS) in China (2003–2005), the oil price spike in 2008 and 2011–2014, the eruption of the Icelandic volcano Eyjafjallajökull in April of 2010, the earthquake and resultant tsunami that hit Japan in March of 2011, the Arab Spring in Northern Africa, the 2014 West African Ebola outbreaks, the November 2015 Paris terror attacks, the Brussels airport attack in March of 2016, the June 2016 attack on Istanbul's airport, and the June 2016 Brexit vote (Veitch, 2016:35–36; Airbus, 2016:14; Harper, 2016:12; Bottini & Morphet, 2016:23). These unpredicted events introduced shocks to the industry and severely influenced the operations profitability of many airlines in the industry.

**Figure 5.1: Key global crises affecting global aviation for the period 1970–2015**




**Source:** Airbus (2016:14).

The point of the previous paragraph, however, is to highlight a key characteristic of the air transport industry: resilience. Figure 5.1, in essence, highlights the fact that even though these damaging events had a negative effect on air travel demand at the time, the overall trend has still been one of growth with RPKs showing consistent strong growth since 1970 and in fact doubling between 2003 and 2015 (Airbus, 2016:14). The overriding reason for this resilience is put down to the ability of the industry to adapt itself to meet the needs of the continuously changing market (Bottini & Morphet, 2016:23). A more detailed analysis of the reasons behind the air transport industry's resilience is given by Oxley & Jain in the *Travel and Tourism Competitiveness Report* for 2015 (World Economic Forum, 2015:59–61). They identify the following reasons for the industry's resilience:

- A large decline in the real cost of travel over time. In essence, as technology has evolved, costs have fallen resulting in travel becoming cheaper (discussed in section 3.5.1).
- The increase in living standards and disposable income over time, which opens up travel to a larger market (discussion in section 4.5.2).
- Growth in the middle classes in the emerging and developing economies (*see* the discussion on the growing middle-class in section 4.5.2).
- Liberalisation of air transport markets (*see* sections 5.2.1 and 5.3.1 for the discussions in this regard).

Figure 5.1 also shows that after each decline due to an unanticipated event, passenger traffic bounces back to the long-term trend line after a short period of time. Oxley & Jain emphasise the point that the airlines must not take the industry's resilience as automatic and that factors in the regulatory environment (liberalisation for example) have an impact on how quickly the industry can recover from an unanticipated event (World Economic Forum, 2015:60)

Airlines are constantly looking to grow their markets and passenger base within the constraints imposed by the global economy. Since the beginning of 2016, the airlines have been facing an environment where a feeling of protectionism is spreading around the globe, which is causing concern and uncertainty regarding the forward momentum of air market liberalisation and open skies (Airline Leader, 2016a:20–21). Adding to these concerns are signs that the current weak economic cycle is slowing even further and international trade has stagnated (IATA, 2016k:2–5). IATA's September 2016 briefing highlights that the industry is showing resilience and that, whilst the industry is currently profitable, issues like geopolitical concerns, weak economic performance, and protectionist political agendas could cause unwanted turmoil (IATA, 2016j).

### 5.2.3 The current situation in the global air transport environment

Section 1.2.1.1 gave a brief introductory overview of the progress the industry has made since the 2008 recession. Section 2.4.1 also gave a few introductory points to put the industry in context of global airlines. The focus of this section is to build on these introductory sections and quantify, in detail, the current situation in the global air transport market across a number of key performance indicators. Where appropriate, trends across each indicator are given for the short-term past to the end of 2016 to highlight the direction of changes being experienced. Consideration is also given to addressing the different indicators across the different regions. To ensure comparability, the discussions that follow are largely based on figures obtained from IATA and the reports that the organisation issues.

Before addressing the various indicators, the value of the global air transport industry will be quantified. The full-year figure for 2014 values the air transport industry at US $585 277 million, which is a 7.7% increase from 2013 which was calculated at US $543 506.3 million. For 2015, the figure shows a value of US $628 677.2 million, which represents a 7.4% increase from 2014. The forecast for the end 2016 is even more positive, with 8.1% annual growth expected at a value of US $679 287.1 million (Marketline, 2015:8 & 12).

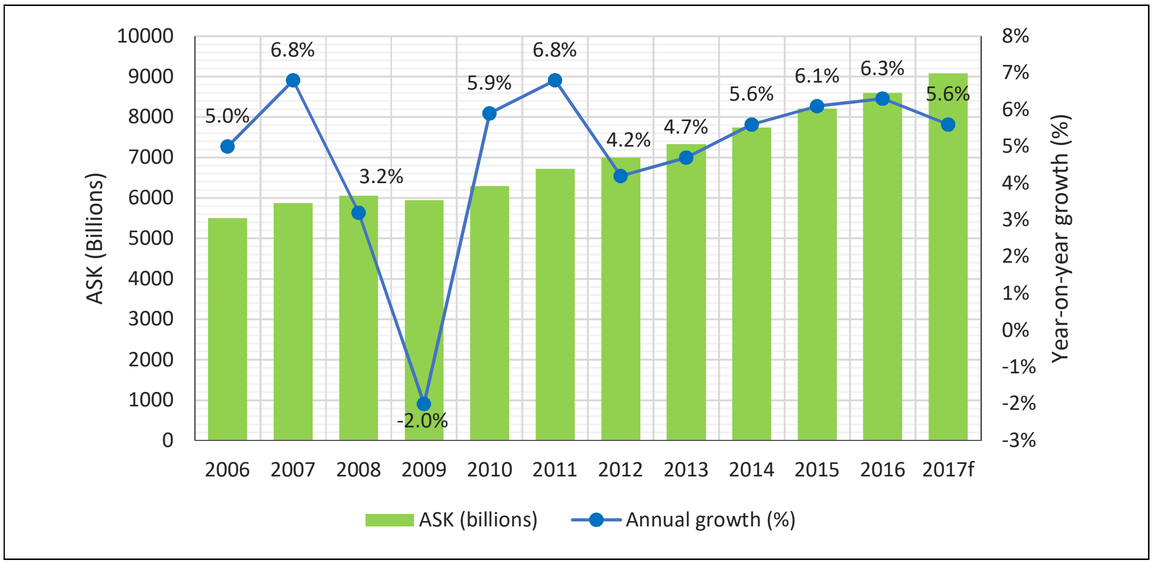
#### 5.2.3.1 Global capacity

Sections 3.2.2 and 3.4.2 addressed theoretical issues relating to airline capacity and over-capacity in the industry. In this section, the focus is on the quantification of the industry in terms of global capacity. The global air transport industry is massive with approximately 104 000 flights transporting close on 9.8 million people on a daily basis (ATAG, 2016:5). At the end of 2016 there were just under 900 airlines in operation (Flight Global, 2017:10). Growth in air transport capacity has been positive since 2010 and for the year 2015, airline capacity growth exceeded GDP growth for the first time since the 2008 financial crisis (Flight Global, 2016a:2). Part of the capacity growth is because of the increase in average size of aircraft (in terms of seats) that form part of the global fleet and the lengthening of the average stage length. As identified in the glossary of terms, capacity is stated in ASKs (Available Seat Kilometres) and calculated by multiplying the available seats by sector lengths. Figures by IATA show that the average aircraft size in 2015 was 139 seats which is an increase of two (1.7%) from 2014 (IATA, 2016L:4). Forecasts put this figure at 141 for 2016 and 143 by 2017. At the same time, the average sector length in 2015 increased by approximately 16 kilometres (Stalnaker, Usman, & Taylor, 2016:51). Whilst these seem like small differences, the effect of this on annual ASKs should be seen in the context that there were 3.7 million available seats in the global fleet in 2015, which thus results in an additional 59.2 million ASKs just from longer sectors flown. Another contributor to increases and decreases in terms of ASKs is the start-up and failure of airlines in the industry. In 2014, there were 83 start-ups and 44 failures compared to 58 start-ups and 55 failures in 2015 (Flight Global, 2016a:7).

Figure 5.2 provides a look at Global ASKs and ASK growth rates for the period 2006 to 2017f. The impact of the 2008 recession is quite clear. Global ASKs were growing at a rate of 6.8% per annum before the financial crisis and then, at the peak of the recession, global ASKs declined by 2.0% for 2009.

Capacity growth accelerated through 2010 and 2011 but slowed to 4.2% growth per annum for 2012. Since then the trend has continued its steady climb and is expected to have grown by 6.2% by end 2016. In numerical terms, ASKs have grown from approximately 5 500 billion ASKs in 2006 to 8 200 billion ASKs in 2015. For 2015, RPK growth was 0.7% higher than ASK growth, which resulted in an overall improved annual passenger load factor being realised (ICAO, 2016a:1). In terms of 2016, a review of IATA's '*air passenger market analysis*' monthly reports to October 2016 shows that overall ASK growth was around 7.0% for the 1st quarter of the year but then eased to 6.2% by the end of the 3rd quarter (IATA, 2016m:1). Analysis at the end of 2016 shows that International ASKs grew at a rate higher than the domestic ASKs for the calendar year (6.9% vs 5.1% respectively) (IATA, 2017:4). Given the delicate economic growth environment, airlines have taken steps to carefully manage their capacity according to the conditions prevailing in the markets they serve.

**Figure 5.2: Global airline Available Seat Kilometres (ASKs) (2006–2017f)**




**Source:** ICAO (2016a:1), IATA (2016L:4) and IATA (2017:4).

Statistics from ICAO for 2015 show that whilst the global ASK growth rate was 6.1% for the year, a vastly different picture emerges when looking at the individual regions. The Asia/Pacific region recorded 6.9% ASK growth for the year and accounts for 30% of global capacity. The region that had the highest increase in ASKs was the Middle East at 13.8%. The remaining regions recorded ASK growth below the 2015 global growth rate. This includes Europe (4.0%), North America (3.9%), Latin America/Caribbean (5.7%), and Africa (0.9%) (ICAO, 2016a:2). The Asia/Pacific, Europe, and North America together offer 81% of the global available capacity. Africa only accounts for 3% of global ASKs. A review of the capacity growth of the various regions over the past six years highlights some significant differences. Table 5.1 shows IATA data for the system-wide global commercial airlines capacity across the various regions since 2011. From this table, it is clear that yearly capacity growth has been occurring at a much faster rate in the developing economies than in the advanced economies, albeit from a much lower base in many cases. The Middle East has shown above-average capacity growth over the identified period. This capacity growth is due to the rapid growth of the three main Middle East carriers, namely Emirates, Etihad and Qatar Airlines. North America shows stagnant capacity growth with Europe showing mixed, but below industry average, capacity growth. The Asia/Pacific has shown strong system-wide capacity growth with the strongest growth coming from the Chinese market. System-wide capacity growth in Africa is the weakest from an emerging market perspective, with 2015 showing an overall capacity shrinkage resulting from demand slumps due to Ebola outbreaks and terror-related attacks (Flight Global, 2016a:10). The final 2016 ASK system-wide growth figures showed growth across all regions. Europe and North America have shown ASK growth but at a lower rate than 2015. Latin America has seen its ASK growth rate slow significantly from 2015, largely due to the impact of the recessionary situation in Brazil. Africa has reversed the ASK decline of 2015 and recorded ASK growth of 6.3% for the year (IATA, 2017:4).

**Table 5.1: System-wide capacity change (%) for the period 2011–2017f**

| System-wide | Year-on-year percentage change in capacity (ASK) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017f |
| **Global** | 6.6 | 4.0 | 4.8 | 5.5 | 6.7 | 6.3 | 5.6 |
| • North America | 2.8 | 0.0 | 2.0 | 2.5 | 5.0 | 3.7 | 2.6 |
| • Europe | 8.9 | 2.6 | 2.7 | 5.1 | 4.8 | 4.4 | 4.3 |
| • Asia-pacific | 7.0 | 5.3 | 7.1 | 7.4 | 8.4 | 8.1 | 7.6 |
| • Middle East | 9.8 | 12.0 | 12.3 | 10.9 | 12.9 | 13.5 | 10.1 |
| • Latin America | 9.3 | 7.3 | 4.5 | 4.7 | 6.9 | 1.9 | 4.8 |
| • Africa | 3.2 | 6.3 | 4.0 | 2.5 | -0.2 | 6.3 | 4.7 |

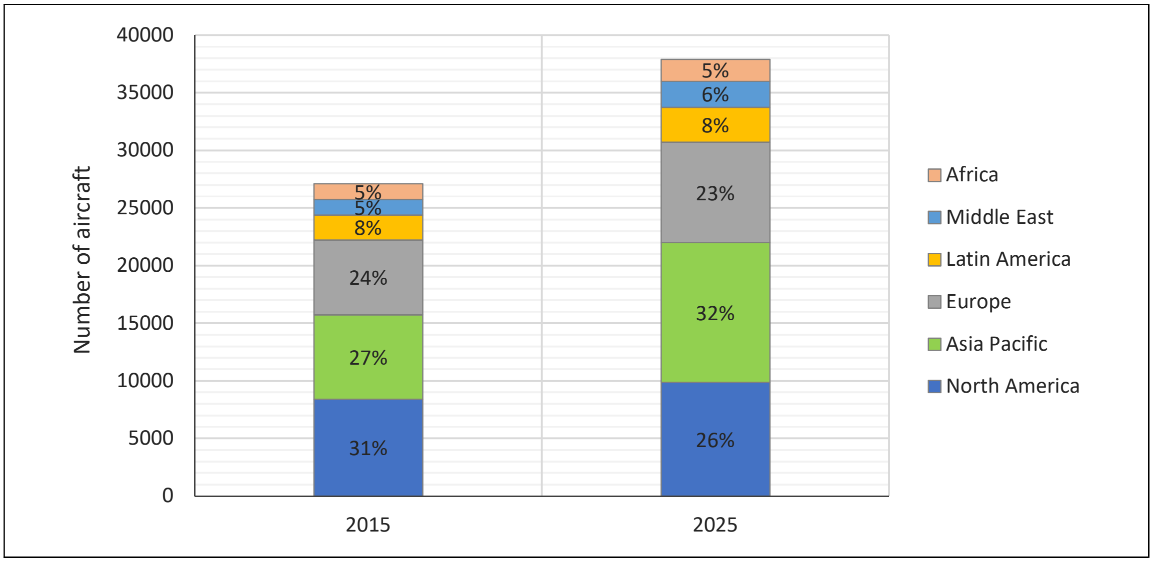
**Source:** IATA (2016f:2) and IATA (2017:4).

Figures released in the RDC Aviation Capstats report for November 2016 (Capstats, 2016:2) show that, in terms of ASKs, low-cost carriers offer more ASKs than any of the three major FSC alliances in 2016 (Oneworld, Skyteam, and Star Alliance). This is a significant increase over 2015, where all three of the major FSC alliances individually offered more capacity than the LCCs. The first 10 months of 2016 saw LCCs increase their ASK by 32.6% compared to the major alliances, which recorded flat or declining capacity. Further analysis of LCC capacity growth shows that over the past 10 years, LCCs have grown capacity at a compounded annual growth rate of 7.1% compared to the global market growth rate of 3.5% (Lazaridis, 2016).

#### 5.2.3.2 Global fleet – current and future

The number of aircraft in service, on order, and being retired have a direct influence on global ASKs. Different organisations use slightly differing categorisations to report the size of the global airline fleet, each of which yield slightly different figures on the exact size of the fleet. Based on the figures given by IATA, the global fleet consisted of 25 860 aircraft in 2014, 26 704 in 2015, and is estimated at 27 712 for the end of 2016 (IATA, 2016L:4). Boeing and Airbus dominate the market with market shares of 31.5% and 27.1% respectively (Airline Leader, 2016b:70). Single-aisle aircraft dominate the type of aircraft in operation at 56.3% of the global fleet. These include the Boeing 737 family and the Airbus A320 family that are the favoured aircraft of the LCCs. Figure 5.3 shows that 31% of the global fleet is based in North America, 24% in Europe, 27% in the Asia Pacific, with the balance spread across Latin America, the Middle East, and Africa (5%). By 2025 it is forecast that the Asia Pacific will hold the largest share of the global fleet (32%). Approximately 2 324 aircraft were in storage in 2016 (Airline Leader, 2016b:70).

**Figure 5.3: Global commercial aircraft fleet by global region (2015 and 2025f)**




**Source:** IATA (2016h:14) and Flight Global (2015).

In terms of aircraft ordering, 2015 saw fewer aircraft sales than 2014 by both main manufacturers but still saw Airbus record 1 036 sales. Figures in May of 2016 indicate that there are 12 803 aircraft on order. Of the aircraft on order, 41.6% are from the Asian Pacific region. Europe and North America account for 23.4% and 19.4% of the orders respectively, with Latin America trailing at 8.6% of the total (Airline Leader, 2016b:70–71). The Middle East and Africa make up the remainder at 5.4% and 1.7% respectively. Of this ordered fleet, 66.2% are for narrow-body jet aircraft (Boeing 737 and Airbus A320 primarily), 20.4% for wide-bodies aircraft, 11.1% for regional jets, and 2.2% for turboprops. In terms of manufacturers, 44.5% of the on-order fleet is with Airbus and 39.0% with Boeing. As an illustration of the vast difference between capacity growth in the different regions, figures on 3 May 2016 show that fleet orders for the Asian Pacific stood at 4 349 orders whilst for Africa there are only 214 orders. The main drivers behind aircraft orders include replacement of less fuel-efficient aircraft in an attempt to lower operating costs, the replacement of old aircraft (retirements), and the rapid expansion of the LCCs and the routes that they are serving (Euromonitor, 2016:25).

In 2016, over 1600 mainline aircraft were delivered to the global fleet (all manufacturers). Of these deliveries, Boeing delivered over 720 aircraft and Airbus delivered 640 aircraft. Asian Pacific operators received 37% of the total deliveries, followed by North American airlines at 23%, Europe at 25% Latin America at 6%, The Middle East at 7% and Africa trailing at 2% of deliveries received (Flight global, 2017:15). More than 50% of the deliveries were made to mainline operators. The bulk of the 2016 deliveries were narrow-body aircraft at 980 deliveries. The sheer volume of narrow-body aircraft on order has created a significant order backlog, particularly for the Boeing 737 family and the Airbus A320 family, which are the basis of the LCC model. At the end of April 2016, the Airbus A320 backlog stood at 5 493 aircraft (of which roughly 3 864 are the A320neo) and the Boeing 737 backlog at 4 784 aircraft (of which roughly 2 825 are the 737-Max) (Flight Global, 2015:4; Airline Leader, 2016b:69).

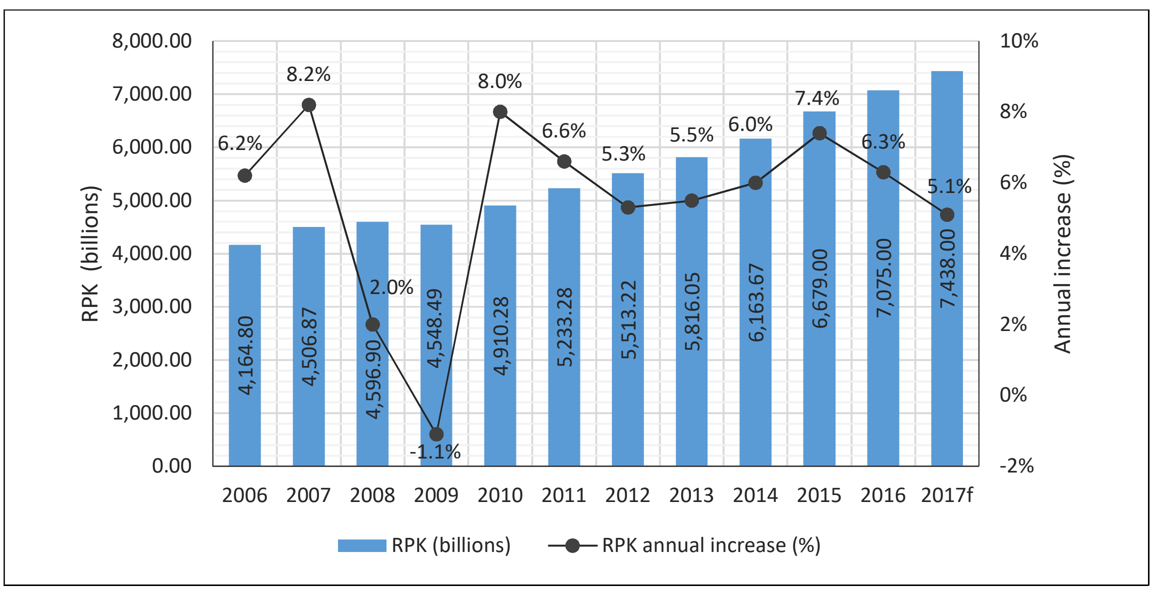
Whilst Boeing and Airbus do differ in terms of the forecast number of aircraft required by 2035, both agree that the consumer's propensity to travel will increase over the next 20 years resulting in the global aircraft fleet more than doubling by 2035 (Boeing, 2016:23; Airbus, 2016d:10). Boeing forecasts that the global passenger fleet will need to rise to 42 230 aircraft by 2035 meaning that, after taking aircraft retirements into account, 38 690 new passenger aircraft will need to be manufactured by 2035 (Boeing, 2016:48). 28 140 of these new aircraft demanded will be single-aisle aircraft. The Asia Pacific is predicted to require 15 130 aircraft, with North America and Europe requiring 8 330 and 7 570 aircraft respectively. Africa is forecast to require only 1 150 new aircraft. The Airbus forecast is more conservative than Boeing's and forecasts that 32 428 new passenger aircraft will be required by 2035 (Airbus, 2016d:118). Airbus see the single-aisle aircraft type as being the most demanded at 23 531 aircraft. The Asia-Pacific region is forecast to need 13 239 new aircraft, with Europe and North America requiring 6 508 and 5 579 aircraft respectively. Africa is forecast to have the lowest demand at only 991 aircraft. At the heart of both forecasts is that it is expected that the commercial air transport market will continue to grow at a strong rate despite the many cyclical and non-cyclical impacts affecting the industry. The Boeing forecast puts RPK growth to 2035 at 4.8% (CAGR) (Boeing, 2016:5) whilst the Airbus forecast expects 4.5% annual RPK growth (CAGR) (Airbus, 2016d:10), which serves as the justification for their positive forecasts.

#### 5.2.3.3 Global passengers and RPK growth

Section 1.2.1.1 gave a few brief introductory points to highlight the size of the air transport industry in terms of passengers. This topic is explored in detail in this section. The air transport industry is a massive industry transporting over 9.8 million passengers per day, with 6.7 trillion kilometres flown per year in 2015 (ATAG, 2016:5). When considering the average growth rate in RPKs for the past 20 years, air travel demand has been recording above-trend growth for the period 2010–2016 (IATA, 2016n:2). The same IATA report shows that emerging markets, especially from Asia, are fast catching up with the advanced economies in terms of passenger growth. Much of the growth is attributed to the rapidly evolving LCC sector (Flight Global, 2016:5). The IATA *2015 annual review* indicates that 3.56 billion passengers were transported by air in 2015 which is a 7.4% increase in RPKs from 2014 and is the largest annual increase since the 2009 global financial crisis (IATA, 2016:11). RPKs were recorded at 6 619.78 billion for 2015. Given the large number of terror-related attacks and low economic growth, this highlights the resilience of the industry. The benefits of a low oil price and a growing middle-class, coupled with increased disposable income, seems to have offset the negatives in recent times (Boeing, 2016:16). Whilst the industry seems to be enjoying an extended period of passenger growth, it has been recognised that the slowing economic cycle will have a cooling effect on the future growth in passenger demand.

From a global perspective, figure 5.4 clearly shows the decline in RPKs experienced as a result of the financial crisis and recession around 2009. It also shows that RPK growth immediately recovered in 2010 and has grown consistently since with only minor variations in the annual rate of growth. Since the bottom of the recession in 2009, RPKs have grown from 4 548.49 billion RPKs to 6 619.78 billion RPKs in 2015 – an increase of 2 071.29 billion. In terms of actual passenger numbers, figures from ICAO show this to be an increase from 2 482 million passengers in 2009 to 3 533 million passengers in 2015, which is an increase of 1 051 million passengers for the six-year period (ICAO, 2016b:2). 2015 saw total passenger numbers reach 3.5 billion passengers and forecasts expect this figure to reach 4 billion passengers by 2018. Refer to figure 2.7 in section 2.4.1 for the graph highlighting the passenger number growth trend for the period 2006-2017f (IATA, 2016f:1).

**Figure 5.4: Global RPK growth for the period 2006–2017f**




**Source:** ICAO (2016b:2), IATA (2016f:1) and IATA (2017:4).

The year 2016 continued to see RPK growth above the 20-year trend line but at a slightly lower rate than in 2015. At the end of the 2016 calendar year, global RPK growth was recorded at 6.3% for the year (IATA, 2017:4). IATA forecasts that the global rate of RPK growth will ease to 5.1% per annum in 2017. The reasoning behind the softer RPK growth forecast is that IATA expect the price stimulus from the lower fuel prices to start to reverse (IATA, 2016L:1). Concerns have emerged regarding the softening of the factors driving RPK growth, despite the fact that the effects of earlier terror-related attacks and political instability have eased (IATA, 2016m:1). A concern that has arisen during the course of 2016 is that of a growing sentiment of protectionism, particularly in the wake of the Brexit vote and the election of Donald Trump as the S president. If protectionist measures increase it will have a negative effect on air travel demand and growth (IATA, 2016n:11). From a longer-term perspective, Airbus forecasts that global RPKs will grow by 4.5% (CAGR) between 2016 and 2035, to reach over 16.0 trillion RPK, with air travel traffic effectively doubling between 2015 and 2030 (Airbus, 2016:2 & 15). Airbus forecasts that the RPK growth rate for emerging and developing economies will be 5.6% (CAGR) between 2016 and 2035, whilst RPK growth in advanced economies will only grow at 3.7% (CAGR) for the same period (Airbus, 2016:7). The Airbus forecast expects 70% of the growth will come from the existing network and 30% from new route development. Boeing's forecast is more optimistic than Airbus's, with their forecast predicting 17.1 trillion RPKs by 2035 at an average annual growth rate of 4.8% over the 20-year period (Boeing, 2016:45).

Table 5.2 highlights the regional distribution of passengers carried and RPKs for 2015. Form this table it is clear that the Asia Pacific has the largest share of the global market followed by Europe and North America. Africa is a very small player at only 2.2% of global RPKs and 2.1% of passengers carried. Global RPK annual growth for 2015 was 7.4% (*see* figure 5.4) but the regions tell a different story. The biggest RPK growth in 2015 was recorded in the Middle East (10.4%) and the Asia Pacific (10.1%). Latin America achieved 7.6% RPK growth in 2015, followed by Europe at 6.0%, North America at 5.3%, and finally Africa at 0.0% (IATA, 2016L:6).

**Table 5.2: ICAO regional distribution of scheduled traffic (2015)**

| | Europe | Africa | Middle East | Asia Pacific | North America | Latin America & Caribbean |
|---|---|---|---|---|---|---|
| RPK (millions) | 1 765 131 | 142 924 | 606 406 | 2 108 450 | 1 629 202 | 349 353 |
| Share of world RPKs (%) | 26.7% | 2.2% | 9.2% | 31.9% | 24.7% | 5.3% |
| Passengers carried (thousands) | 927 757 | 73 979 | 186 705 | 1 205 703 | 878 458 | 260 172 |
| Share of world passengers (%) | 26.3% | 2.1% | 5.3% | 34.1% | 24.9% | 7.4% |

**Source:** ICAO (2016b:5).

The end of the 2016 calendar year saw strong, but mixed, results regarding RPK changes. The Middle East (11.2%) and Asia Pacific (9.1%) are both still showing strong growth rates, whilst North America (3.2%), Europe (4.6%), and Latin America (3.6%) have shown lower levels of RPK growth for the year compared to 2015. Africa recorded a 6.5% RPK growth rate for 2016 (IATA, 2017:4). The Airbus forecast to 2035 for the regions views the Middle East (5.7%) and the Asia Pacific (5.7%) as still being the main drivers of global RPK growth, albeit at rates lower than achieved in 2015 or 2016. European and North American RPK growth is seen to be relatively flat at 3.7% and 2.9% per annum respectively. African RPK growth to 2035 is forecast to be a positive 4.8% per annum (Airbus, 2016:16). Refer to table 1.1 in section 1.2.1.1 for the global long-term RPK growth forecast for the various regions.

#### 5.2.3.4 Global connectivity and air travel route concentration

Key to surviving in the air transport industry is profitable growth, cost control, and connectivity (Sentence, 2015:4). Connectivity, as highlighted in sections 2.3.1 and 5.2.1 of this study, is a core function of an airline and involves identifying routes to be profitably served through an efficient network pattern. Constantly improving connectivity is essential for an airline to be competitive and achieve growth. In terms of global connectivity, the number of routes served in 2015 was 52 964 with 17 370 of these being unique city-pairs (ATAG, 2016:5). IATA forecasts estimate that at the end of 2016 there will be 18 429 unique city-pairs (IATA, 2016L:2).

From an economic region's perspective, the growth of the emerging markets is changing the global route landscape and are forecast to shift the balance of traffic significantly by 2035. In 2015, traffic between advanced economies accounted for 42% of global air traffic. For the same period, traffic between countries in advanced economies and emerging economies accounted for 30% of global traffic, whilst traffic between countries in emerging economies only accounted for 28% of global air traffic (Airbus, 2016d:28). By 2035, traffic between countries in advanced economies is forecast to account for only 28% of world traffic, with traffic between countries in advanced economies and emerging economies accounting for 33% of world traffic. A key opportunity for South Africa, is that in 2035, traffic between countries in emerging economies is forecast to account for 39% of world air traffic (Airbus, 2016d:28).

Table 5.3 highlights the top ten regional flows in terms of passenger traffic (RPKs) for 2010, 2015 and 2035. The growing dominance of China is clear, as is the growth within the rest of Asia, especially in Southeast Asia. The table also clearly highlights the size and importance of domestic air travel within a region with the top three positions being intra-regional travel. IATA data shows that the fastest growing regions for the period 2010 to 2015 were within Europe, domestic China, Europe – North America, within Asia, Europe – Asia, and Asia – North America (IATA, 2016o:5). These figures give a clear indication that the centre of gravity for RPK volumes and growth in the industry is moving eastwards, away from North America and Europe (IATA, 2016n:12–13). Taking the analysis down to the country-pair level, which considers routes between two countries, the USA and European countries still operate on some of the densest country-pairing routes. Routes like Mexico–United States, Spain–United Kingdom, Canada–United States, Korea–China, and United Arab Emirates–India are country–

pairings that are traffic dense in 2015 and are expected to be the top five international pairings in 2035 (IATA, 2016n:18). China–Taiwan, China–Thailand, and China–Japan also feature in the top 10 for 2035, showing the extent to which China is making its presence felt. The absence of Africa represents a concern given the economic benefits that connectivity offers (*see* sections 5.3.1 and 5.3.4 for the discussions on the African connectivity deficit).

**Table 5.3: Top ten regional traffic flows in terms RPKs**

| (ranked on 2015) | RPKs (billions) | | | 2015–2035 growth (%) |
|---|---|---|---|---|
| | 2010 | 2015 | 2035f | |
| North America – North America | 946.3 | 1 077.7 | 1 808.7 | 2.6% |
| Europe – Europe | 640.2 | 796.8 | 1 482.1 | 3.2% |
| China – China | 335.4 | 564.7 | 1 897.4 | 6.2% |
| Europe – North America | 418.6 | 475.0 | 840.2 | 2.9% |
| Europe – Middle East | 143.8 | 242.5 | 690.2 | 5.4% |
| Southeast Asia – Southeast Asia | 113.1 | 194.0 | 848.1 | 7.7% |
| Central America – North America | 112.7 | 170.1 | 478.1 | 5.3% |
| North America – Northeast Asia | 128.4 | 160.5 | 231.1 | 1.8% |
| South America – South America | 115.8 | 159.1 | 509.7 | 6.0% |
| Africa – Europe | 135.5 | 153.2 | 387.5 | 4.7% |

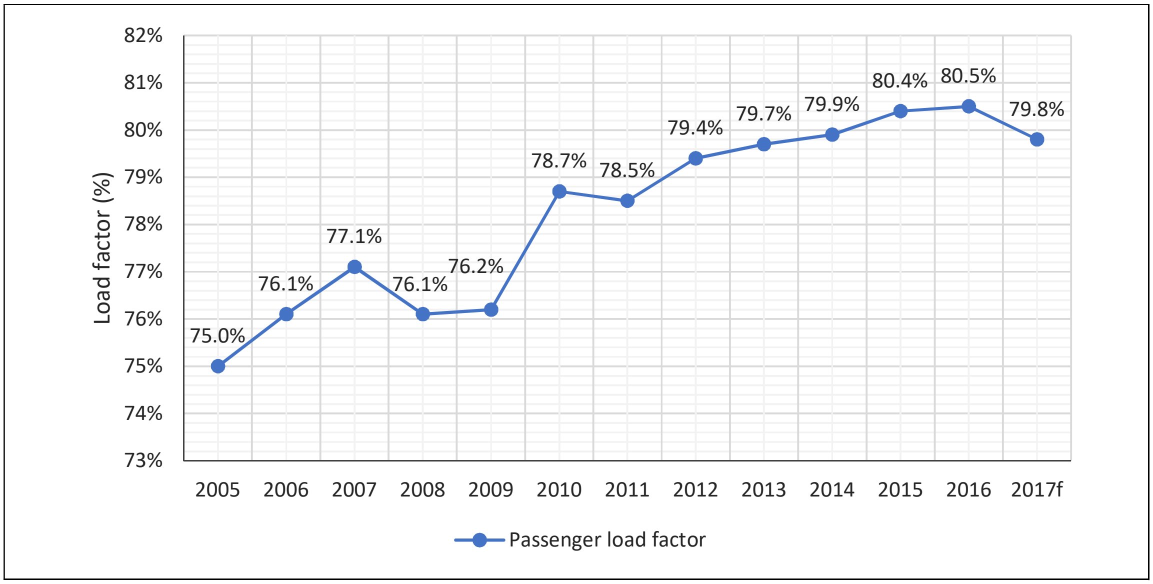
**Source:** Boeing (2016:45).

#### 5.2.3.5 Global passenger load factors

As was defined in the glossary of terms, passenger load factor refers to the Revenue Passenger Kilometres (RPK) expressed as a percentage of Available Seat Kilometres (ASK). It is an important metric because it gives airlines an indication of the proportion of capacity that is consumed. Figure 5.5 shows that global passenger load factors have shown a significant upward trend over the past 10 years, climbing from 75.0% in 2005 to 80.4% in 2015. The financial crisis and recession of 2008–2009 interrupted this growth trend with load factors dropping to 76.1% in 2008. This decline arose because of the sudden decrease in demand during this period and airlines were unable to instantly reduce capacity to match the lower levels of demand. In line with the ASK and RPK spike in 2010 (*see* figures 5.2 and 5.4), load factors also increased notably in 2010, and since then have shown consistent growth to 2015.

In 2015, the global passenger load factor reached a high of 80.4%, which is the highest level ever recorded. This high load factor was achieved based on strong global RPK growth exceeding strong global ASK growth for the year by 0.7% (ICAO, 2016a:1). ICAO further state that the high passenger load factor achieved was aided by efforts by the airlines to optimise operations. In their review of 2015, IATA highlighted that the lower fuel costs in 2015 lowered the industry's break-even load factor value (IATA, 2016:12–13). The body also stated that the break-even load factor was further lowered as a result of changes to the industry structure and the airlines' returns-focused approach to operations. From a regional insight perspective, North America and Europe and North America achieved above-average load factors of 84% and 82% respectively for 2015. Latin America/Caribbean and the Asia Pacific both achieved a load factor of 79% for the same year. The two regions that achieved well below-average load factors for 2015 were the Middle East (76%) and Africa at a low 68% (ICAO, 2016b:5). A review of the top 150 global airlines, divided according to the different business models, shows that mainline airlines achieved a load factor of 80.0% for 2015, whilst the LCCs achieved 85.1% for 2015 (Dunn, 2016:44). In the same analysis, it was shown that leisure carriers and regional carriers achieved load factors of 88.9% and 82.2% respectively for the year 2015.

**Figure 5.5: Global passenger load factor: 2005–2017f**



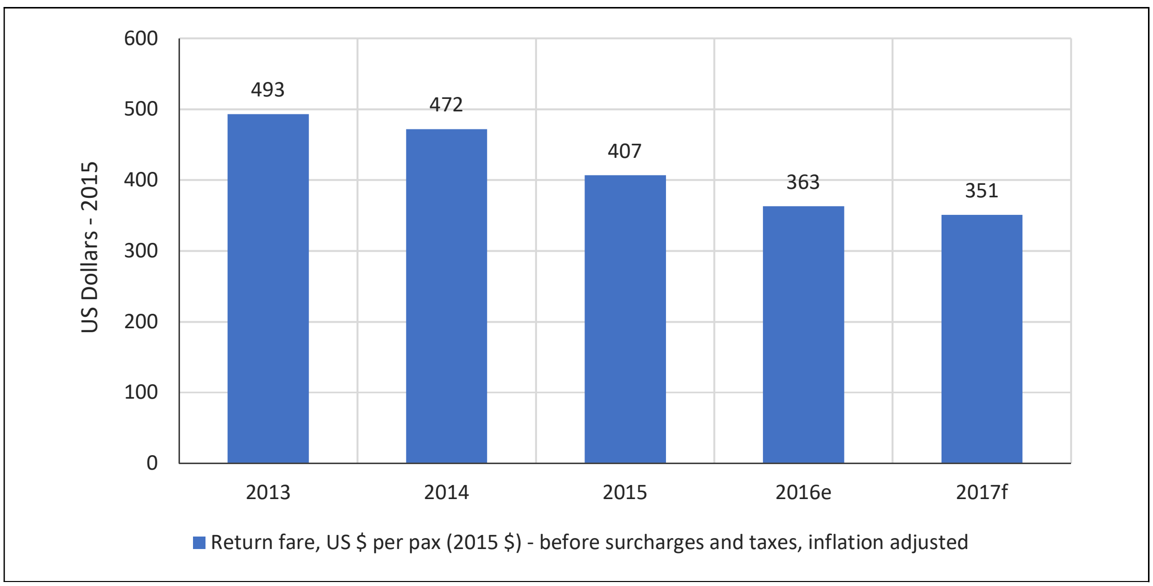

**Source:** ICAO (2016b:4), IATA (2016f:1) and IATA (2017:4).

Passenger load factor was strong for most of 2016, although there were signs indicating a slight easing towards the end of the year. For the end of the 2016 calendar year, a total market passenger load factor of 80.5% was achieved for the year (IATA, 2017:4). The IATA analysis further shows that at the end of the 2016 calendar year the load factor for international passenger markets was at 79.5% and for domestic passenger markets at 82.2%. Reasons given for the expected easing of the 2017 load factors revolve around demand slowing faster than capacity. Costs are also expected to rise slightly for 2017 and this will result in the breakeven load factor rising slightly (IATA, 2016L:3). A deeper review of these load factors shows that there are noticeable differences between the various regions in terms of their load factor performance. The end of the 2016 calendar year load factors show that North America (83.5%) and Europe (82.4%) are still leading the way, with Latin America improving to 80.8%. The Middle East showed a slight decline at a load factor of 74.7%, whilst Africa has achieved a negligible improvement to 68.6% for the year (IATA, 2017:4). The figures for the Middle East and Africa are once again below the global average with both regions recording bigger increases in ASKs over RPKs for the year.

#### 5.2.3.6 Trends in global air travel prices

As identified in section 3.6 of this study, pricing is a perennial tricky issue that airlines have to deal with, and one that is made more complex with the constantly changing conditions in the broader market environment. Whilst the focus in section 3.6 was on the theoretical issues relating to air ticket pricing, this section addresses the trend in air travel fares. On a global scale, figure 5.6 gives a brief overview of the trend of the return fare per passenger from 2013 to 2017f. The fares in the figure are the fares before surcharges and taxes and are inflation adjusted. Quite clearly it is seen that, in real terms, the relative cost of air travel is decreasing. This decline is in part due to the growth in the LCCs around the world. The forecast is that this downward trend in the cost of travel will continue through 2016 into 2017 where the average return fare will be 63% cheaper than 1995 levels (IATA, 2016L:1).

**Figure 5.6: Trend in global air travel prices – return fares**



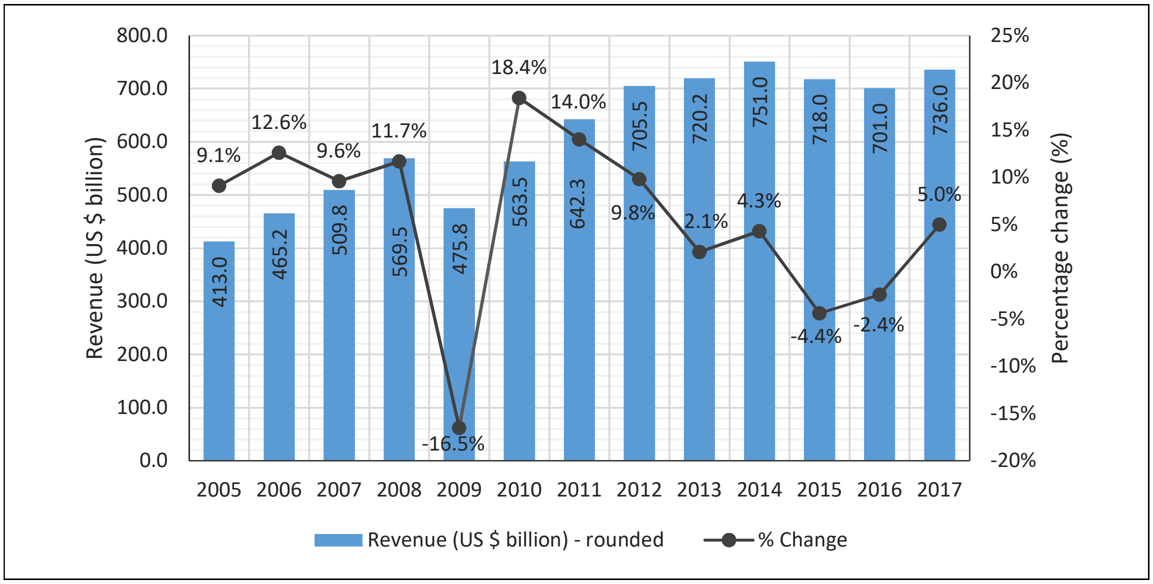

**Source:** IATA (2015d:1), IATA (2016e:1) and IATA (2016L:1).

Whilst the overall inflation adjusted trend shows an overall decline in the real cost of travel, the actual fares paid are gradually increasing year-on-year. Carlson Wagonlit Travel's '*2017 Global Travel Price Outlook'* predicts that airfares will increase slightly (2.5%) in 2017 from a global perspective, but that in some regions prices may even fall below prices experienced in 2016 (Carlson Wagonlit Travel, 2016:7). In the forecast, it is predicted that prices will decrease in the Asia-Pacific (-1.1%) and Latin America & the Caribbean (-1.9%). Moderate increases are forecast for Western Europe (0.5%) and the Middle East and Africa (2.0%). Fare increases above the global increase (2.5%) are forecast for North America (3.7%) and Eastern Europe (4.0%). The relevant influences on pricing were address in section 3.6 of chapter 3.

### 5.2.3.7 Global industry revenue

The topic of revenue and profit was first identified in section 1.2.1.1 and is explored in detail in this section. Although not a guarantee or indicator of profit, revenue is extremely important in the air transport industry, particularly as a means to cover its fixed costs. The current market environment sees ancillary revenues playing an increasingly important role in increasing overall revenues to cover costs and enhance customer value. Figure 5.7 outlines total industry revenues for the period 2005–2017f and indicates the annual growth rate.

**Figure 5.7: Global industry revenue (total) for the period 2005–2017f**




**Source:** ICAO (2016b:12) and IATA (2016f:1).

From figure 5.7, for the period 2005 to 2012 (excluding 2009) there has been a yearly increase in revenues, and at a rate higher than that of RPK increases for the corresponding year (*see* figure 5.4). The year 2009 saw a US $93.7 billion decline in revenues due to the effects of the financial crisis and recession at the time. Comments in the IATA 2010 annual report stated that network airlines in particular were badly affected by the recession due to the significant decline in the number of premium passengers (IATA, 2010c:12). From 2013 onwards, the rate of revenue growth has slowed and for 2014 and 2015 revenue declines were experienced in the industry due to falling yields (Airline Leader, 2016c:20). For this period (2013–2016), revenue growth has been at a level lower than RPK growth. The revenue declines in 2015 and 2016 have been accompanied by reductions in operating costs (ICAO, 2016b:12). Regional revenue figures for 2015 show that revenue generation is generated unequally across the regions. Revenue results show that US $218.3 billion was generated in North America, US $179.2 billion in Europe, and US $200.1 billion in the Asia Pacific. At the other end of the regional revenue spectrum, the Middle East generated US $59.1 billion, Latin America generated US $29.1 billion, and Africa generated a distant US $12.5 billion (Dunn, Rivers, Russell, Yeo, & Taylor, 2016:30–

38). IATA (2016f:1) forecasts that revenue will reach US $701.0 for 2016 and grow by 5.0% to US $736.0 in 2017.

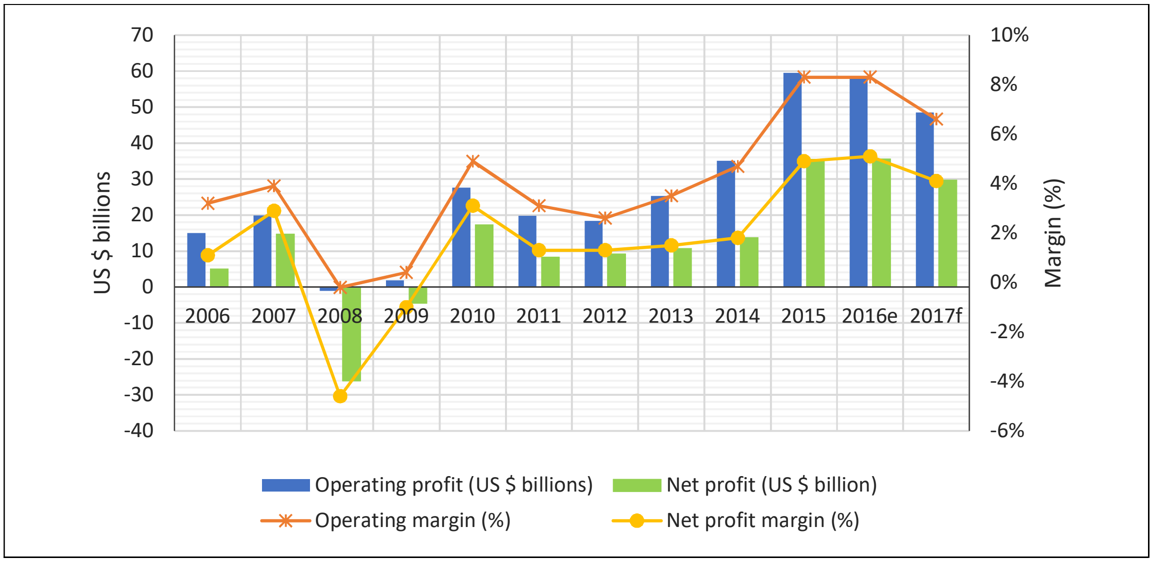
The unbundling of the air transport product over the past decade has had a significant effect on the pricing strategies of airlines and the revenues they generate. Revenue generated from the sale of ancillary products and services is viewed by many airlines as an important tool in improving their margins and ensuring they generate a strong cash flow for their business (Euromonitor, 2016:17). Leading ancillary revenue consultancy, IdeaWorks, project that ancillary revenues will amount to US$ 67.4 billion in 2016, which is a significant increase from US $22.6 billion in 2010 (IdeaWorks, 2016:1). Overall, this represents approximately 9.1% of global revenue for airlines in 2016 compared to only 4.8% in 2010. Ancillary revenues are set to remain popular in the short-term and form part of all major airline business models.

#### 5.2.3.8 Global air transport industry profit

Industry profitability has, "always been characterised by both cyclicality and by thin margins" (Airline Leader, 2016c:15). IATA report that the severe challenges faced by the industry in terms of competitive intensity in its markets, is the underlying cause behind poor industry profitability (IATA, 2016p:10–12). The organisation state that in terms of Porter's five forces model, the air transport industry faces intensive threats from all forces; (i) strong bargaining power of the suppliers, (ii) a constant threat of new entrants, (iii) many product substitutes, (iv) high rivalry within the industry, and (v) a strong influence by both governments and consumers. These combined forces result in over-capacity, long-run fall of yields, and loss of value, which ultimately result in low returns to investors.

Brief introductory comments relating to global industry profit were made in section 1.2.1.1. Building on this, a review of figure 5.8 provides a clear indication of the performance of global airlines in terms of profits over the past 10 years. The year 2007, just before the start of the financial crisis, was at the peak of a boom period for many sectors of the global economy with commodities and resources performing well and stock markets soaring. This was true for the air transport industry as well with a global net profit of US $14,7 billion being realised. Figure 5.8 then shows the devastating impact of the banking crisis and recession with net results tumbling to a US $26,1 billion net loss for 2008 and a US $4,6 billion net loss for 2009 (IATA, 2016f:1). One impact of the recession was that airlines sought to raise cash, which increased debts and ultimately the interest payable, which turned an operating profit into a net loss for 2009 (IATA, 2010c:14). The years 2010 to 2012 saw the industry return to both an operational and net profit, although these profits were impacted upon by rising oil prices and the slower than expected revenue growth (IATA, 2012g:11). Despite the global trend of operational and net profit continuing from 2010 to 2014, the industry was still not creating value for investors because the returns on capital (ROIC) were less than the cost of capital (WACC).

**Figure 5.8: Industry operating and net profit for the period 2006–2017f**




**Source:** IATA (2016f:1) and ICAO (2016b:12).

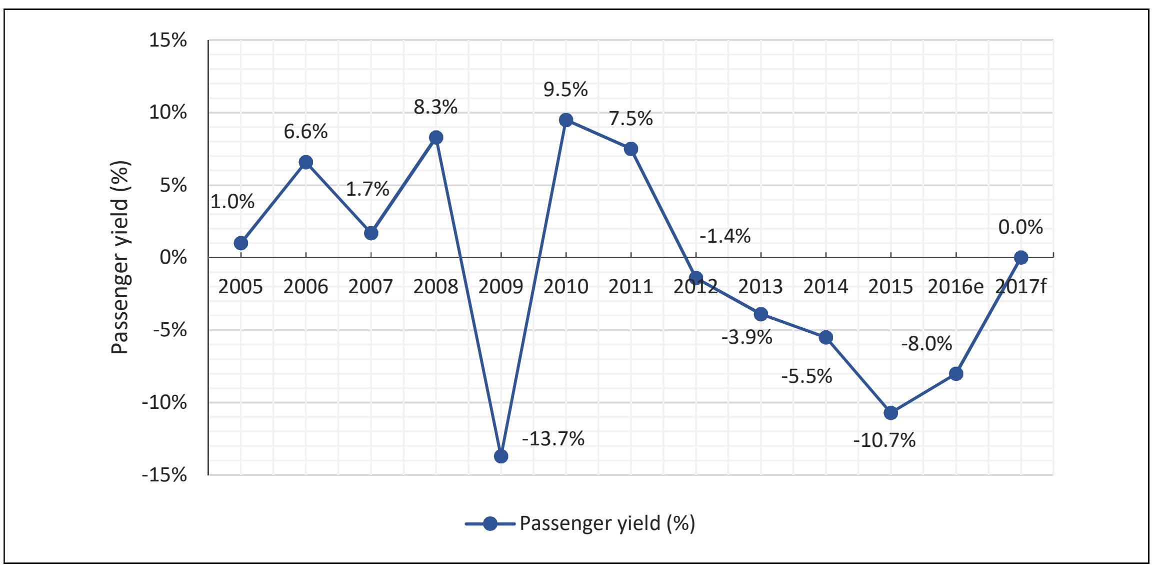
The year 2015 was a particularly good year for the global air transport industry in terms of profit. With reference to figure 5.8, a clear jump in both operating and net industry profit was realised in 2015 (US $59.5 billion and US $35.3 billion respectively). The operating margin was 8.3% (an industry record) and the net profit margin 4.9%, which is a large improvement on the results over the past decade. It is noted that, despite the record profit levels for 2015, the industry still only realised a relatively low US $9.90 net profit per departing passenger (IATA, 2016f:1). This figure is, however, substantially higher than the per passenger net profit for any of the ten previous years. Of particular significance, is that 2015 is the first year in the history of the industry that the Return on Invested Capital (ROIC) exceeded the cost of the capital (WACC) (IATA, 2016:9 & 13). Numerous reasons have been identified for the industry's improved profitability performance. These include the fall in oil prices, better consumer demand, capacity discipline, and improved operating efficiencies (Dunn & Russell, 2016:14). The profit forecast for 2016 was equally positive, with an expected operating profit of US $58.3 billion (8.3% operating margin) and expected net profit of US $35.6 billion (5.1% net margin) across the global industry. A per departing passenger net profit of US $9.40 is estimated for year end. As with 2015, it is expected that industry ROIC will exceed industry WACC in 2016, which is positive news for industry investors (IATA, 2016L:3). The IATA forecast for 2017 shows a slight softening in profits but still at levels much higher than 2014 and earlier. In numerical terms, an operating profit of US $48.5 billion (6.8% operating margin) and net profit of US $29.8 billion is forecast. This forecast reflects that 2017 will be the 3rd year in a row (and in the industry's history) that the industry makes a ROIC (7.9%) that is higher than the WACC (6.9%) (IATA, 2016q). The rising cost of labour is seen as a key future risk.

Whilst the overall global picture looks positive, not all regions and airlines are thriving. Figures for 2015 show that North America realised the largest proportion of profits within the industry (IATA, 2016f:2). In fact, the US $21.5 billion net profit realised in 2015 by North America is more than Europe (US $7.5 billion), Asia Pacific (US $7.8 billion), the Middle East (US $1.1 billion), Latin America (US $-1.7 billion), and Africa (US $-0.9 billion) combined. The projected regional figures for 2016 reflect operating and net profits roughly the same (in value and proportion) as 2015, as do the forecast figures for 2017. Some of the key factors affecting profits in the weaker regions are intense competition, geo-political concerns, increasing airport charges, and slow economic growth (IATA, 2016f:2).

#### 5.2.3.9 Global passenger yield

Passenger yield, as defined in section 3.6.4 of this study, is the average revenue collected per passenger-kilometre. Passenger yield is calculated by dividing the total passenger revenue on a flight by the passenger-kilometres generated by that flight. It is a measure of the weighted average fare paid and is expressed in cents per kilometre. A review of the past 10 years shows that the yearly growth rate in terms of passenger yield has been variable with a high of 9,5% in 2010 and a low in 2009 of -13.7%. The overall pattern is shown in figure 5.9. There has been a gradual decline in the rate of growth in passenger yields, indicating that the average airfare across the globe, whilst still increasing, is doing so at a progressively slower rate since 2010 (*see* section 5.2.3.6 which addressed the trend in global airfares. Airline analyst Chris Tarry, stated that "the key risks to airline profits in 2016 and beyond are continuing pressure on yield resulting from too much capacity entering the market against a weakening economic environment" (Dunn & Russell, 2016:15). 2016 began with huge pressure on yields but this eased up towards the end of the year, with the final passenger yield estimated to be -8.0%. IATA forecasts that yields will stabilise in 2017 due to slightly improved economic growth and the continuing effect of industry structural changes (IATA, 2016q).

**Figure 5.9: Passenger yield growth rate per annum (%) 2005–2017f**




**Source:** IATA (2016f:1).

#### 5.2.3.10 The global low-cost carrier sector in context

The concept of a low-cost carrier was defined in section 1.7.3, with a number of theoretical issues regarding the model addressed in section 1.7.4. The bulk of the theoretical discussion relating to the LCC model is given in section 6.3.5 of the study. In this section, selected trends and statistics relating to the LCC sector and its growing presence are quantified in the context of the global air transport industry. The growth of the LCC sector is seen as being a key contributor to the growth in the air transport industry over the past 15 years. Additionally, the LCC sector has been responsible for reducing the market share of FSCs, increasing aircraft utilisation, and higher global load factors. The impact of the model has been so marked, that an article in the ICAO journal in 2010 commented that the effects of the financial crisis and recession in 2008/2009 on the global air transport industry could have been a lot worse had it not been for the strong performance of the LCCs during this period (Teyssier, 2010:7).

As stated in section 5.2.3.1, LCCs have grown at a compounded annual growth rate of 7.1% compared to the global market growth rate of 3.5% over the past 10 years (Lazaridis, 2016). To put the size of the LCC sector into context, table 5.4 identifies the 2015 performance of the top 150 global airlines across the different business models. Whilst it is clear that the FSCs still dominate in terms of passenger numbers globally, the LCCs are growing at a faster rate than the FSCs. In terms of RPKs, LCCs in the top 150 airlines grew by 11.4% during 2015 to reach a total of 1 127 189 million RPKs (Flight Global, 2016:5). This represents 862 million passengers for 2015. In contrast to this, FSCs only showed a RPK growth rate of 5.9% for the year. Similarly, LCCs improved their load factors to a high of 85.1% compared to the FSCs of 80.0%. In comparison to some of the massive FSCs, LCCs are relatively small, although from the global top 150 airline rankings it is seen that many of the LCCs/hybrids are rapidly growing in terms of size and passengers. The standout LCC players, as identified in section 2.4.1.1 of chapter 2, are Southwest Airlines, Ryanair, and Easyjet. Southwest Airlines are now ranked 5$^{th}$ in terms of global RPKs, with Ryanair ranked 11$^{th}$, and Easyjet 21$^{st}$. Other notable LCCs/hybrids include Air Berlin (33$^{rd}$), Jetblue Airways (25$^{th}$), GOL Transport Aereos (39$^{th}$), and Westjet Airlines (47$^{th}$). In terms of actual passenger numbers, Southwest rank 3$^{rd}$, Ryanair rank 5$^{th}$, and Easyjet rank 9$^{th}$ (Flight Airline business, 2016:46).

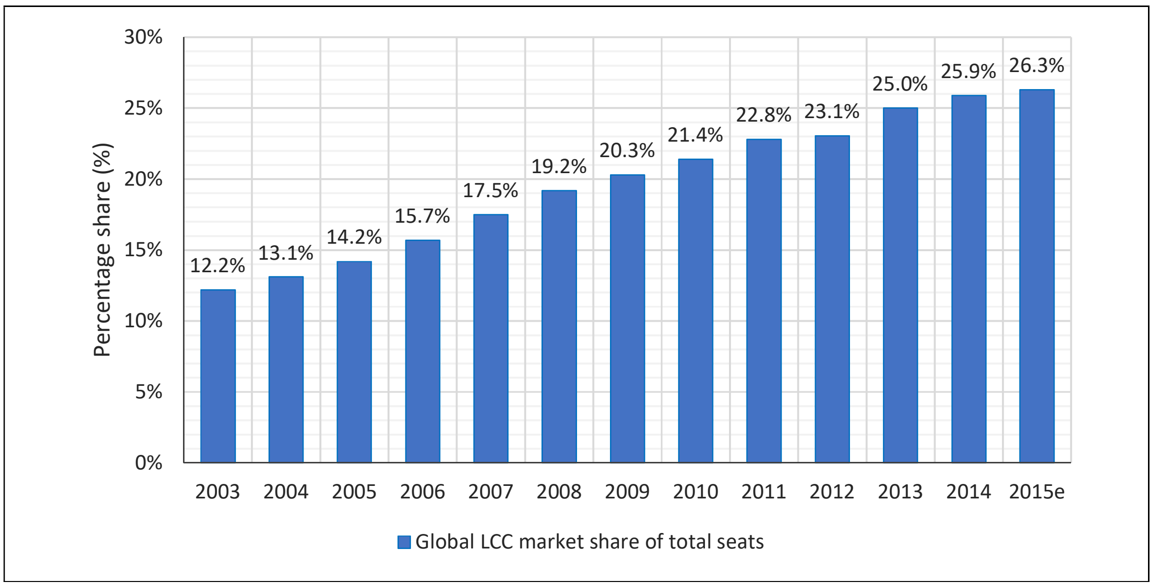
**Table 5.4: Performance of top 150 airlines per model (2015)**

| | Pax traffic (RPK) | | Load factors | | Passenger numbers | |
|---|---|---|---|---|---|---|
| **Airline type** | **Million** | **Change** | **Percent** | **Change** | **Million** | **Change** |
| Leisure | 219 032 | 0.4% | 88.9% | 0.4% | 78 | 0.1% |
| Low-cost | 1 127 189 | 11.4% | 85.1% | 1.4% | 862 | 10.23% |
| Mainline (FSC) | 4 852 269 | 5.9% | 80.0% | 0.3% | 2 169 | 5.4% |
| Regional | 104 259 | 14.5% | 82.2% | 1.3% | 107 | 6.5% |
| **Total** | 6 302 729 | 6.7% | 81.2% | 0.5% | 3 215 | 6.5% |

**Source:** Dunn (2016:44).

A closer look at the LCC's share of global available seats provides more insight into the size and strong growth being experienced in the sector. Figure 5.10 identifies the proportion of the total seat capacity on offer by the LCCs to the global market. The growth in the number of seats on offer by the LCC sector in the past 14 years has seen the sector more than double its share of the market, rising from a mere 12.2% in 2003 to 26,3% at the end of 2015. It can also be observed that during the 2008/2009 financial turmoil, the LCC sector had a growth spurt in terms of share of global seats, rising from 17.5% market share in 2007 to 19.2% in 2008, and 20.3% in 2009. Overall seat capacity in the industry declined by 39 417 055 seats but the number of seats on offer by LCCs actually increased by 17 673 097 seats, highlighting that the LCCs fared better during the recession and were actually able to add capacity during this period (Centre for Aviation, 2012b). LCCs benefited from passenger migration from the perceived more expensive FSCs to the cheaper LCCs.

**Figure 5.10: LCC capacity of global industry in terms of share of total seats**



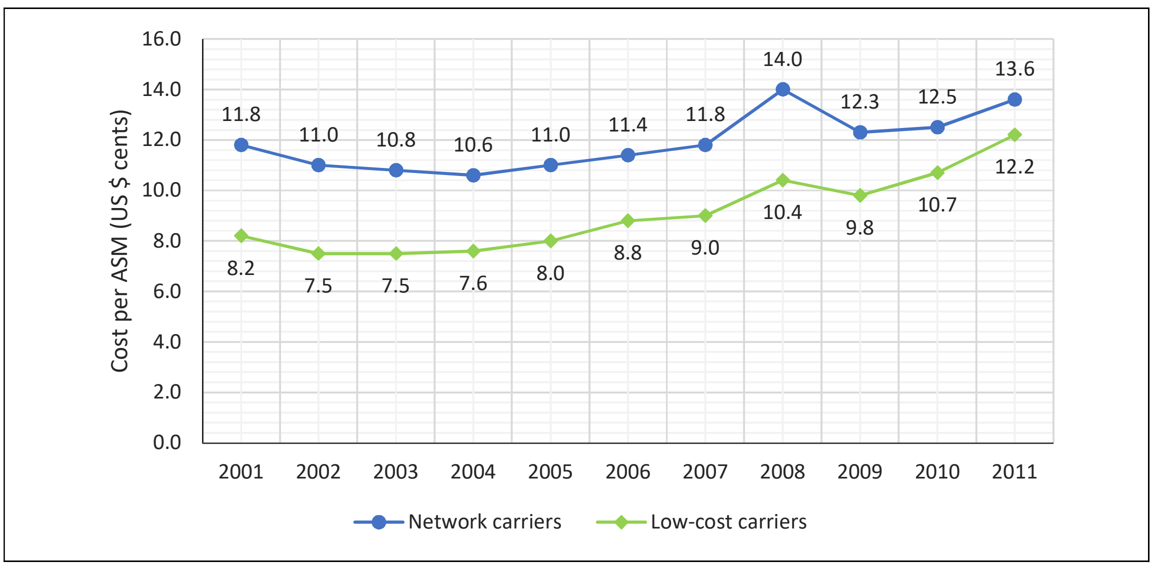

**Source:** Centre for Aviation (2015b).

The figures in figure 5.10 provide a picture of the global growth of the LCC sector in terms of seat availability. When viewing the LCC sector across the different regions, it is clear that it is not an equal distribution of penetration and growth. In terms of the global number of LCC passengers in 2015, 37.7% were in Europe, 28.5% in Asia Pacific, 23.2% in North America, 8.1% in South America, 2.0% in the Middle East, and 0.5% in Africa (Flight Airline Business, 2016a:25). When considering the specific regions and the size of the LCC sector within the specific region, a slightly different picture emerges. Europe has the largest LCC sector, with the LCC model accounting for 41% of the ASKs in the region. Latin American LCCs offer 32% of the ASKs in the region, whilst LCCs in North America account for 31% of regional ASKs. LCCs in the Middle East offer 23% of the regional ASKs. The Asia Pacific region is interesting because even though it is such a large market, LCCs still only account for 20% of the ASKs in the region. Within the Asia Pacific region however, the Southeast Asia sub-region has a large LCC sector accounting for about 54% of the seats on offer. Finally, Africa has the lowest LCC penetration, with LCCs only offering 4% of the continent's ASKs (Airbus, 2016d:56).

In terms of the global in-service fleet, figures on 3 May 2016 indicate that 57.4% are in service with FSCs, 21.7% in service with LCCs, and 20.9% in service with regional carriers (Airline Leader, 2016b:70). Figures in the July 2016 issue of *Low Cost and Regional* report that at the time there were 111 LCCs in operation out of a total of 2 178 operators of all models in the global fleet. (Low Cost and Regional, 2016:54–55). In total, LCCs operate 4 354 aircraft, which is 15% of the global fleet. From a regional perspective, North America has the largest percentage of the global LCC fleet (33.5%), followed by the Asia Pacific (28.0%), Europe and CIS (23.7%), Latin America (10.5%), the Middle East (3.0%), and Africa (1.3%).

As the name 'low-cost model' suggests, one of the main differentials between LCCs and FSCs is the relatively lower costs of the LCCs. Towards the end of 2012, an article by Aso and Spafford (2012:42), showed that the cost gap between North American LCCs and FSCs has narrowed over the past decade. This closing gap is clearly illustrated in figure 5.11, which looks at the years 2001–2011.

**Figure 5.11: Closing cost gap between FSCs and LCCs – US market 2001–2011**




**Source:** Aso & Spafford (2012:42).

From figure 5.11, it is seen that whilst the cost per ASM for the years 2001–2004 changed, the cost gap remained constant. The years 2005–2007 showed a closing of the gap coupled with an overall rise in costs per ASM for both models. 2008 highlighted the nature of travel demand and market dynamics in periods of crisis; that is, a move to LCCs. Since 2008, the cost per ASM has shown a consistent increase on a yearly basis, with the gap noticeably narrowing between the two models. Calculations show that in 2001 the LCCs enjoyed a 44% cost per ASM advantage over the LCC model, but in 2011 this stood at only 11.5%. Much of this cost gap narrowing is attributed to FSCs being forced to restructure and reduce costs to avoid bankruptcy and liquidation (Aso and Spafford, 2012:44). A more recent analysis of the differences between LCC and FSC costs per ASK have shown that for a given trip length still have an advantage over the FSCs (Airline Leader, 2016:62). Refer to figure 3.12 in section 3.5.1 where a 2014 snapshot of the cost (US cents) per ASK difference between LCCs and FSCs was highlighted.

With the growth of the middle classes (*see* section 4.5.1 and 4.5.2), especially from the emerging and developing economies, the LCCs are in a good position to benefit from this growing market and the increasing level of consumers with higher level of disposable income. The LCCs are adapting to this changing market environment, with increasing attention being given to customer service and operating from primary airports so as to be more accessible (Embraer, 2016:19).

## 5.3 THE CURRENT SITUATION IN THE AFRICAN CONTEXT

The picture outlined in section 5.2.3 showed that the global air transport industry is currently in a strong position, except for the African continent which currently lags behind in terms of growth and is the only continent experiencing annual losses. Whilst brief observations were given on the African situation in section 5.2.3, the focus in this section will be on quantifying key African figures and addressing other issues relevant to the African air transport industry in more depth.

Sections 4.2.1 and 4.2.2 of this study clearly indicate that Africa, after a few years of above-average GDP growth, has slowed down and is experiencing above-average inflation. Despite this, it was shown in section 4.5.2 that the continent's middle-class is growing and urbanising at a fast rate (figure 4.22) resulting in a population that is in a better position to engage in air travel. The population of Africa is expected to increase by 1.3 billion people between 2015 and 2050 (African Economic Outlook, 2016:388). This all ties in with the emergence of so-called 'aviation mega-cities[1]'. In 2015, there were 55 aviation mega-cites with only one of them being on the African continent – Johannesburg. By 2035 it is projected that this figure will increase to 93 mega-cities with eight being on the African continent (Airbus, 2016:20 & 24). Whilst this is an improvement and reflects the impact of the GDP growth predicted over the period; Europe, Asia, and North America will still dominate in terms of the number of aviation mega-cites.

A big problem facing the continent is the imbalance that exists in terms of intra-African trade and international trade. Intra-African trade currently only comprises 16% of the continent's total trade (African Economic Outlook, 2016:80). This low level of intra-continental trade is one of the main reasons behind the lack of a significant air transport network between countries on the continent. With the prospect of growth (economic and demographic) in many of the African economies, the potential

[1] 'Aviation mega-cities' are cities that handle more than 10 000 daily international long-haul passengers.

for increased intra-Africa trade is high. To meet the rising demand for intra-African trade, the air transport industry on the continent needs to undergo rapid development. A long-recognised barrier to developing the African air transport industry is the presence of restrictive air service agreements and bilateral agreements between African countries, which restrict the air routes available on the continent for airlines to service (WEF, 2013:85). Overcoming this barrier requires that the African air transport market be liberalised and the decisions in the Yamoussoukro Decision implemented (*see* to section 5.3.1 for the detailed explanation of this Decision).

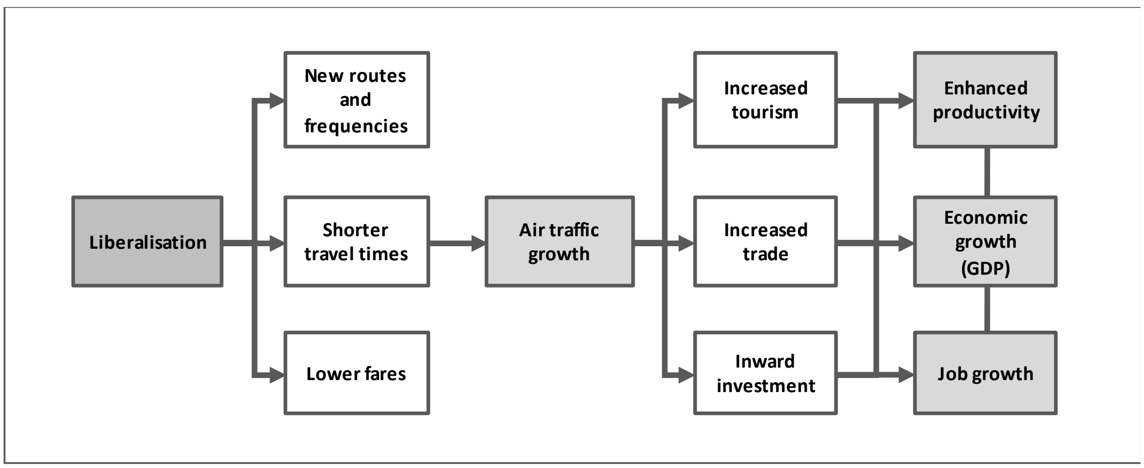
Sections 4.4.1 and 4.4.2 highlighted that whilst tourism shows an overall growth trend, it is currently experiencing a short-term stagnation due to geopolitical concerns and Ebola outbreaks (2014), although 2016 has shown an improvement. The importance of travel and tourism to Africa was highlighted in table 4.11. Despite concerns, there is an overall increasing demand for air travel to the continent, albeit from a low base when compared to other continents and even cities. The economic benefits to be gained from a strong air transport industry are significant. For 2014, the Air Transport Action Group (ATAG) identified that the air transport industry generated approximately 381 000 direct jobs (ATAG, 2016:40). Taking the direct, indirect, and induced jobs into account, the air transport industry supported one million jobs on the continent in 2014. The catalytic effect of the industry is even greater, with the industry supporting a further 5.8 million jobs in the travel and tourism industry, for a total job impact of 6.8 million jobs. The impact of the air transport industry on GDP amounted to a US $26.5 billion contribution to the African economy, with the catalytic impacts resulting in a further US $46 billion contribution to African GDP, for a total of US $72.5 billion (ATAG, 2016:40). An Oxford Economics analysis suggests that the African air transport industry will grow at 5.4% per annum for the next 20 years, resulting in increased benefits (ATAG, 2016:41).

### 5.3.1 The *Yamoussoukro Decision*

Connectivity, from a global perspective, was highlighted in sections 5.2.1 and 5.2.3.4 as being important for not only airline growth but also economic growth within a country. It is identified as being crucial to increasing tourism and enhancing trade between countries. This is particularly important in the African context given that the continent lags behind other economic regions, despite the potential that exists. Poorly developed intra-African trade and intra-African connectivity is placing great restrictions on future growth (Ascend, 2016:19). The Yamoussoukro Decision was taken in an attempt to liberalise African air services and thereby promote freedom of connectivity. Refer to section 5.3.4 for the discussion on African connectivity and the current connectivity deficit on the continent.

A significant amount of development in the African air transport industry occurred in the 1960s with many national carriers being set-up in these countries and focussed on developing international routes between themselves and European countries with the result that domestic routes and intra-African routes were not given the attention required in order to develop a competitive industry. International air services between countries were traditionally facilitated by bilateral agreements between two countries, which covered items like traffic rights, allowable routes, capacity, and the designation of the operator to operate the service (IATA, 2014c:4–5). These bilateral agreements were very restrictive and created a bureaucratic and protective environment, which created a very expensive air sector. As the USA and European markets moved towards liberalising their air transport markets (*see* section 5.2.1), it was recognised by African states that change was needed if their airlines were to remain competitive. As highlighted in figure 5.12, the benefits to be gained from liberalised air markets include beneficial industry structure changes, increased routes and connectivity, increased route competition, increased activity in the aviation sector, increased tourism visits, and overall improvements in trade, investment and productivity (IATA, 2014:10–13). It is estimated that liberalisation of the African skies could add 155 000 total jobs and US $1.3 billion to the continent's GDP (Airbus, 2016d:91).

**Figure 5.12: Benefits of air transport liberalisation**




**Source:** IATA (2014c:26).

In recognition that the existing protectionist bilateral agreements were not promoting growth and negatively affected industry safety, civil aviation ministers from 40 African states met in Yamoussoukro in 1988 to develop a new African air transport policy. This meeting resulted in the 'Yamoussoukro Declaration', which focussed on African airline cooperation and integration (PPIAF, [s.a.]:125). The focus of the declaration was to integrate African airlines over an eight-year period with the aim of (i) maximising capacity usage between the carriers through the exchange of technical and capacity information, designating airport gateways, encouraging greater cooperation between the airlines themselves, with the ultimate goal of merging the existing struggling national carriers into bigger competitive airlines to serve the intra-African markets, (ii) fostering joint operations on the international routes and ensuring flexibility in the granting of air traffic rights to African countries, including fifth freedom rights, (iii) establishing joint operations on aspects like reservations systems, maintenance, parts procurement, training, and collaborative marketing activities and (iv) creating an environment that facilitates the financing of the air transport sector (Schlumberger, 2010:9–10).

The complexity of the economic and political circumstances that prevail on the continent, coupled with the complexities of the air transport industry, meant that the 8-year period set for the achievement of the Yamoussoukro Declaration was unrealistic with very few of the objectives being achieved. In November of 1999, the civil aviation ministers met once again in Yamoussoukro to assess the level of implementation of the 'Yamoussoukro Declaration' and the progress towards cooperation and liberalisation. In an effort to speed up the implementation of the Yamoussoukro Declaration, the 'Yamoussoukro Decision' was ratified in 2000 and established a new framework for air traffic liberalisation in Africa with the focus being on the development of a competitive air transport sector (PPIAF, [s.a.]:126). In developing the 'Yamoussoukro Decision', attention was paid to the need to harmonise air transport policies in order to remove the barriers to greater air transport cooperation on the continent as a whole. In summary, the key objectives and articles identified in the revised 'Yamoussoukro Decision' were (i) the complete liberalisation of scheduled and non-scheduled intra-African air transport services, (ii) the right of eligible air services to exercise first, second, third, fourth, and fifth freedom of the air rights, (iii) fair competition in a non-discriminatory manner, (iv) the right of each state party to designate and authorise an airline to operate intra-Africa air services, and (v) adherence to international safety, security, and environmental standards and guidelines (AFCAC, 1999: 4–10; Schlumberger & Weisskopf, 2014:139; IATA, 2014c:33).

It is widely recognised that the implementation of the provisions of the 'Yamoussoukro Declaration' and the 'Yamoussoukro Decision' is progressing extremely slowly. Statements made at the beginning of 2015 seemed to commit to implementation by January 2017, however, even 2025 is currently seen as being unlikely (Airline Leader, 2016d:58). It was recorded at the AFRAA annual general assembly that, by the end of 2016, the number of African countries that have given their solemn commitment to the "immediate and unconditional" implementation of the Yamoussoukro Decision (YD) had risen to 15, up from 11 in 2015 (AFRAA, 2016:18). It is noted that many air markets between African countries and other continents have been liberalised, but, within the continent, domestic and intra-African routes remain strictly controlled by bilateral agreements that are impeding the prospects of growth in trade and connectivity (IATA, 2014c:1). Some progress has been made. South Africa, Kenya, Morocco, Namibia, Zambia, and Ethiopia are a few examples in this regard. Concern has been expressed over the manner in which some of the regions are 'opening' up their markets. Instead of following the YD guideline of providing unrestricted access to their markets, they are engaging in 'bilateral liberalisation'. In effect, formerly strict bilateral air service agreements are being replaced with more liberal agreements that allow for added capacity and frequencies between the two countries (Schlumberger & Weisskopf, 2014:140). This is in contradiction to the principles of the YD, because the very nature of any bilateral agreement means that the agreement is between two parties and thereby excludes others.

An overriding reason for the slow implementation of the YD seems to be that the 44 countries that initially signed have differing levels of economic development, differing political ideals, and differing national priorities. The continent is, in essence, being hindered in its growth by protectionist thoughts and the over-reliance on bilateral air service agreements. In summary, some of the key reasons why the implementation of the Yamoussoukro Decision is proceeding at a slow rate include (Kuuchi, 2012:4; IATA, 2014c:34; OAG Aviation, 2016:6; Clark, 2016; World Economic Forum, 2017:18):

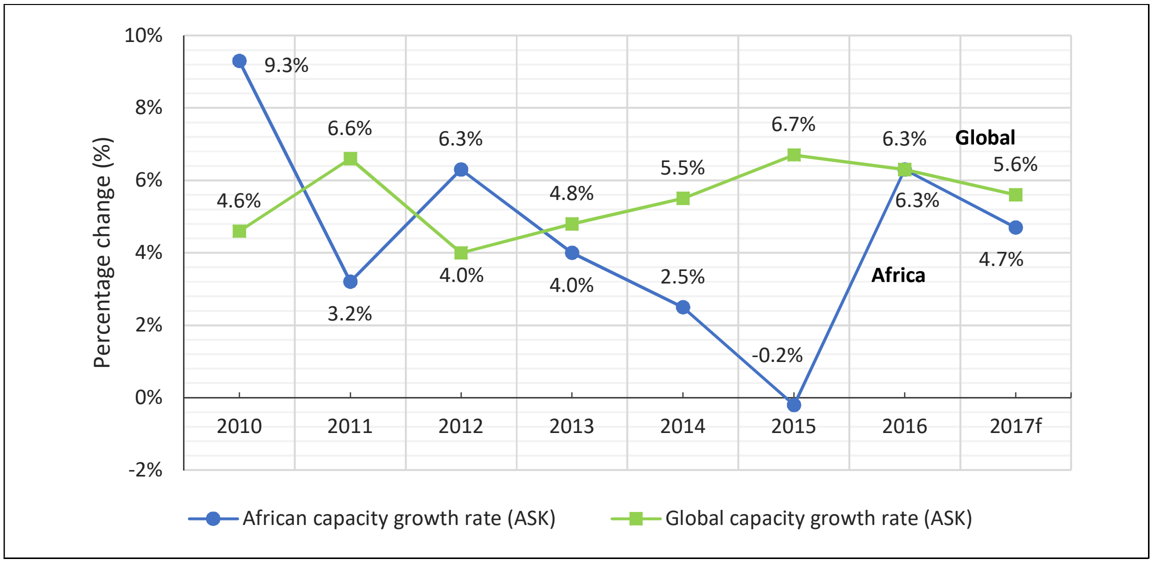
- The lack of an implementation framework and body to enforce implementation.
- The lack of political will and protectionist policies that hinder liberalisation.
- A fear of market dominance by state supported national carriers entering smaller markets.
- Discriminatory practices on the part of the more developed states regarding the safety records and procedures of airlines from less developed states.
- Paranoia by some states over the hidden influence of foreign airlines and their control over some African airlines that they will manipulate to their own advantage.
- Non-physical barriers that exist between the various states regarding travel (visa requirements, work permit requirements, high passenger taxes, and exchange controls).

In order to take advantage of the potential benefits that are to be gained from increased connectivity and intra-African trade, the continent needs to focus on liberalising the air transport system so that the continent as a whole is competitive instead of 54 countries competing against each other. This is particularly important from a South African perspective if the domestic airlines are to seek growth beyond the country's border to neighbouring states.

### 5.3.2 African capacity

Section 5.2.3.1 quantified global capacity. The discussion in this section narrows down to focus on quantifying African available seat capacity. Commercial air transport capacity on the Africa continent it is significantly underdeveloped compared to that on offer in Europe, Asia or North America. Comments relating to global capacity towards the end section 5.2.3.1 clearly put Africa's global capacity share into context. Figure 5.13 compares Africa with the global ASK yearly growth rate. Except for 2010 and 2012, African capacity growth has been at a level lower than that of the global figure. African capacity growth is from a lower base than most continents. As shown in table 5.1 of section 5.3.2.1, 2016 saw an improved performance for the continent in terms of capacity growth, with ASK growth being recorded at 6.3% for the year (IATA, 2017:4). The African international passenger market ASK growth rate at the end 2016 was 6.9%, which indicates that domestic ASK growth was lower than international ASK growth. The continent's ASK growth slowed down in the latter part of 2016 compared to the earlier part, which saw ASK increases of up to 9.5% (April) and 9.3% (May).

**Figure 5.13: African versus global capacity yearly growth (ASK%)**




**Source**: IATA (2016f:2) and IATA (2017:4).

To provide some context for the scale of capacity available on the continent, intra-regional capacity for Africa in December of 2016 was 7 250 447 seats flying 71 362 sectors, which equates to a total of 8 111 million ASKs (Capstats, 2016a:3). For the same period, Asian intra-regional capacity was 141 150 020 seats flying 865 774 sectors, equating to 176 464 million ASKs. At an inter-continental level, the Africa-Europe route for December 2016 showed 5 075 339 total seats with 26 655 sectors, equating to a total of 18 033 million ASKs. This equates to roughly 1.2 million non-stop return seats per week, of which less than 40% of these seats are on African airlines (Airline Leader, 2016d:55). Similarly, African airlines account for fractionally less than 40% of the non-stop seat capacity on the Africa-Middle East route and only 30% on the Africa-North America non-stop route. On the Africa-Asia route, African carriers account for 81% of the available seats mainly due to their ability to offer African connections.

Looking at African air capacity from an airline and its country of origin perspective it is clear that in terms of seat capacity, the South Africa carriers offer a lot of the continent's capacity, particularly in terms of domestic capacity. Overall, Ethiopian Airlines offers the most weekly[2] capacity on the continent at 728.6 million ASKs, followed by SAA at 605.5 million weekly ASKs, Egypt Air at 501.3 million weekly ASKs, and Royal Air Maroc at 425.3 million weekly ASKs (Airline Leader, 2016e:41). From an international perspective, the North African carriers offer the most number of weekly seats. From a domestic seat capacity perspective, the South African carriers absolutely dominate, with over 373 000 weekly seats. Arik air in Nigeria, the highest non-South African carrier, offers 59 406 weekly seats.

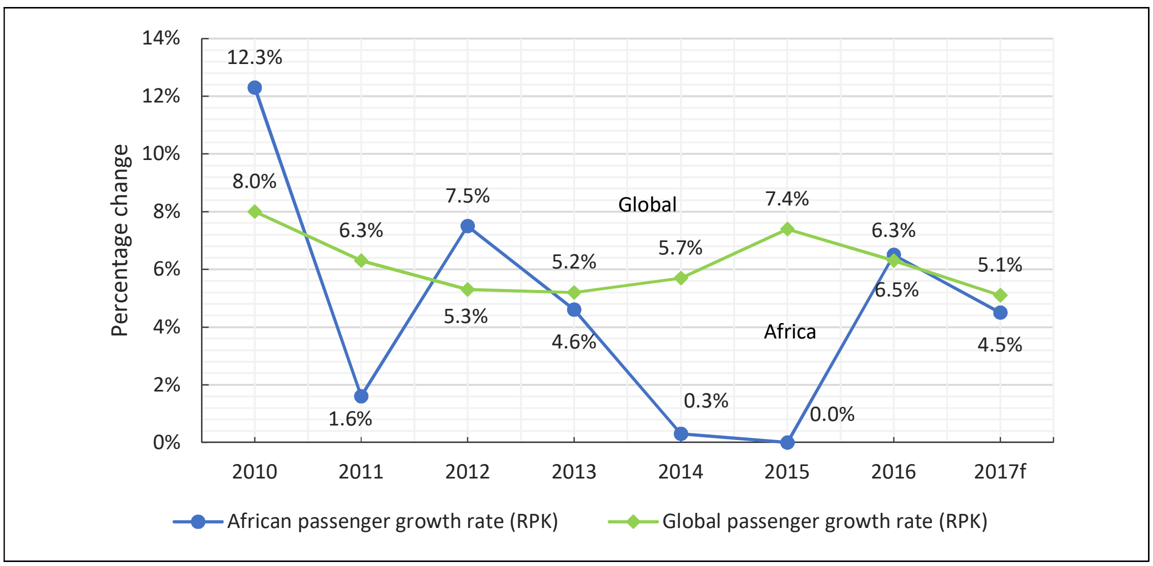
[2] Based on weekly capacity for the week starting 25 April 2016.

African airlines are viewed as "fragmented and inefficient" (Airline Leader, 2016d:54), which has resulted in intra-African capacity being low. Making matters worse, the system in many of the regions is sporadic, with insufficient frequencies, and trips involving multiple stopovers. This has resulted in many destinations and routes being under-served or not at all, whilst other routes and destinations have an excess capacity as a result the use of inappropriately sized aircraft. Suggestions by Embraer, in support of comments made by AFRAA, imply that more appropriately sized aircraft (capacity) should be used to match the given demand on the various routes and thereby increase load factors and yields (Embraer, 2016:28).

### 5.3.3 African RPKs, load factors, and profitability

The focus in this section shifts from the global perspective (*see* sections 5.2.3.3, 5.2.3.5, and 5.2.3.8) to the quantification of African RPKs, load factors and profitability. Section 5.2.3.3 identified the RPK growth in the global air transport market and highlighted that Africa is a small player on the global stage accounting for only 2.2% of global RPKs in 2015. RPK annual growth rates for Africa for the past five years have been mixed with a declining growth rate since 2012. Figure 5.14 provides a simple representation of Africa's RPK growth rates compared to the global RPK growth rate since 2010.

**Figure 5.14: Passenger traffic growth rate (RPK) – Africa vs global (2010–2017f)**




**Source:** IATA (2016f:2) and IATA (2017a:1).

From figure 5.14, the growth of 12.3% in 2010 occurred as the global economy was emerging from the recession. The decline in growth rate in 2011 was attributed to the rising problems in the Eurozone and the political instability in North Africa. The year 2015 showed zero growth in terms of RPKs for the continent, reaffirming its status as the weakest aviation market. RPKs for Africa totalled 142 924 million in 2015, with just under 74 million passengers being carried. Reasons for the poor 2015 performance include slowing economic growth, low commodity prices, geo-political turmoil, residual effect of the 2014/5 Ebola outbreak, and terrorism-related attacks in North Africa (Veitch, 2016:31; Flight Global, 2016a:4–5; IATA, 2016L:6). 2016 saw a much-improved performance, with RPK growth of 6.5% being achieved for the calendar year (IATA, 2017:4). African International passenger market RPKs grew by 7.4% for the year. RPK traffic growth for the continent is forecast to grow by 5.4% (CAGR) between 2015 and 2035 (Airbus, 2016d:97).

Figures released by AFRAA reflect that the distribution of passengers for 2015 shows that 47.6% were intercontinental passengers, 25.6% were intra-Africa passengers, and 26.8%, and 26.8% were domestic passengers (AFRAA, 2017:10). Since 2010, intra- and inter-regional traffic has surged on the African continent (albeit it from a low base), whilst domestic growth has remained subdued with low levels of growth recorded. Intra- regional and domestic traffic is forecast to grow by 6.0% (CAGR) between 2015 and 2035, with inter-regional traffic forecast to grow by 5.3% (CAGR) over the same period (Airbus, 2016d:96). Table 5.5 highlights the different RPK regional flows between Africa and the different regions for the period 2008 to 2015 and the forecast for 2035. The importance of the European routes is clear, as is the undeveloped nature of the intra-regional market, and the unrealised potential to Asia. Percentages given in the Boeing forecast show that in 2015 intra-African RPKs accounted for 19% of the total traffic to, from, and within Africa and this is forecast to rise to 22% by 2035 (Boeing, 2016:50). As a result of the rise of traffic to the Middle East, the Middle East-Africa route will increase in importance to 2035. Regional flows between Africa and South America are expected to grow by 9.1% (CAGR) between 2015 and 2035 (Boeing, 2016:50).

**Table 5.5: African airline passenger traffic growth by selected regional flows**

| | RPKs – (Billions) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2035** |
| Africa – Africa | 41.6 | 43.9 | 48.7 | 51.1 | 54.5 | 53.7 | 56.6 | 59.2 | 223.3 |
| Africa – Europe | 125.6 | 128.2 | 135.5 | 134.1 | 140.4 | 140.4 | 146.5 | 153.2 | 387.5 |
| Africa – Middle East | 24.9 | 32.9 | 36.4 | 39.4 | 48.6 | 50.8 | 53.7 | 59.5 | 235.9 |
| Africa – North America | 6.3 | 8.8 | 11.3 | 11.4 | 12.6 | 12.2 | 12.5 | 12.7 | 41.7 |
| Africa – Southeast Asia | 5.4 | 4.1 | 5.6 | 5.9 | 4.6 | 4.2 | 3.7 | 3.7 | 13.0 |

**Source:** Boeing (2016:45).

In terms of African load factors, section 5.2.3.5 highlighted the fact that in 2015 African passenger load factors significantly trail those of the other continents and thus the global average. The AFRAA Secretary General's 2015 report shows that the passenger load factor for 2015 was 68.2%, which was well below the global average passenger load factor of 80.4%. This report noted that the reasons for these low load factors were due to the, "imbalance of capacity and demand, limited commercial co-operation, and uncoordinated intra-African networks" (AFRAA, 2016:9). The picture becomes bleaker when considering the overall load factor (i.e. load factor expressed as percentage of ATK, which includes passengers and cargo). In 2014, the overall load factor recorded was 56.1% and it has declined each year since then. By 2017 it is forecast to be 50.8% (IATA, 2016L:6). For 2014 to 2017f, the overall load factor has been lower than the breakeven load factor. As identified in section 5.2.3.5, the continent achieved a passenger load factor of 68.6% for the 2016 calendar year, which is a negligible improvement compared to 2015. This slight improvement is largely due to good load factors being recorded in the third quarter of the year (IATA, 2016m:4). The continent does, however, still lag the global year-to-date load factor of 80.5% (IATA, 2017a:2).

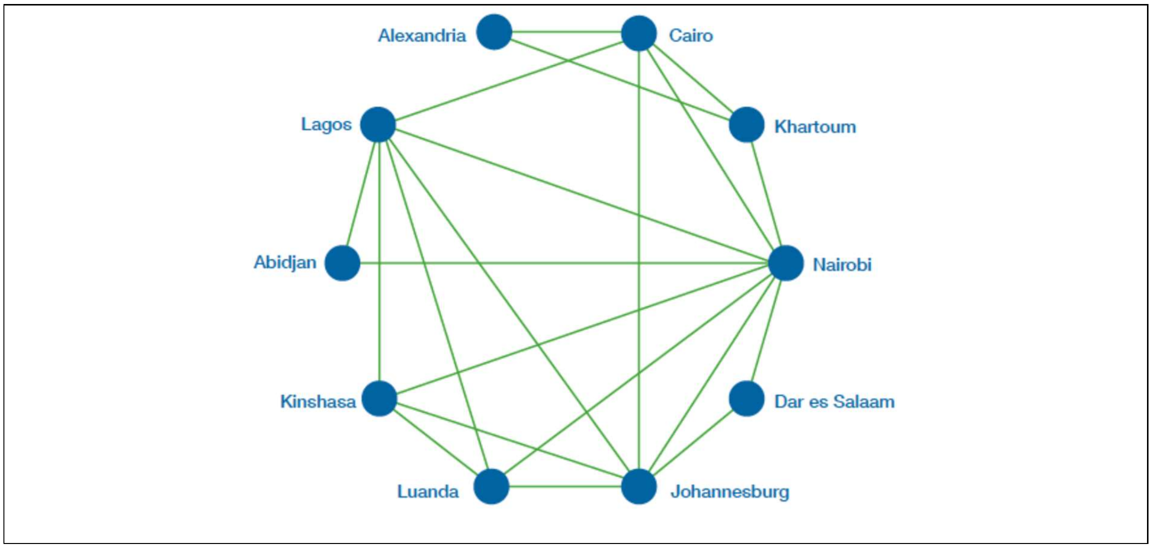
Section 5.2.3.8 highlighted the fact African airlines as a whole are performing poorly in terms of profit. A review of this discussion shows that in 2011 a slight operating profit was made but since then it has been a streak of both operating and net losses. IATA figures show that African airlines, as a whole, made a US $8.47 net after tax loss per passenger for 2015 (IATA, 2016:13). Operating losses (US $0.2 billion) and net losses (US $0.8 billion) are forecast for both 2016 and 2017 (IATA, 2016f:2). This is problematic because for 2015, 2016, and 2017 (forecasted), the industry as a whole is realising record profitability and is achieving ROIC higher than the cost of capital. Africa will be the only region to be recording losses for 2016 (Airline Leader, 2016f:65–66). The reasons given for the losses are the same as those given to explain the declines in ASKs, RPKs, and load factors (see previous paragraphs). It is worth noting that there are some carriers, like Ethiopian Airlines, Royal Air Maroc, and Comair (British Airways and kulula.com brands), that are succeeding and realising good profits.

### 5.3.4 African connectivity deficit

The importance of connectivity in the global context was emphasised in sections 5.2.1 and 5.2.3.4 of this chapter. Section 3.5.1 focussed in on the African continent and highlighted that a lack of liberalisation of African skies was hampering intra-African connectivity and in the process, is negatively impacting on the continent's ability to grow not only its airline industry, but economy as a whole. This section addresses the current connectivity deficit on the continent. The lack of intra-African air transport connectivity is highlighted by the fact that in 2014 there were just over 300 operating airports on the African continent and that only eight of them connected more than 25 cities (Embraer, 2016:28). Of these 300 airports, 240 of them linked to less than six cities. To further highlight the lack of intra-regional connectivity in Africa, as of mid 2016, only Ethiopia and Kenya have direct air connections with more than half of the countries on the continent (South Africa is directly connected to only 25 of the 54 countries) (IATA, 2016r:17).

Figure 5.15 illustrates the lack of connectivity by highlighting the point that for the ten biggest urban conurbations in Africa (population of 5 million+), there are only 22 direct air services in operation between these cities out of a possible 45 (OAG Aviation, 2016:9). A result of this lack of connectivity is that travel time between cities without direct air connections is extended and more expensive in many cases. Trips that could take 5 hours with a direct flight, could take over 12 hours using connecting flights and involve a stop-over in a country outside the African continent.

**Figure 5.15: Non-stop air connections between the largest urban conurbations in Africa**




**Source:** OAG Aviation, 2016:10.

The continent has experienced some growth in the number of new routes being established. The 2016 AFRAA annual report highlighted that in 2015, 37 new routes were established by 14 different AFRAA airlines, of which 16 routes were intercontinental routes (43.2%) and 21 were within Africa (56.8%) (AFRAA, 2017:14). This compares to 37 new routes in 2014 by 13 AFRAA airlines, of which 15 were intercontinental routes and 22 intra-African routes (AFRAA, 2015:13). Forecasts are that the traffic flows within Sub-Saharan Africa, between Africa and the Middle East, and between Africa and China will experience rapid growth in the next 20 years which will contribute to increased connectivity on the continent (Airbus, 2016d:28).

### 5.3.5 African fleet development

Considering the global ASK and RPK numbers addressed in sections 5.2.3.1 and 5.3.2.3, it is no surprise that Africa only has a 5% share of the global fleet (*see* section 5.2.3.2). Figures for 2015 show that the African aircraft fleet is made up of an assortment of roughly 1 531 aircraft. In terms of the fleet operated by the commercial airlines, with capacities of over 100 seats, the African fleet stood at between 605 and 690 aircraft in 2015 (Airbus, 2016d:96; Boeing, 2016:49; AFRAA, 2017:24). In terms of the current fleet composition, Africa's fleet is comprised of 110 regional jets (15.9%), 430 single aisle aircraft (62.3%), 80 small wide-body aircraft (11.6%), 60 medium wide-body aircraft (8.7%) and 10 large wide-body aircraft (1.5%) (Boeing, 2016:49; AFRAA, 2016:13). In terms of new aircraft deliveries, Africa is a small player, accounting for only 3% of 2015 deliveries. IATA figures show that in 2015 the continent took delivery of 30 aircraft (17 wide-body and 13 narrow-body), and in 2016 had received 30 new aircraft (19 wide-body and 11 narrow-body) (IATA, 2017a:2).

Africa's 2016 fleet is the oldest fleet in the world with an average aircraft age of 18 years (Airline Leader, 2016b:75). The age of the continent's fleet was exacerbated in the past because Africa used to be the 'dumping ground' for old aircraft by other airlines and lessors (Veitch, 2016:31). The age of this fleet has implications for the profitable running of the airlines as old aircraft are less fuel-efficient and have higher maintenance costs. Forecast increases in demand, growth resulting from new routes, and an aging fleet, require that new aircraft orders be placed to cope with the expected expansion and inevitable aircraft retirements. Whilst the new aircraft forecasts made by the different airframe manufacturers do differ slightly, the key point is that they all expect the African fleet size to more than double over the next 20 years.

Table 5.6 summarises the main manufacturer forecasts for new aircraft required by the African airlines from 2016 to 2035. The figures include new aircraft to increase capacity and aircraft to replace retired aircraft. The Boeing forecast predicts that an additional 1 110 aircraft will be required in the next 20 years, bringing the African fleet to 1 460 by 2035. Airbus forecasts that 1 000 aircraft will be required to meet demand, bringing the fleet to 1 370. It is clear that the demand for the single aisled aircraft will be the highest and make up between 70%–75% of the continent's aircraft requirements. The range and capacity of these types of aircraft make it clear that a lot of growth is expected in the African domestic market and intra-African air travel market. This fleet expansion, in conjunction with the appropriate implementation of the principles of the Yamoussoukro Decision, should see solid rates of growth in the continent's air transport industry and overall economies.

**Table 5.6: Airbus and Boeing new aircraft forecast for Africa (2016–2035)**

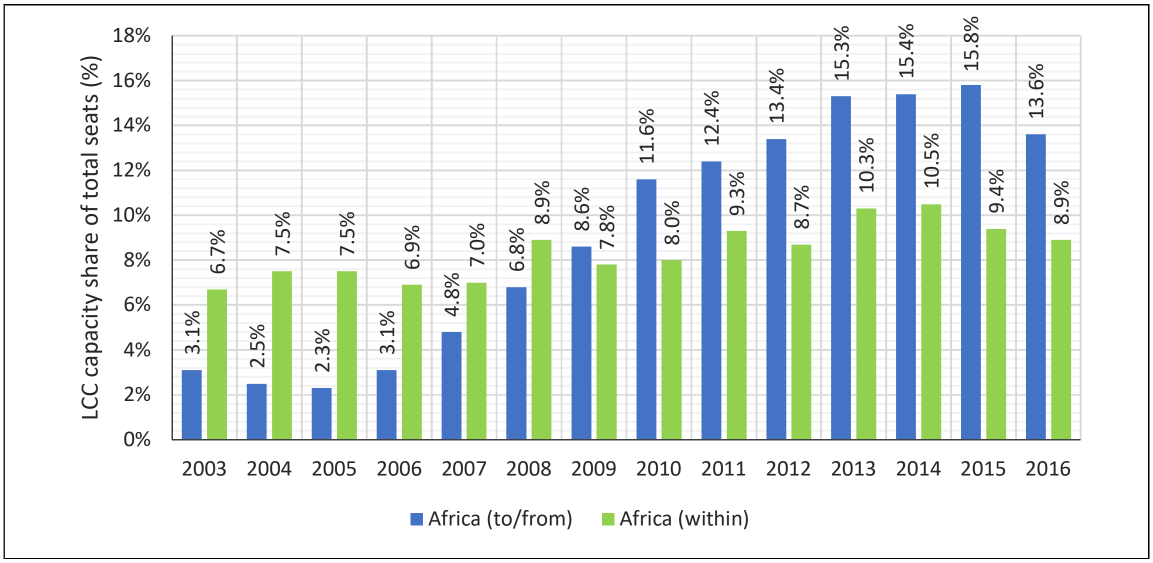
| | Single aisle | Small wide-body | Medium wide-body | Large wide-body | Total |
|---|---|---|---|---|---|
| **Airbus** | 757 | 148 | 80 | 115 | 1 000 |
| **Boeing** | 810 | 240 | 60 | 0 | 1 110 |

**Source:** Airbus (2016d:118) and Boeing (2016:46).

### 5.3.6 Low-cost carriers in Africa

The growth and size of the global LCC sector was outlined in section 5.2.3.10. From an African perspective, section 5.2.3.10 highlighted the point that the African continent is a relative newcomer to the LCC market and is significantly lagging behind the rest of the world in terms of regional penetration. From an African perspective (for end April 2016), FSCs offer 84.2% of the overall weekly international seat capacity compared to only 10.9% by the LCCs. This picture is somewhat different when looking at domestic capacity where FSCs offer 64.1% of the weekly seat capacity and LCCs 22.9% (Airline Leader, 2016e:41). Charters, regional operators and cargo make up the remaining capacity. This capacity is not evenly spread around the continent, with about 66.6% of the continent's LCC fleet being operated in the South African domestic market (Airline Leader, 2016f:69). Figure 5.16 illustrates the LCC capacity share of African total seats according to (i) seats to and from Africa and (ii) seats within Africa.

**Figure 5.16: African LCC capacity share of African total seats (%) (2003–2016)**




**Source:** Centre for Aviation (2015b:67) and Airline Leader (2017:66).

Figure 5.16 shows that LCCs within Africa had a higher percentage share of total seats up until 2008. From 2009, the LCC percentage share of seats to/from Africa grew substantially to reach 15.8% of total seats in 2015. This rapid growth of LCC seats to/from Africa was due to international LCCs operating trips to North Africa from the nearby European market and not due to the growth of African LCCs. International LCCs like Ryanair, Easyjet, FlyDubai, and Air Arabia account for the largest portion of LCC seats flying to North Africa. The capacity share decline of LCCs in 2016 resulted from some African LCCs (e.g Skywise and FlyAfrica.com) suspending operations, as well as Fastjet suspending flights to numerous destinations (Airline Leader, 2017:66–67). Additionally, many European LCCs reduced operations to some North African countries due to terror-related events. Most of the domestic LCC capacity is concentrated in South Africa. The vast majority of the LCC growth on the continent between 2003 to 2006 arose from the establishment of kulula.com, Mango and 1time in South Africa. A current review of the African countries served by LCCs shows that the markets are concentrated on the north eastern, eastern, and south eastern parts of the continent. Central and western Africa are still basically unserved by any LCC largely due to regulatory constraints and air travel still being perceived as a luxury item (Low Cost and Regional, 2015:18).

Activity has been picking up in the African LCC competitive landscape. After the early emergence of kulula.com, Mango, and 1time in South Africa, 2012 saw the emergence of Fastjet, who have ambitions of being a pan-African carrier and penetrating the South African market. Further growth was seen in

2014 with the emergence of FlySafair, FlyAfrica.com Zimbabwe, and Jambo Jet. 2015 saw the arrival of Fastjet Zimbabwe, Skywise, FlyAfrica.com Namibia. Whilst a number of these arrivals have battled, and some ceased operations, the LCC model is starting to make its African presence felt (Low Cost and Regional, 2015:18–19).

Many reasons are given in an attempt to explain the slow penetration of LCCs into Africa. These include the large distances between key African markets not being conducive to the LCC model, failure to implement the provisions of the Yamoussoukro Decision, the high costs of airline operations, high taxes and charges, infrastructure constraints, and excessive non-physical barriers to travel (Kahonge, 2016:11–12). Detailed research by Schlumberger and Weisskopf (2014:xix) revealed the following factors as being crucial to achieving LCC success on the African continent; (i) economic growth and a growing middle class, (ii) air transport liberalisation and the privatisation of state-owned airlines, (iii) improved safety and security standards, (iv) adequate air transport infrastructure, (v) skilled personnel, (vi) low-cost distribution channels, (vii) cost effective aircraft financing, (viii) availability of fuel at a fair price, and (ix) good governance. Many African countries currently fall short of these conditions. (*see* section 6.3.5 for the full theoretical discussion relating to the LCC model).

### 5.3.7 Challenges for the African air transport industry

Tony Tyler (former DG and CEO of IATA) made a strong statement regarding the development of the African air transport industry when he stated that "governments need to change their view of aviation from that of a luxury cash cow to a utilitarian, powerful draught horse that can pull the economy forward" (Veitch, 2016:31). The continent, which has previously been neglected in terms of the development of the aviation industry, has large levels of untapped natural resources which are in demand for development, not only on the continent, but throughout the world. Additionally, the growing size of the middle class and urbanisation offers many opportunities for the African air transport industry (*see* section 4.5.1). On the negative side, Africa is facing serious problems that prevent it from taking advantage of the opportunities being presented. Some of the key issues standing in the way of Africa's development include poor infrastructure, low education levels, political upheaval, corruption, and high unemployment. In terms of the air transport industry, key problems identified include a shortage of adequately trained personnel, pilot shortages, inadequately developed airport infrastructure, safety concerns, restrictive legislation, visa requirements between African countries, high fuel charges and taxes, difficulties in repatriating funds from some states, and restrictive air service agreements between the various countries on the continent that limit traffic rights between the countries (World Economic Forum, 2011:104; Airline Leader, 2017:66–67; AFRAA, 2017:31–33).

Facilitating the anticipated growth requires disruptive thinking to develop an improved transportation system within the continent, particularly the air transportation system, in order to provide better linkages across the continent. The development of this air transport system on the African continent requires not only the improvement of the airlines themselves, but also the entire system of infrastructure supporting the industry such as airports, airport access, air transport navigation services, maintenance, and technological resources. Key to success is the liberalisation of the African skies (OAG Aviation, 2016:13; AFRAA, 2016:33) and the matching of supply with demand for intra-African routes, using appropriate aircraft and frequencies (addressed in section 5.3.1). From a broader perspective, political stability and poverty reduction are essential to encourage greater investment in the continent and encourage the establishment of a wider, more interconnected air transport network. On reflection, the nine factors identified by Schlumberger and Weisskopf at the end of section 5.3.6 are not only important for LCCs to achieve success on the African continent, but for the industry as a whole.

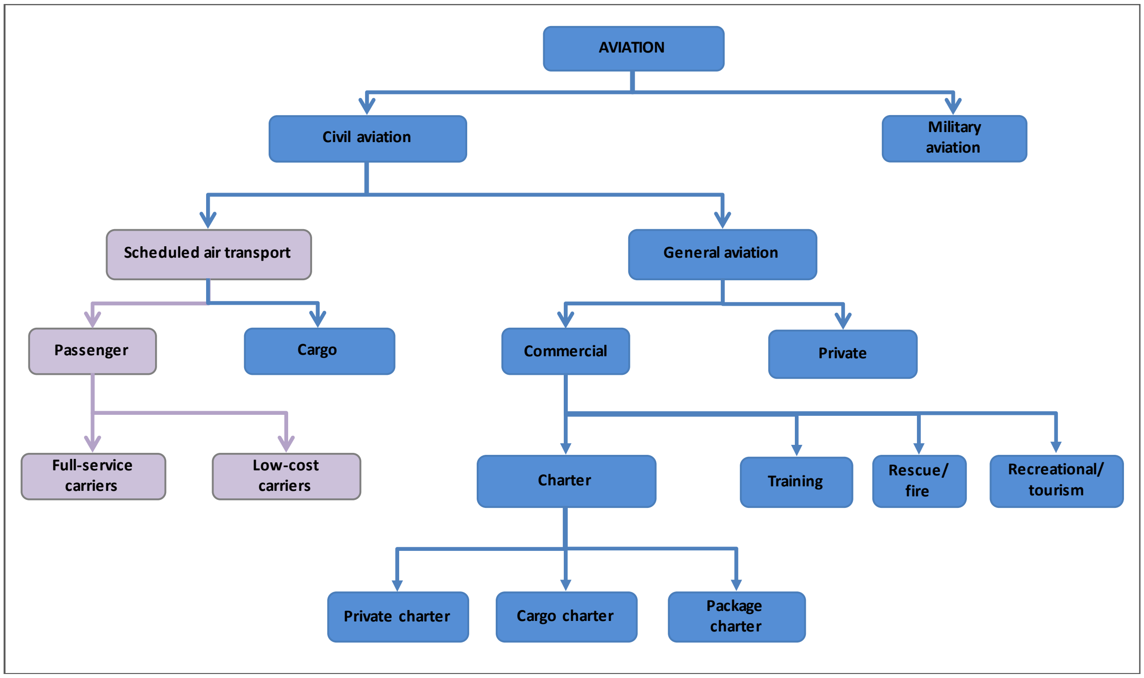
## 5.4 THE SOUTH AFRICAN DOMESTIC COMMERCIAL AIR TRANSPORT INDUSTRY

Sections 5.2 and 5.3 focussed on quantifying the global and African air transport industry respectively. As per the flow identified in the introduction to the chapter, the focus is now on quantifying the South African domestic air transport industry. In chapter one, a broad introductory outline was given of the South African domestic air transport industry to set the scene for the scope of the study. Chapter two identified the individual carriers operating in the South African domestic air transport industry. This section now focusses specifically on issues pertaining to the South African domestic commercial air transport industry that were not formally covered in chapters 1 and 2. Specific airlines and airports are referred to in the broader context of competition within the South African air transport industry. Topics addressed in this section include, the structure of the South African air transport industry, a summary of a number of key industry indicators, the contribution of the air transport industry to the SA economy, the competitive environment in the country, and a summarised SWOT analysis of the South African air transport industry.

### 5.4.1 Broad structure of the South African air transport industry

Figure 5.17 provides an overview of the structure of aviation within South Africa. The lighter-shaded sections to the left of the figure highlight the area of focus for this study. From this figure, it is shown that aviation is sub-divided into military and civil aviation. Civil aviation is further sub-divided into scheduled air transport and general aviation. Scheduled air transport is sub-divided into passenger services and cargo. Passenger services are sub-divided into FSCs and LCCs. The discussions in section 5.4 all concentrate on scheduled passenger services and the competition between them.

**Figure 5.17: Structure of South African aviation**




**Source:** Stern (2012:1).

Refer to sections 1.2.2.1 and 2.4.2 of this study for the discussion on the evolution of the South African air transport industry and the carriers that operate in the domestic scheduled air transport passenger market. Refer also to section 2.5.2 of this study for the discussion on the main airports that are utilised in the South African domestic market.

### 5.4.2 Quantification of the South African air transport industry

In this section, the South African air transport industry is quantified in terms of the main industry indicators as was done for the review of the global air transport industry (section 5.2) and the African air transport industry (section 5.3).

#### 5.4.2.1 South African industry outline

South Africa has a relatively small air transport industry when compared to countries like France, the USA, or Spain. The country is, however, a significant competitor on the African continent. Overall, South African airports (managed by ACSA) handled 19 974 508 departing passengers and 284 582 aircraft landings in the 2016 calendar year (ACSA, 2017b; ACSA, 2017f). The South African airline industry currently finds itself in a position where it needs to find some direction for future development. The country is a powerhouse on the continent, but its GDP is forecast to grow at a rate below the regional, continental, and global average. Regarding tourism, the country again enjoys a strong position on the continent, but its growth rates are expected to impeded by political and economic factors. In terms of air transport services and passenger numbers, the country again dominates the continent, but compared to the global picture, its share is declining and growth is slower than other similar economies. South Africa has to an extent understood the benefits of market liberalisation and through opening up its markets has established more connections and routes compared to many of the other countries on the African continent (*see* sections 5.2.1 and 5.3.1 for the discussions on connectivity and liberalisation of African skies). Further opening of the South African skies will open up the country's economy to the continent and the world, which should enhance growth opportunities. The emergence of a low-cost carrier sector in the South African air transport industry is testament to some form of liberalisation being implemented in the country (Luke & Walters, 2013:10).

Growth in the South African airlines category is highlighted in table 5.7. This table highlights that, between 2010 and 2018f, the annual sales value in the SA air transport industry shows growth of approximately 4.0% CAGR. The impact of the demise of 1time and Velvet Sky in 2012 is clearly seen on the LCC sales values in 2013. The eventual launch of FlySafair (late 2014) and Skywise (early 2015) saw the LCC sector rebound in sales, with a slowing of growth again in 2016 with the demise of Skywise at the end of 2015. The rate of growth for the traditional (FSC) carriers compared to the LCCs is apparent, with the FSCs showing much lower overall levels of growth – albeit from a higher base. The forecasts for 2016–2018 show slowing growth rates for both models, with the FSCs expecting a slight decline for 2018.

**Table 5.7: South African airline sales value (2010–2018f)**

| | Airlines sales value – ZAR millions | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016f** | **2017f** | **2018f** |
| Charter | 1 753.8 | 1 662.2 (-5.5%) | 1 647.3 (-0.9%) | 1 644.0 (-0.2%) | 1 658.9 (0.9%) | 1 654.9 (-0.2%) | 1 574.6 (-5.1%) | 1 501.1 (-4.9%) | 1 447.5 (-3.7%) |
| LCCs | 4 006.7 | 4 288.0 (6.6%) | 4 754.7 (9.8%) | 4 233.1 (-12.3%) | 5 212.1 (18.8%) | 6 338.9 (17.8%) | 6 700.7 (5.4%) | 6 979.6 (4.0%) | 7 210.1 (3.2%) |
| Traditional | 22 389.5 | 23 779.9 (5.8%) | 27 168.6 (12.5%) | 29 208.9 (7.0%) | 30 951.8 (5.6%) | 32 457.6 (4.6%) | 32 759.0 (0.9%) | 33 186.3 (1.3%) | 32 957.5 (-0.7%) |
| Total | 28 150.0 | 29 730.1 (5.3%) | 33 570.6 (11.4%) | 35 086.0 (4.3%) | 37 822.8 (7.2%) | 40 451.4 (6.5%) | 41 034.3 (1.4%) | 41 666.9 (1.5%) | 41 615.2 (-0.1%) |

**Source:** Euromonitor (2016a:2–4).

#### 5.4.2.2 Main industry indicators

The South African air transport industry, like any air transport industry around the globe, is highly cyclical. Demand and supply varies according to the time of year, month, week, and day. Holiday periods, religious holidays, and special events like the Comrades Marathon, the 94.7 cycle challenge, or once-off music concerts, all have an influence on demand and cause irregular peaks and troughs throughout the year. The figures given in this section are annualised figures unless otherwise stated.

***South African air seat capacity***

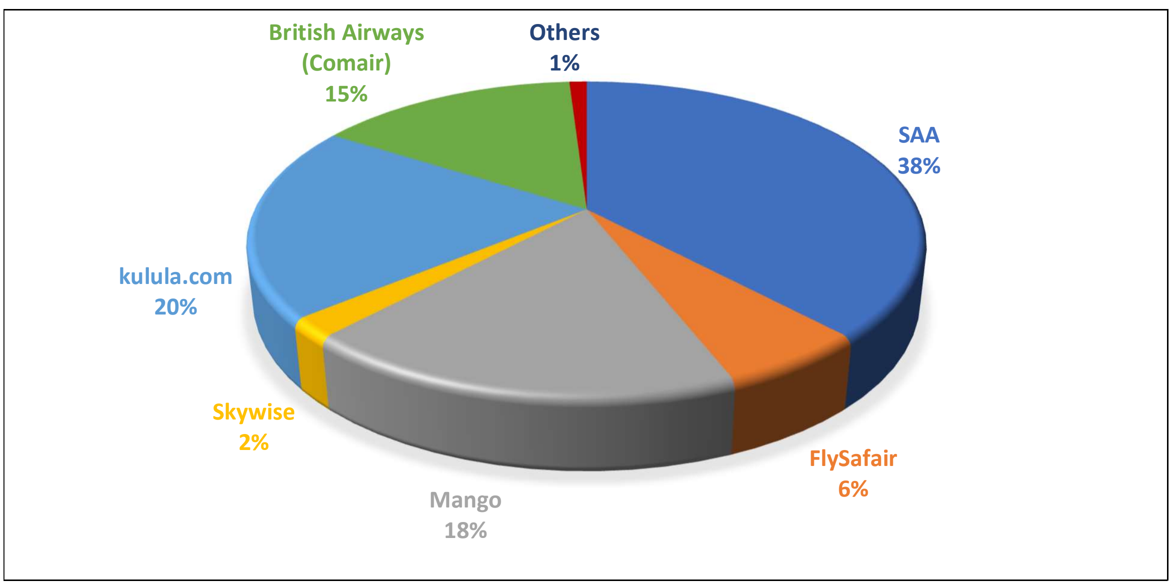
Flowing from the discussion on global and African seat capacity (sections 5.2.3.1 and 5.3.2 respectively), this section focusses on South African seat capacity. South Africa has been characterised by excess capacity in the domestic air transport market since at least 2014 and is set to continue to be the case into 2017. Industry experts state that there are too many competitors in the South African market and too much capacity given the small size of the market and the current poor economic conditions (Airline Leader, 2017:63). The World Economic Forum's 2017 '*Global Travel and Tourism Competitiveness Report*' identifies that the international seat capacity for South Africa stood at 866.9 million weekly ASKs (World Economic Forum, 2017:305). In terms of domestic seat capacity, the report identified that South Africa had 324.8 million weekly ASKs on offer. This figure fluctuates frequently dependant on airline failures, airline introductions, new route developments, international airlines opening/closing routes to the country, and airlines utilising larger/ smaller aircraft on a particular route. There has been an overall growth trend since 2002. Capacity growth forecasts for South Africa reflect a positive outlook for the next 20 years. Traffic flows between South Africa and the Middle East, and between South Africa and China feature in the top 20 of the fastest growing traffic flows for the 2016–2035 (Airbus, 2016d:28). Seat capacity between South Africa and the Middle East is forecast to grow by a factor of 3.9 in the next 20 years – largely due to the Middle East carriers adding frequencies and utilising larger aircraft to the country. Seat capacity between South Africa and China is forecast to grow by a factor of 3.7 for the same period. Intra-sub-Saharan capacity, which includes South Africa, will grow by a factor of 3.6 for the period, thus presenting many opportunities for the country (Airbus, 2016d:28).

Narrowing the focus to the airlines operating within the South African air transport industry, it can be seen that whilst South Africa is a relatively small player in terms of international ASKs, the domestic air transport market is the largest on the African continent by some margin. Statistics by CAPA show that for the week starting 25 April 2016, South African Airways offered 122 637 weekly international seats (Airline Leader, 2016e:41). This made the airline the fifth highest supplier of weekly international seats to the African continent behind Egypt air, Ethiopian Airlines, Royal Air Maroc, and Emirates. The North African states benefit greatly from their proximity to the European continent resulting in them being a short haul destination from Western Europe. South African Airways is the only South African airline offering long haul international capacity. Comair, using their British Airways brand, offer short haul regional flights to neighbouring countries (*see* section 2.4.2.1 for the discussion on Comair).

The picture of the South African domestic air transport industry is in stark contrast to the international operation. In the context of the African continent, the South Africa domestic air transport market is by far the biggest domestic market on the continent in terms of seat capacity. Weekly seat capacity figures for the week starting 25 April 2016, show that the five main South African domestic carriers at the time offer 39.2% of all domestic weekly seat capacity on the continent (Airline Leader, 2016e:41). This was quantified as SAA 130 858 weekly seats, kulula.com 77 622 weekly seats, Mango 70 308 weekly seats, British Airways Comair 57 754 weekly seats, and FlySafair 36 540 weekly seats (Airline Leader, 2016e:41). These weekly domestic seat capacity figures, particularly when seen in the context of the rest of the African continent, show that the South African domestic air transport industry is very dense and highlights the need for the South African carriers to seek growth beyond the South African borders. South Africa's geographic location at the southernmost tip of the African continent, surrounded by sea to the east, south, and west, present the South African airlines with restricted growth opportunities into countries that are either politically or economically constrained. A liberalised air transport industry on the African continent, particularly in the SADC and southern Africa, is crucial to any growth plans of the South African domestic carriers.

Breaking the South African domestic air transport industry down to individual airlines, it is clear that SAA/Mango (SAA group including SA Airlink) dominate in terms of market share. Whilst the relative market share of the various airlines has fluctuated over the years as airlines enter and leave the market, the overall trend shows SAA slowly losing market share to the LCCs. Figure 5.18 shows the market share of the domestic South African operators as a percentage of seats on offer for the middle of 2015 (29 June 2015 – 5 July 2015). This period covers the peak when the new LCC entrants, FlySafair and Skywise, had been operating for a few months and were making inroads into the market. Skywise suspended operations five months after this period (10 November 2015). From this figure is can be seen that the FSCs held 53% of the available seats and the LCCs 46%. The impact of Skywise can also be seen with the airline obtaining a 6% market share after only eight months in operation.

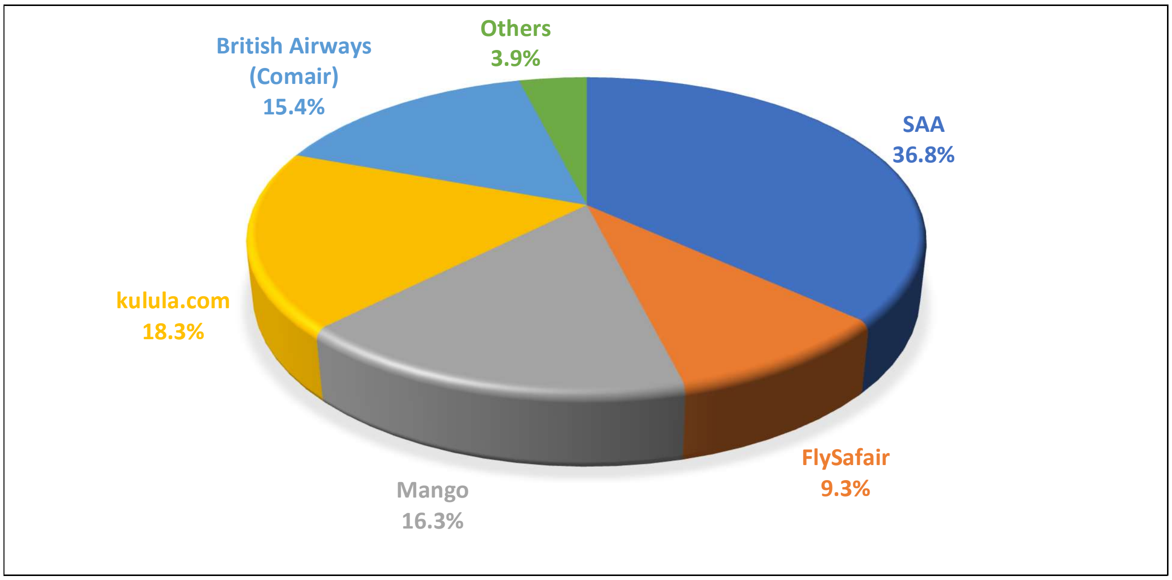
**Figure 5.18: South African domestic airline market share (% of seats) – mid 2015**




**Source:** Centre for Aviation (2015a).

The mid-2015 situation outlined in figure 5.18 reflected a situation when the number of carriers in the South African domestic market was at a peak. With the demise of Skywise in November 2015 and the impact on airline capacity changes (increases or decreases), the picture in September 2016 (15 months later) reflected a slightly different situation – as highlighted in figure 5.19. The most noticeable changes, apart from the exclusion of Skywise, is the seat capacity share gain of FlySafair. This gain has been at the expense of SAA, Mango, and kulula.com. The increase in the seat capacity share of the 'other' category reflects the entrance of Fly Blue Crane. From a business model perspective, in September 2016, FSCs hold an advantage in terms of seat capacity over the LCCs, with regional operators increasing their share due to the introduction of the hybrid carrier, Fly Blue Crane. The SAA group, as of September 2016, controlled 53.1% of the overall seat capacity (±910 000 seats), whilst Comair (British Airways and kulula.com) controlled 33.7% of the overall seat capacity (±894 000 seats). A *Flight Global* analysis for September 2016, highlighted capacity in terms of ASKs as SAA 32.2%, Comair British Airways 17.0%, kulula.com 19.0%, Mango 17.4%, FlySafair 10.5%, and 'others' 3.9% (Flight Global, 2016b).

**Figure 5.19: South African domestic airline market share (% of seats) – September 2016**




**Source:** Flight Global (2016b).

Airline capacity naturally varies depending on the routes served. As stated previously, the 'golden triangle' of Johannesburg, Cape Town, and Durban are the main routes in South Africa and have the highest capacity operating on them. The ORTIA–CTIA route has the highest capacity density. Figures from end August 2015, where the number of mainline domestic carriers stood at six, show that on the ORTIA–CTIA route, SAA had a 36.2% share of the seat capacity (125 weekly departures), followed by Comair's British Airways at 22.0% (76 weekly departures), kulula.com at 13.3% (46 weekly departures), Mango at 11.0% (38 weekly departures), FlySafair at 9.9% (34 weekly departures), and Skywise at 7.5% (at 26 weekly departures) (Anna.aero, 2015). This tallies to 345 weekly flights for the identified period. At this point in time, FlySafair and Skywise had been operating on the route for less than a year. Figures at the end of August 2015 for the Lanseria–CTIA route, show that kulula.com offered 47 weekly flights and Mango 20 weekly flights. Figures for the week 1 August 2016 show that SAA operated 116 weekly flights on the ORTIA–CTIA route followed by Comair's British Airways (76 weekly flights), kulula.com (43 weekly flights), Mango (38 weekly flights), and FlySafair (33 weekly flights) (Anna.aero, 2016). This tallied to a total of 306 weekly flights on the route for the identified period. The seat capacity removed from the market as a result of the demise of Skywise had clearly not been filled by the remaining competitors on the route. At the same time, kulula.com and Mango were offering a combined 70 flights per week from Lanseria to Cape Town, with FlySafair starting operations from the airport with 13 weekly flights (Anna.aero, 2016).

***South African passengers and RPKs***

Flowing from the discussion on global and African passengers in terms of RPK growth (section 5.2.3.3 and section 5.3.3 respectively), this section focusses specifically on South African passenger numbers and RPKs. Figures provided in the Airbus *Global Forecast for 2016–2035* (Airbus, 2016d) show that South Africans took 0.34 and 0.36 trips per capita in 2015 and 2016 respectively. This is forecast to increase to 0.38 and 0.40 trips per capita in 2017 and 2018. This level of travel is relatively low given the country's GDP per capita. South Africa's trips per capita lags behind all BRICS countries except for India, and significantly behind most developed economies, which show 1.5 trips per capita and beyond (Airbus, 2016d).

Figures released by ICAO indicated that for 2014 South Africa recorded RPKs of 31 603 million, which represents 19 677 million RPKs for international services and 11 926 million domestic RPKs. The year 2015 saw a total of 31 075 million RPKs, which represents 18 909 million international RPKs and 12 166 million domestic RPKs (ICAO, 2016b:6). This reflects an overall decline from 2014 for overall and international RPKs, but a slight increase in terms of domestic RPKs. Focussing on actual passengers carried, table 5.8 outlines the overall figures reported for 2010–2015 for the various models operating in South Africa and includes charters and all airports. The annual growth rates are identified below the passenger figures. The effects of the demise of 1time and Velvet Sky are clearly seen in 2013 and 2014 with large annual declines in passenger numbers being recorded. The effects of the introduction of FlySafair and Skywise in 2015 can be clearly seen. The Euromonitor report on South African airlines distinguishes between long-haul and short-haul passengers (Euromonitor, 2016a). In 2010, long-haul passengers accounted for 28.8% of all passengers and short-haul passengers for 71.2% (Euromonitor, 2016a:3). Each year since 2010 has seen the ratio of long-haul passengers to short-haul passengers gradually increase in favour of long-haul passengers. In 2015, 29.9% of all passengers were long-haul passengers and 70.1% were short-haul passengers.

**Table 5.8: South Africa airline passengers (2010–2015)**

| | Airline passengers carried ('000 persons) | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Charter | 1 076.2 | 1 031.4 (-4.3%) | 1 009.7 (-2.1%) | 1 018.3 (0.8%) | 1 030.6 (1.2%) | 1 046.3 (1.5%) |
| LCCs | 6 875.8 | 7 058.8 (2.6%) | 7 011.7 (-0.7%) | 5 968.8 (-17.5%) | 5 353.1 (-11.5%) | 6 973.3 (23.2%) |
| Traditional | 15 070.9 | 14 736.0 (-2.3%) | 15 052.9 (2.1%) | 15 534.5 (3.1%) | 16 177.7 (4.0%) | 16 666.2 (2.9%) |
| Total | 23 023.0 | 22 826.2 (-0.9%) | 23 074.3 (1.1%) | 22 521.6 (-2.5%) | 22 561.4 (0.2%) | 24 685.8 (8.6%) |

**Source:** Euromonitor (2016a:2–4).

Section 2.5.2 in chapter 2 outlined the total number of passengers handled at the ACSA controlled airports in South Africa. The totals given reflected the total number of arriving and departing passengers at the specific airports. This record of 'total passengers handled' results in an element of double-counting as a large proportion of the passengers, depending on their point of origin, are recorded twice on the same trip because they depart from the one airport (for e.g. ORTIA) and arrive at the destination airport (for e.g. CTIA). By focussing on departing passenger figures, a reflection of passenger numbers is obtained. Table 5.9 takes overall passenger numbers down to the airport level to highlight departing passenger flows through the various ACSA airports and thereby highlights travel demand concentration.

**Table 5.9: South Africa departing passengers – ACSA airports (FY 2012–2017)**

| | Departing passengers ('000) | | | | | |
|---|---|---|---|---|---|---|
| **Airport** | ***FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** | **FY 2016** | **FY 2017#** |
| ORTIA | 9 491 | 9 318 | 9 415 | 9 589 | 10 205 | 10 376 |
| CTIA | 4 301 | 4 226 | 4 216 | 4 387 | 4 850 | 5 128 |
| KSIA | 2 526 | 2 337 | 2 241 | 2 266 | 2 475 | 2 623 |
| Port Elizabeth international | 682 | 651 | 624 | 674 | 804 | 793 |
| East London airport | 339 | 323 | 333 | 320 | 364 | 400 |
| George airport | 290 | 274 | 289 | 309 | 361 | 372 |
| Bram Fischer international | 222 | 207 | 192 | 183 | 197 | 198 |
| Kimberley airport | 70 | 75 | 78 | 80 | 84 | 89 |
| Upington international | 26 | 27 | 32 | 37 | 34 | 32 |
| **Total** | **17 947** | **17 438** | **17 419** | **17 845** | **19 374** | **20 011** |

*ACSA's financial year runs from 1 April to 31 March
# FY 2017 figures are unaudited and rounded

**Source:** ACSA (2016i:146) and ACSA (2017e).

From a departing passenger perspective, the three airports that form part of the golden triangle are clearly seen as the routes with the highest passenger traffic. ORTIA, as the main hub in the country, recorded more passengers than the other eight airports combined. The year 2013 was noticeable for a decline in passenger numbers across all airports with only marginal recoveries from some airports in 2014. This coincides with of the demise of 1time and Velvet Sky. The 2016 financial year saw ORTIA breach the ten million passenger mark, with this growth trend continuing into the next financial year. CTIA, KSIA, and George also saw strong gains in 2015/2016 which is linked to the introduction of FlySafair and Skywise Airlines. From the FY 2017 figures it can be seen that 2016 was a particularly good year for the airlines with passenger numbers at all but two airports showing solid growth (ACSA, 2017e).

Overall departing passenger growth showed a 3.1% increase from the previous year. The high level of competition in the industry, resulting in excess capacity has had an influence on the average ticket price, which coupled with lower jet fuel costs, has resulted in more consumers being able to afford air travel. It is noted that international passenger flows were affected by stringent visa and child documentation requirements and other global factors outlined earlier in the chapter.

In the context of this study, where the key focus is on the South African domestic market, table 5.10 outlines the passenger numbers for ACSA airports divided according to international, domestic, regional, and unscheduled departing passengers. Building on to the comments made in the previous paragraph relating to the demise of 1time, Velvet Sky, and the introduction of FlySafair and Skywise (all LCCs), table 5.10 highlights that the effects of these changes were felt at the domestic passenger level. This is seen in the decline in passenger number for the LCCs for FY 2013 and FY 2014, and the subsequent increases in FY 2015 and FY 2016. The domestic market is clearly the dominant market for the country, but it is also clear that the regional market is in need of growth and this will require the domestic carriers moving, and being able to move, into neighbouring states.

**Table 5.10: Departing passengers (domestic vs international) – ACSA airports**

| | FY 2013 | | FY 2014 | | FY 2015 | | FY 2016 | |
|---|---|---|---|---|---|---|---|---|
| | % Share | % Change | % Share | % Change | % Share | % Change | % Share | % Change |
| **International** | 28.2% | 1.4% | 29.4% | 4.0% | 29.1% | 1.6% | 27.7% | 3.0% |
| **Domestic** | 68.6% | -4.8% | 67.2% | -2.2% | 67.5% | 2.8% | 69.1% | 10.2% |
| **Regional** | 2.8% | -0.6% | 2.9% | 6.1% | 3.0% | 2.3% | 2.8% | 1.7% |
| **Unscheduled** | 0.4% | -5.0% | 0.5% | 10.7% | 0.4% | -3.4% | 0.4% | -11.1% |
| **Total** | **100%** | | **100%** | | **100%** | | **100%** | |

**Source:** ACSA (2016i:145).

Whilst 2016 seems to have been a good year for the industry, the past decade has seen problems of over-capacity and many external environmental influences playing havoc on the South African air transport industry (refer to sections 3.2.2 and 3.4.2 where the industry problem of over-capacity is addressed). There is, however, a general positive outlook for the industry, with good growth being forecast. IATA forecast that, if the challenges can be overcome, South Africa could record just over 46 million passengers by 2035 at an average annual growth rate of 3.8% (IATA, 2016r:13–14). ACSA are similarly optimistic, and have forecast that departing passenger numbers from ACSA run airports will grow by a CAGR of 3.3% between 2014 and 2025 (ACSA, 2014:11). Airbus, taking a broader perspective of the South African air transport industry, are also extremely positive for most areas of RPK growth within, to, or from South Africa. Table 5.11 provides a summarised table of the forecasted RPK growth rates for the period 2015–2035 as per the Airbus global market forecast. In line with the economic growth predictions, RPK growth to emerging countries, and BRIC countries specifically, show extremely positive prospects, whilst mature markets like North America and Europe show lower levels of forecast growth for the period. Domestic growth is forecast at a positive CAGR of 4.6% for the 20-year forecast period (Airbus, 2016d).

**Table 5.11: Forecast passenger traffic flows between South Africa and global regions**

| Origin – destination | | | 2015–2025 CAGR | 2025–2035 CAGR | 2015–2035 CAGR |
|---|---|---|---|---|---|
| Asia Advanced | – | South Africa | 6.2% | 6.3% | 6.2% |
| Asia Emerging | – | South Africa | 6.2% | 6.3% | 6.2% |
| Australia/NZ | – | South Africa | 6.2% | 6.3% | 6.2% |
| Domestic South Africa | – | South Africa | 5.1% | 4.0% | 4.6% |
| Indian sub-continent | – | South Africa | 6.2% | 6.3% | 6.2% |
| Middle East | – | South Africa | 8.1% | 6.0% | 7.1% |
| North Africa | – | South Africa | 7.1% | 6.1% | 6.6% |
| China | – | South Africa | 7.2% | 6.2% | 6.7% |
| South America | – | South Africa | 4.9% | 4.2% | 4.6% |
| Sub Saharan Africa | – | South Africa | 7.1% | 6.1% | 6.6% |
| USA | – | South Africa | 3.8% | 3.9% | 3.8% |
| Western Europe | – | South Africa | 3.4% | 2.9% | 3.2% |

**Source:** Airbus (2016d).

***South African airports***

The core South African airports were explored in section 2.5.2 of chapter 2 with the focus on passengers handled and the key developments that have taken place over the recent past. From an airports perspective, South Africa has a small number of airports for the size of the country and population. In terms of the 'airport density' indicator in WEF Travel and Tourism Competitiveness Index, South Africa is quantified at 0.8 airports per million urban population, which ranks the country 79$^{th}$ out of 136 countries (World Economic Forum, 2017:305). As a result of new airlines and more direct routes to CTIA and KSIA, these two airports recorded strong growth in terms of passengers and aircraft landings during 2016. Third quarter 2016 figures show that arrivals and departures of foreign, regional, and domestic passengers were up on the previous year's figure by between 3.7% and 8.5%, with the overall figures showing a 4.4% increase (Traveller24, 2016a). The 2015/2016 financial year saw aircraft landings at ORTIA, CTIA, and KSIA reach 112 177, 50 127, and 26 190 respectively. Aircraft landings at the same three airports for the 2014/2015 financial year were recorded at 108 972, 45 587, and 24 693 aircraft landings. Port Elizabeth, East London, and George airports, which are served by the LCCs, also showed good aircraft landing growth (ACSA, 2016i:145).

Rounding off the focus on airports, table 5.12 highlights the aircraft landings at ACSA controlled airports divided according to domestic and international landings. The importance of the domestic market is clear, with just under 50% of all landings originating from within the republic. ACSA have forecast that aircraft landings at ACSA run airports will grow by a CAGR of 2.7% between 2014 and 2025 (ACSA, 2014:11).

**Table 5.12: South Africa aircraft landings (domestic vs international) – ACSA airports**

| | *FY 2013 | | FY 2014 | | FY 2015 | | FY 2016 | | FY 2017 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Landings | % Share | Landings | % Share | Landings | % Share | Landings | % Share | Landings | % Share |
| International | 36 146 | 14.2% | 38 315 | 14.7% | 36 573 | 13.4% | 36 803 | 12.9% | 37 722 | 13.4% |
| Domestic | 126 388 | 49.6% | 125 956 | 48.2% | 133 093 | 48.7% | 141 978 | 49.9% | 142 205 | 50.7% |
| Regional | 11 251 | 4.4% | 11 131 | 4.3% | 12 157 | 4.4% | 13 080 | 4.6% | 13 138 | 4.7% |
| Unscheduled | 81 238 | 31.9% | 85 892 | 32.9% | 91 519 | 33.5% | 92 424 | 32.5% | 87 642 | 31.2% |
| **Total** | **255 023** | **100.0%** | **261 294** | **100.0%** | **273 342** | **100.0%** | **284 285** | **100.0%** | **280 707** | **100.0%** |

*ACSA's financial year runs from 1 April to 31 March.
# FY 2017 figures are unaudited and rounded

**Source:** ACSA (2016i:145) and ACSA (2017f).

### 5.4.3 Contribution of the air transport industry to the South African economy

Much has been said about the economic impact of the air transport industry at **different levels** throughout this study. Section 2.3.1 highlighted the economic impacts of the air transport industry at the global level. The introduction to section 5.3 identified the economic benefits of the air transport industry to the African continent. In section 4.4.3.2 the economic impact of travel and tourism on the South African economy was discussed. Section 3.2 of chapter 3 explored the relationship between the air transport industry and GDP growth. All that remains to be addressed is the economic impact of the air transport industry on the South African economy. There is no doubt that the travel and tourism industry adds significant value to the South African economy and that the air transport industry plays an important role in facilitating travel and tourism. In fact, logic would dictate that the benefits brought to the South African economy by the air transport industry go well beyond their impact on the tourism industry. Previous discussions in this chapter (sections 5.2.1, 5.2.3.4, 5.3.1, and 5.3.4) have also emphasised the importance of connectivity to the competitiveness of an airline and to economic development as a whole. A 2011 Oxford Economics report on South African aviation highlighted that a 10% improvement in the country's connectivity would result in a ZAR 1.5 billion (US $138 million) per annum addition to GDP (Oxford Economics, 2011:10). The link between GDP, connectivity, and air transport has been clearly established (*see* section 3.2.1 of this study).

The contribution of the air transport industry to GDP and employment provide insights into the importance of the air transport industry. Table 5.13 summarises the contribution of the South African air transport industry to national GDP and employment as per the 2016 ATAG '*Aviation: benefits beyond borders*' report. In this table, a clear distinction is made between the direct (related to aviation economic activity), indirect (related to supply chain activity), induced (related to spending by persons employed in the air transport industry), catalytic (related to benefits generated through tourism and trade), and total contribution of the industry on the South African economy. From a GDP contribution perspective, the air transport industry directly contributed US $2 969 million to the South African economy. The total contribution is recorded as US $12.4 billion. In Rand terms, a report by Genesis Analytics for Emirates in June 2016 (Emirates, 2016:25) quantified the direct, indirect, and induced value added to the South African economy in 2014/2015 at approximately ZAR 62 billion. For 2016, the direct, indirect, and induced GDP contribution is estimated at ZAR 80 billion (Veitch, 2016:9). (Global GDP is reviewed in section 4.2.1 for context).

**Table 5.13: Contribution of the aviation sector to the South African economy**

| | Direct | Indirect | Induced | Tourism | Total |
|---|---|---|---|---|---|
| **Contribution to GDP (US $ million)**[3] | 2 969 | 3 066 | 1 320 | 5 118 | 12 473 |
| **Contribution to employment (jobs)** | 70 000 | 133 000 | 57 000 | 234 000 | 493 000 |

**Source:** ATAG (2016:62).

When considering the impact of the aviation industry on South African employment, table 5.13 shows that the air transport industry contributes approximately 70 000 direct jobs and 133 000 indirect jobs. A further 57 000 jobs arise from induced benefits associated with the industry. When adding in the catalytic (tourism) effects of the aviation industry, a further 234 000 jobs are added, giving a total of approximately 493 000 jobs that exist due to the air transport industry in South Africa (ATAG, 2016:62). Rationalisation and cost-cutting across all sectors of the industry have seen the number of jobs in the industry decline, with the result that figures for end 2015 show that the air transport industry accounts for approximately 227 000 direct, indirect, and induced jobs (Emirates, 2016:26). In a country experiencing a high rate of unemployment, the air transport industry offers significant prospects for future employment opportunities provided the growth forecasts are realised and the planned levels of liberalisation of the African continent's skies are achieved.

The benefits of tourism to the South African economy were described in section of 4.4.3.2 of the study. A report by Genesis Analytics for Emirates, published in June 2016 (Emirates, 2016:12), highlighted that the spending of travellers that arrive in South Africa via air transport is significantly higher than the spending of travellers that arrive via land transport. The report identified that, on average, air travellers spend approximately ZAR 13 500 during their visit, whilst land travellers only spend approximately ZAR 4 900 during their visit. The importance of the air transport industry is thus further highlighted given that the number of arrivals by air is substantially lower than the tourist arrivals by land. Tourists that arrive by air are calculated to spend approximately three times as much as tourists that arrive via ground transport.

### 5.4.4 South African domestic competitive environment

Section 1.2.2.1 of the study introduced the basic composition and evolution of the South African domestic air transport industry to establish a basis for the study and subsequent discussions. The focus

[3] Dollar values are stated in terms of US Dollars 2014 prices.

in this section will be to explore the issues identified in more detail and explore a number of key issues that have influenced the nature of competition between the airlines in the South African air transport industry over the past 5–7 years. The South African domestic air transport industry is highly competitive, serving a relatively small market focussed around traffic between Johannesburg, Cape Town, and Durban. Geographic limitations restrict the number of destinations that domestic operators can service. South Africa is in effect an end-of-the-line destination, making it unrealistic to serve as an international hub to other global destinations. Other African cities located further north, like Addis Ababa, Lagos, Nairobi, or Accra are much better located to serve as hub for traffic into the African continent. South Africa, due to its level of development and fairly liberalised skies, is however considered to be the main air travel hub to southern Africa (Veitch, 2016:5).

One of the key problems facing the South African air transport industry is the reliance on the so-called 'golden triangle' for the bulk of the air traffic. Back in 2012, Chris Zweigenthal (CEO of the Airlines Association of Southern Africa), highlighted the point that South African domestic carriers need to look for opportunities beyond the golden triangle as these routes are the most competitive and result in airlines facing high levels of price competition and ultimately very small margins on these routes (Stern, 2012:13). With the restricted number of destinations that airlines can serve, the problem arises that any additional options can be equally well served (if not better, cheaper, and quicker) by road travel.

A number of events have occurred since 2010 that have had an effect on the competitiveness and structure of the South African air travel industry. In terms of airports, the opening of the King Shaka International Airport in 2010 significant added capacity to the Durban region, including international capacity, with the arrival of Emirates, Qatar Airlines, Turkish Airlines, and Ethiopian Airlines. The introduction of flights by Mango (06/2011) and FlySafair (08/2016) from Lanseria removed kulula.com's status as the sole Lanseria carrier and thereby added more travel options for the South African traveller. This increased competition between the carriers from the airport resulting in more competitive fares being offered to the consumer. The decision by SAA to cease direct flights from Cape Town to London in August 2012 also affected the industry, with SAA passengers being routed through Johannesburg. British Airways (UK) was the main beneficiary of this move by SAA, with the airline now operating two daily direct flights to London. The improvements and expansions to ORTIA and CTIA, as described in chapter 2, have added significant capacity to South Africa's airports.

In terms of airlines, there have been many events/occurrences that have shaped the industry over the past 5–7 years (*see* section 1.2.2.1 for more detail). The year 2012 saw the demise of two of the country's LCCs – Velvet Sky and 1time (*see* section 2.4.2.2). Velvet Sky was liquidated when it was unable to pay its bills. 1time was placed into business rescue and eventually filed for liquidation in November of 2012 when a combination of high fuel prices, fuel inefficient aircraft, weak demand, rising airport fees, and strong domestic competition forced the airline to cease operations (Hedley, 2012;

Anna.aero, 2012). The effect of these liquidations at that stage was that the South African airline market was reduced to two main operators (South African Airways and its low-cost partner Mango and Comair with their British Airways and kulula.com brands), who then enjoyed a duopoly until the introduction of FlySafair in October of 2014 (Centre for Aviation, 2015).

In the wake of the failure of 1time and Velvet Sky a perceived gap in the market was identified prompting numerous proposals for new airlines to enter the South African market. One of these was FlySafair (*see* section 2.4.2.2 for the description of the airline's operations). The market gap identified by FlySafair was based on flight prices which had risen by 30% – 40% during the SAA/Comair duopoly (Financial Mail, 2014). Initially, the airline planned to launch in October of 2013 but were prevented from doing so when Comair and the still unlaunched Skywise obtained an interdict against the proposed airline based on FlySafair having more than 25% of the airline company owned by foreign shareholders. After a restructuring, the airline eventually obtained its operating license in April of 2014 (Pickworth, 2014). Flights were launched flights in October 2014 and the airline has shown strong growth, becoming the third domestic LCC to operate flights from Lanseria in August 2016.

At the same time that FlySafair were planning to launch, a slightly controversial airline idea was being floated by the founders of 1time airline Glenn Orsmond, the former CEO Rodney James, and the former CIO, Michael Kaminski (all three had left 1time some time prior to the airline's collapse). The proposed airline was to be named 'Skywise' and aimed to operate on the ORT – CPT route using Boeing 737-300's which are more fuel efficient that 1time's former MD-82 fleet (Smith, 2012a:2). An operating licence was obtained in May 2013, but this was later sold to PakAfrica Aviation in October 2014 (Traveller24, 2015b). As outlined in section 2.4.2.2 of chapter 2, the airline launched flights in March of 2015, announced ambitious growth plans in June 2015, and in December 2015 it ceased operations after numerous disputes with ACSA over unpaid service fees that amounted to over ZAR 8 million.

The operational features (routes, fleet, model type, etc.) of privately owned Fly Blue Crane were discussed in section 2.4.2.3 of the study. The airline is headed by the former SAA CEO Siza Mzimela and a number of former SAA executives. Even before the airline's launch, the question was raised whether the airline had sufficient money to operate. After what seemed to be stable growth and planned expansions into Swaziland and Mozambique, a newspaper report in the Business Day reported that Fly Blue Crane was "on the endangered list". The report stated that the airline had developed funding constraints after talks with a Gulf-based carrier for a cash injection stalled after it emerged that the airline was also in talks with the state-owned Industrial Development Corporation (IDC) to secure funding (Skiti, 2016). Fly Blue Crane initially requested ZAR 240 million from the IDC but only secured ZAR 30 million in bridging finance. Complications arose in the process because Fly Blue Crane is in competition with struggling SA Express, which is a state-owned organisation like the IDC. The structuring of the bridging loan with the IDC is the source of concern to the Gulf carrier. A 17 November

2016 report stated that the airline was considering entering business rescue in order to restructure the business and ensure its continued operation (Gernetzky, 2016). As of end March 2017, the airline has grounded its fleet whilst it 'restructures'.

Fastjet is an airline that is frequently mentioned in the press as having a strong desire to enter the South African domestic market. Fastjet, backed by Easyjet founder Sir Stelios Haji-Ioannou, launched in Tanzania in November 2012. The airline had rapid expansion plans with the goal of being the first pan-African LCC. An early move was made to enter the South African domestic market in 2012/2013 when the airline attempted to buy the defunct 1time airline. Mango, SAA, and Comair objected to Fastjet's application (Centre for Aviation, 2013). Fastjet's bid to enter the market at this time failed because of the South African regulation that restricts foreign ownership of a domestic operator to a 25% holding. A second attempt in 2013 also failed. Financially, 2015 and 2016 were extremely difficult for Fastjet and saw them record widening losses. In August of 2016, Nico Bezuidenhout, the former CEO of Mango and acting CEO of SAA, joined Fastjet as their new CEO. His immediate task was to stabilise operations. One of the first measures implemented was to relocate the airline's headquarters from London to Johannesburg – a move seen by analysts as a cost–saving measure and a strategic measure aimed at facilitating eventual entry into the South African domestic market (Flight Global, 2016b).

Comair (*see* section 2.4.2.1 for the description of the airline's operational features) have extended their market reach and source markets by concluding a number of interline and codeshare agreements with a number of long-haul airlines. The largest of which is a partnership with Air France which will facilitate passengers arriving from France to easily connect to kulula.com served destinations in South Africa (Traveller24, 2014). A partnership was also struck with another Skyteam member – Kenya Airways. In October of 2016, a codeshare agreement was made between kulula.com and Etihad Airways of the UAE, providing even more access to arriving passengers from beyond South Africa's borders. Comair, as a private operator, is a constant fighter of the inequality of the state-supported dominance of the SAA group. The airline has also strongly opposed licence applications of many new operators (e.g. FlySafair and Fastjet) to ensure regulations and competitive fairness are adhered to. In June 2015, it was announced that HNA Group one BV, a Dutch company wholly-owned by China's HNA group, had obtained a US $13 million (6.2%) stake in Comair as part of the group's expansion strategy (Centre for Aviation, 2015c). The exact benefits of the deal are yet to emerge. Back in 2013, FlySafair lodged a complaint against Comair with the Air Services Licensing Council (ASLC) alleging that the airline group had breached the 25% limit relating to foreign shareholding of a domestic carrier after the repurchase of some of its shares (Business Day, 2016). In May of 2016, Comair obtained an interdict against the ASLC barring the council from suspending Comair's air services licence thus ensuring that the airline's licence will not be suspended until the matter has been reviewed by the courts.

SAA is a state-owned airline backed by state guarantees and is the largest carrier in South Africa (*see* section 2.4.2.1 for the description of the airline's operational features). As such, the airline's competitive/ anti-competitive activities have a significant impact on the South African domestic air transport industry. The financial difficulties of the SAA group were briefly outlined in chapter 2. A review of newspaper articles and other industry sources show that SAA has been in management and financial turmoil for at least the past 5 years. The airline has had many CEOs come and go with many turnaround strategies being proposed and partially implemented before the emergence of the next crisis. Losses at the carrier have required that the airline obtain frequent guarantees from the National treasury as backing for the airlines debts. This allows the airline to fund its losses through loans backed by the guarantees and thus free the airline from the prospect of having to recover its losses from the customer or cost-cutting (Vermooten, 2015:10–16). This artificially allows the airline to be price aggressive when competing in the market because their competitors do not have the government guarantees, and thus have to recover their costs/losses from customers through increased prices or other cost-cutting measures which could affect their competitive position. In other words, airlines like British Airways (Comair), kulula.com, FlySafair, and Fly Blue Crane are required to compete on the strength of their own business models against the strength of SAA's state-backed coffers. Clearly, there is not a level playing field in the South African domestic air transport industry. SAA received ZAR 14.4 billion in government guarantees in the 2014/2015 period and in August 2016 it was reported that there was only ZAR 99 million left for the airline to borrow against these guarantees (Business Day, 2016a). In September 2016, a further guarantee of ZAR 4.7 billion was provided to allow the carrier to finalise its financial statements resulting in the total guarantee amounting to ZAR 19.1 billion (Ensor, 2016b). The airline has since stated that it needs a further cash injection of ZAR 2.3 billion to bridge a funding gap. This additional ZAR 2.3 billion bailout was granted in July 2017 to ensure that the airline was able to meet its commitments (Chambers & Joubert, 2017). A further burden placed on the carrier's finances a high court judgement in August 2016 that SAA needs to pay ZAR 104.5 million to the liquidators of the Nationwide Airlines as a result of being found guilty of anti-competitive behaviour (abuse of dominant position in 2001–2005) by the Competition tribunal (Rabkin, 2016). Comair, a much larger operator, has a similar claim against SAA of over ZAR 1 billion.

Frequent allegations of financial mismanagement, questionable contracts being awarded, and mishandling of purchasing processes all contribute to the airlines' precarious position. Government interventions/mingling and disputes between the SAA chairperson and board members during 2015/2016 further reinforce the need for drastic changes at the airline. February 2016 saw the minister of Finance suggest that SAA, Mango, and SA Express should be merged under a state-owned aviation holding company or merged into a single entity (Veitch, 2016). It was also suggested that a 25% stake could be sold in the holding company to a minority partner. The speech by the minister of Finance regarding the proposed merger prompted FlySafair to state that they would be interested in buying Mango from the government at 'the right price' (Business Day, 2016b). Comair expressed a similar interest, with both airlines stating that it would have to be an outright purchase from the government as they had no interest in being equity partners in SAA. In (January 2017), Bain and Company was appointed to develop the plan for the merger of the three airlines and were expected to deliver a brief at the end of January 2017.

An analysis in 2011 by Datamonitor (2011:13–20) highlighted some of the key competitive issues in the South African air transport industry. These are still valid in 2016 and include:

- Buyer price sensitivity in the market is high due to the tough economic conditions and the consumers' ability to conduct online price comparisons.
- The switching costs for the consumer to switch to another airline are relatively low.
- Airlines have few options when it comes to selecting aircraft for their operations. Boeing and Airbus dominate and offer the carriers limited bargaining power.
- Jet fuel suppliers are limited, which reduce an airline's bargaining power on the price paid.
- ACSA hold a strong position over airlines as they control the main airports. Airports fees and taxes are largely beyond the airlines' and consumers control.
- The barriers to entry to the market are considered quite high. These include the cost of aircraft, the cost of establishing flight operations at an airport, the difficulty of obtaining favourable slots, the costs of establishing a distribution system, high fuel and labour costs, cost of meeting regulatory requirements and obtaining operating certificates, and the restrictions imposed by the lack of an open skies policy or the implementation thereof.
- There are a number of substitutes to air travel. A large portion of the population makes use of bus and taxi for long distance travel. These trips are taken by low income earners who cannot afford air travel or do not consider air travel due to its perceived high cost.
- The rivalry within the industry is considered to be very high. Competition on the basis of price is particularly high given the limited mix of airlines in the market competing on a small number of routes that are currently saturated.

### 5.4.5 The issue of taxes and airport tariffs in South Africa

Brief reference was made to the issue of taxes and tariffs charged by South African airports in section 2.2.1 and section 2.5.2. Section 3.6.1 addressed the entire composition of the passenger ticket price (*see* table 3.10), whereas this section now focusses on one component: passenger taxes and service charges. One of the main issues of contention in the South African air transport industry is the high taxes, fees, surcharges and tariffs levied by the South African government and South African airports - airports controlled by ACSA in particular. Given that the key routes in the country all involve the use of ACSA airports, these high tariffs are unavoidable and thus significantly add to the costs to the airlines and the passengers in terms of the ticket price they have to pay. The tariffs and charges that ACSA levy are regulated and can be broken down into three main categories; landing charges, aircraft parking charges, and passenger service charges (ACSA, 2017). Passenger service charges are collected by the airline from the passenger and paid to the airport. Airlines are faced with landing charges, aircraft parking charges, and a number of other charges like apron fees and air traffic control fees from various suppliers. Most of these charges are based on the weight and origin of the aircraft and levied directly to the airlines. These costs are not recouped from the passenger directly as a separate charge but through the calculation of the base fare charged by the airline. The only non-ACSA airport that is used by the mainline domestic carriers is Lanseria international airport, which, on inspection, has lower tariffs than the ACSA airports.

The total fare paid by the South African passenger at ACSA airports is made up of a number of different components, as highlighted in table 5.14. In terms of the so-called 'airport taxes', the monies collected through a passenger's ticket are broken down into four main categories: taxes, regulated charges, non-regulated charges, and airline costs. These charges are made in addition to the base fare charged by the airline for the service they are providing.

**Table 5.14: Categorisation of airport charges for ACSA managed airports**

| Description | Examples |
|---|---|
| Taxes | • Value added tax<br>• International departure tax |
| Regulated charges | • ACSA passenger service charge<br>• SA Civil Aviation Authority safety charge<br>• Air Traffic and Navigation Services charge |
| Non-regulated charges | • ACS passenger charge (a company owned jointly by the airline associations) |
| Airline costs | • Fuel surcharge<br>• Insurance |

**Source:** ACSA (2017).

The entire fare charged to a passenger for a domestic airplane ticket in South Africa at ACSA airports breaks down into the following components (Stern, 2012:5; ACSA, 2017):

- Ticket base fare (charged by the airline - variable)
- VAT (levied by the state at 14 % on domestic tickets)
- Passenger service charge (levied by ACSA: ZAR 127 per sector or ZAR 254 per return trip)
- Passenger safety charge (South African civil aviation authority: ZAR 20,23 per sector or ZAR 40,46 per return trip – all airports including Lanseria)
- Fuel surcharge (levied by airline – discretionary amount)
- Air passenger tax on regional and international flights
- ACS passenger charges (Aviation coordination services for security services – ZAR 24 per sector or ZAR 48 per return trip).

The impact of the various fees and taxes can be illustrated using examples of a flight from ORTIA to CTIA and from Lanseria to CTIA. A flight option between two non-ACSA airports does not exist for the airlines that form part of the study. The examples given in table 5.15 reflect a one-way ticket between ORTIA and CTIA and a one-way ticket between Lanseria and CTIA departing 6 February 2017. The flights are quoted in South African Rands and include the selection of one checked bag. Departure times were set at between 8:10am–9:10am. Variations in the flight times reflect airline schedules that do not match exactly. (*see* section 3.6.1 for an example of the taxes and charges for a return ticket).

**Table 5.15: Domestic fares, taxes, and charges for a one-way flight**

| ORTIA – CTIA (6 February 2017) | SAA (9:10am) | Mango (8:10am) | BA (9:15am) | kulula.com (9:10am) | FlySafair (8.15am) |
|---|---|---|---|---|---|
| **Base fare** | **1010,00** | **799,72** | **810,00** | **680,00** | **813,83** |
| **Taxes and fees** | **312,63** | **283,19** | **284,63** | **266,43** | **285,17** |
| • South African airport tax | 127,00 | 127,00 | 127,00 | 127,00 | 127,00 |
| • Passenger service security charge | 24,00 | 24,00 | 24,00 | 24,00 | 24,00 |
| • South African VAT | 141,40 | 111,96 | 113,40 | 95,20 | 113,94 |
| • South African passenger safety charge | 20,23 | 20,23 | 20,23 | 20,23 | 20,23 |
| **Carrier imposed surcharges** | **641,00** | **0,00** | **954,00** | **0,00** | **0,00** |
| • Carrier surcharge | 641,00 | 0,00 | 954,00 | 0,00 | 0,00 |
| **Total fare** | **1963,63** | **1082,91** | **2048,63** | **946,43** | **1116,00** |

| LANSERIA – CTIA (6 February 2017) | Mango (8:55 am) | kulula.com (8:30 am) | FlySafair (8:30 am) |
|---|---|---|---|
| **Base fare** | **603,31** | **570,00** | **770,85** |
| **Taxes and fees** | **195,69** | **191,03** | **128,15** |
| • South African airport tax/ service charge | 72,00 | 72,00 | |
| • Passenger service security charge | 19,00 | 19,00 | |
| • South African VAT | 84,46 | 79,80 | 107,92 |
| • South African passenger safety charge | 20,23 | 20,23 | 20,23 |
| **Carrier imposed surcharges** | **0,00** | **0,00** | **0,00** |
| • Carrier surcharge | 0,00 | 0,00 | 0,00 |
| **Total fare** | **799,00** | **761,03** | **899,00** |

**Source:** Fares quoted in ZAR from www.flysaa.com, www.flymango.com, www.kulula.com, http://flysafair.co.za, and www.ba.co.za. [Quoted 24 January 2017].

Table 5.15 highlights that flights departing from Lanseria to CTIA are substantially cheaper than from ORTIA. Noticeably, even the LCC flights from Lanseria are much cheaper than LCC flights from ORTIA (base fares and overall fares). It can also be seen that the overall taxes and fees from Lanseria are cheaper than ORTIA. Excluding the variable VAT figure and the CAA passenger safety charge (R20,23), the difference between the departures from ORTIA and Lanseria are seen in the airport service charge (R127,00 vs R72,00) and the security charge (R24,00 vs R19,00). Also noticeable is the fact that the two FSC carriers from ORTIA impose a carrier charge (R641,00 and R954,00), which add a substantial amount to the fare paid by the consumer. None of the LCCs, from either ORTIA or Lanseria, impose a carrier charge. Taxes, fees, and surcharges make up 48.6% of the fare for SAA and 60.4% for BA, whilst for the LCCs, the percentage is much lower averaging around 25% of the total fare.

ACSA has over the years significantly increased their charges to airlines and passengers to fund their expansion activities. In preparation for the 2010 FIFA football World Cup, ACSA engaged in significant development to its airports, mainly at ORTIA, CTIA, and the development of the KSIA in

Durban. A total of ZAR 17.8 billion was invested (Ensor, 2012) to fund this refurbishment and development. This investment was funded from borrowings and needs to be repaid. In order to do this, ACSA deemed it necessary to substantially increase its tariffs over a cycle of 5 years which caused significant protests from airlines, passengers and industry organisations (IATA for example). ACSA itself, is regulated by an independent regulating committee which oversees the economic regulation of ACSA's economic activity which includes the tariffs charged (ACSA, 2017). Therefore, in order to increase its tariffs, ACSA has to consult with the relevant stakeholders and then apply for permission for the increase to the regulatory committee who promulgates the 'Permission'. ACSA can then increase its tariffs as per the stipulations of the Permission. For the 2009/2010 period ACSA requested a 133% increase but it was not approved. After a number of legal battles a new Permission was established in 2011 which stipulated the annual increases that ACSA could implement for the 2010–2014 period. This was as follows (ACSA, 2013):

| 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| 33% | 34,8% | 30,6% | 5,5% | 5,6% |

The above increases were implemented and over the five-year period airport tariffs were increased by an effective 161%. The regulating committee published the draft Permission for 2016–2020 in May 2015. The tariff structure proposed by the regulator saw a 42.5% reduction for the first year, followed by yearly increases of 4.1%, 15.8%, 15.9%, and 4.0% (ACSA, 2016i:37). This proposal concerned ACSA as it would reduce their revenue to be used to pay debts still owing for the 2010 World Cup upgrades and other projects. On the 23rd December 2016, after delays of over a year, the regulator finalised the tariff structure for 2016–2020. The final tariff structure indicates that from 1 April 2017 airport charges will decrease by 35.5% for the 2017/18 financial year. This will be followed by a 5.8% increase in the 2018/2019 financial year and a 7.4% increase in the 2019/2020 financial year (ACSA, 2017a). The 35.5% tariff decrease means the departing passenger service charge at ACSA airports will reduce from R127,00 to R82,00. Between 1 April 2015 and 1 April 2017, ACSA operated on a 0% increase whilst waiting for the regulator to finalise the charge structure. ACSA shareholders fear that the approved 35.5% tariff decrease for 2017 will decrease the revenue collected by ACSA and affect the ability of the organisation to repay its ZAR 11 billion debt (Gernetzky, 2017). Whilst the general reaction to the 35.5% tariff decrease was positive, Eric Venter (CEO of Comair), voiced the opinion that it was not enough given the 'super profits' ACSA had made in 2015 and 2016 due to underspending on their capex budget, continued charging of high tariffs, and the profits from the sale of the old Durban airport (Traveller24, 2017a).

The airlines have been particularly vocal regarding the increases in tariffs and charges and have suggested that the increases have been a definite contributory factor to the demise of airlines like Velvet Sky, Nationwide, 1time, and Skywise. Erik Venter, CEO of Comair, not only berates the increases as unjustified but states that a lot of the investments made were poorly controlled and unnecessary. In this regard, he cites the budgetary overruns to the tune of ZAR 4.5 billion in the construction of the KSIA (ZAR 7 billion instead of ZAR 2.5 billion) and emphasises that the airport was not actually necessary at that stage because the old Durban airport could have been extended for 10 more years at a cost of around ZAR 1.5 billion (Weavind, 2012). IATA has been particularly critical of the charge and tariff increases at ACSA airports. At the organisation's 66th annual AGM during the state of the industry address ACSA was named on the organisation's wall of shame and described as 'a national embarrassment' for increasing the country's tariffs and charges bill by US $1.2 billion for the next five years (IATA, 2010). These comments were reinforced in May 2011 by IATA's then director general, Giovanni Bisignani, at a press briefing in Johannesburg (IATA, 2011b) and in October 2011 by Tony Tyler (another former IATA Director General) who focussed on the negative impacts of the tariff increases. Tyler noted that, whilst IATA agrees that the airports developments are world class, they are coming at a cost, making South Africa's airports some of the most expensive in the world in terms of tariffs and charges and therefore run the serious risk of making the country less competitive in tourism and exports (IATA, 2011c). IATA have since expressed optimism relating to ongoing dialogue with ACSA regarding their development plans and how large tariff increases can be avoided (IATA, 2014a).

Given the limitations of the South African domestic air transport market, coupled with ACSA's control of domestic airports and its need to repay its debts, the industry bargaining power will remain with ACSA for the foreseeable future.

### 5.4.6 Summarised SWOT analysis

Reviewing the sources referred to throughout this chapter, numerous strengths, weaknesses, opportunities, and threats affecting the South African air transport industry are identified. These are summarised in table 5.16.

**Table 5.16: Summarised SWOT analysis**

| **Strengths** |
|---|
| • There is a large and growing tourism industry.<br>• The aviation industry in the country is an economic multiplier supporting over 200 000 jobs in the country.<br>• South Africa has a good reputation when it comes to hosting large sports/cultural/environmental events.<br>• World class airports.<br>• South Africa is an established regional hub connecting with the continent and international markets.<br>• Air travel is more convenient between the larger cities in South Africa than any other form of transport.<br>• Excellent overall regulation of the civil aviation industry. |
| **Weaknesses** |
| • High airport taxes and tariffs<br>• A battling SAA that has the bulk of the market and is subject to state intervention.<br>• Lack of secondary airports.<br>• Relatively low levels of transformation in the industry.<br>• Lack of sufficient skills in many areas of expertise required to develop the industry.<br>• Insufficient market liberalisation through the implementation of the Yamoussoukro Decision.<br>• Intense rivalry between competitors leading to predatory pricing.<br>• The low level of income of a large portion of the population restrict the number of people that are able to fly.<br>• Restricted market due to geographic location.<br>• High operating costs and difficulty in obtaining institutional funding. |

| Opportunities |
| --- |
| • Serving as a gateway to Sub-Saharan Africa using the strength of airport infrastructure.<br>• Sub-Saharan and southern African expansion with the implementation of the Yamoussoukro Decision.<br>• Growth into the packaged tour and charter markets.<br>• Long haul options to China and other parts of the Asian continent.<br>• With the growing middle class, opportunities exist to entice travellers that previously self-drove or used taxis to long distance destinations. |
| **Threats** |
| • Eastern African countries like Ethiopia or Kenya positioning themselves as a better option as the hub for central and Southern Africa over Johannesburg, which could have a significant impact on traffic.<br>• Escalation in geopolitical tension across the globe – including terrorist attacks and cybercrimes.<br>• Fears arising from the spread of contagious diseases (Zika, SARS etc.).<br>• Currency volatility which affects the strength of the Rand. Planes and fuel are purchased in Dollars.<br>• Spikes in the price of jet fuel arising from global uncertainties and conflicts.<br>• Rising airport taxes and government imposed environmental taxes.<br>• Crime, corruption, and the influence of publicised violent strike actions.<br>• The growing dominance of international carriers into the African market at the expense of African carriers. |

**Source:** Adapted from Stern (2012:35), Business Monitor International (2012:6), and Veitch (2016:53–54).

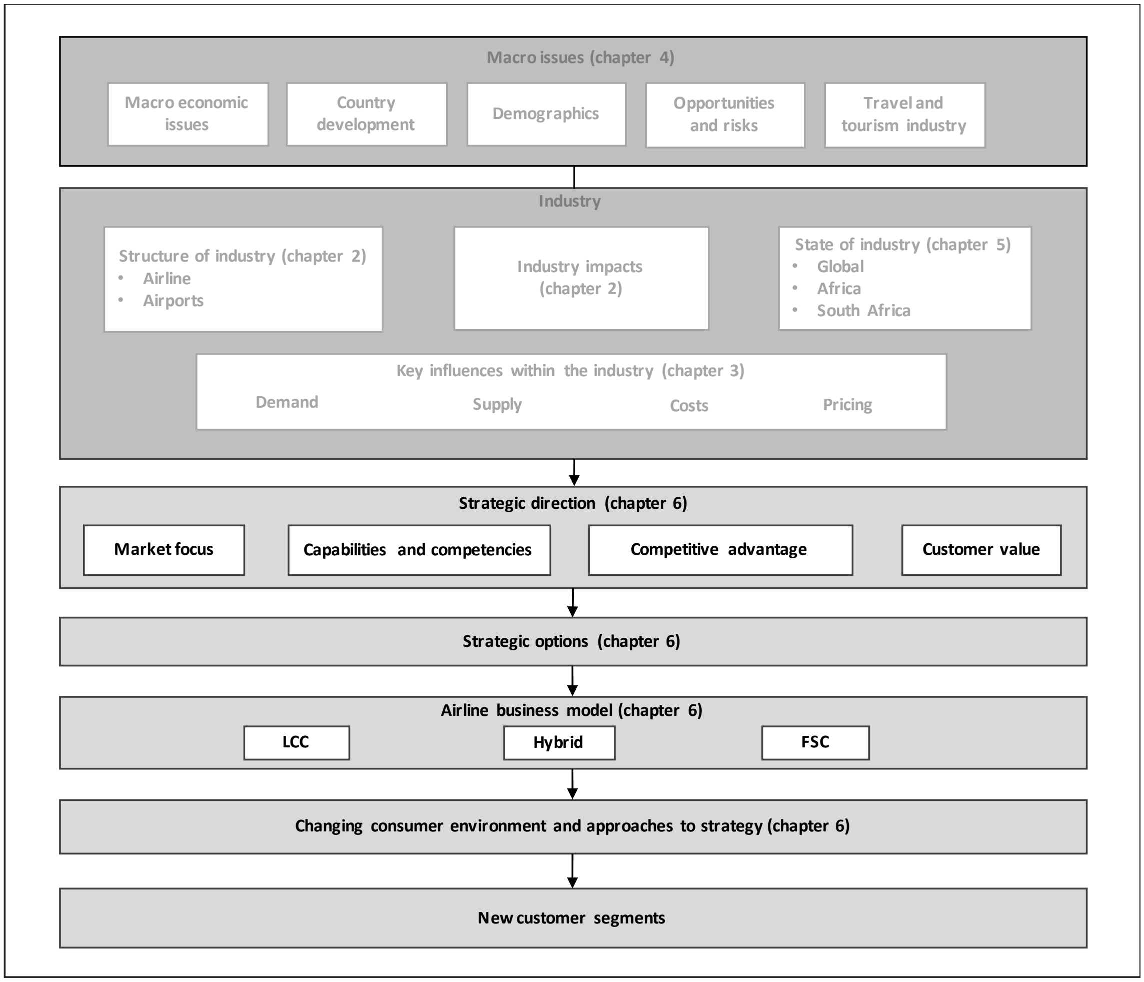
## 5.5 SUMMARY

This chapter covered a large body of work in order to establish the environment in which the air transport industry operates and some of the main issues which have a significant influence over the operation of the industry. The purpose of this chapter is to contextualise the air transport environment in which the South African carriers operate and thereby establish the environment within which consumer decisions are made. An understanding the limited options available to the consumer, and the way in which the carriers compete, provides a clearer framework within which recommendations can be made.

A review was given of the impacts of globalisation and liberalisation on the industry followed by an overview of the state of the industry. The global industry was reviewed with specific focus on a number of industry relevant issues like capacity, RPKs, load factors, revenue, profitability, and yield. Of note in the review, was that whilst the global air transport industry has been achieving overall industry profitability, the African continent as a whole is still loss-making. Additionally, the LCC sector was reviewed in terms of its impact on the industry. The focus of attention then moved to the air travel industry on the African continent with attention given to issues surrounding the lack of implementation of the Yamoussoukro Decision. It was identified as very important that there be liberalisation of the African skies in order to enhance connectivity on the continent and thereby increase intra-African and international trade. Following this, a review was given on the general size and characteristics of the industry on the continent. The final part of the chapter shifted attention to the South African air transport industry. An outline of the structure of the South African aviation industry was given, followed by a quantification of the industry itself. Key points highlighted were the contribution of the industry to the South African economy and the level of competition being experienced within the industry. Specific emphasis was placed on the interaction between the various airlines in the South African air transport industry and the complexity of the competition. In this regard, the unfair financial support of South African Airways by the government was highlighted as a key reason behind the failure of many airlines in the country. The chapter also looked at the concerns revolving around airports charges at South African airports. Finally, a summarised SWOT analysis of the South African air transport industry was given to highlight some of the key issues that need to be considered into the future development.

Chapter 6 considers the theoretical aspects of the three airline business models being implemented, with specific attention given to the newer model in the South African market; the low-cost carrier model.

## Chapter six in the context of the thesis model



# CHAPTER 6

# THE LOW-COST AND FULL-SERVICE CARRIER BUSINESS STRATEGY

> *If all you're trying to do is essentially the same thing as your rivals, then it's unlikely that you'll be very successful.*
>
> *— Michael Porter.*

## 6.1 INTRODUCTION

The opening quote by Porter, who is renowned as a business strategist, can be seen as the fundamental argument why competitive advantage is so important in any industry. For any business, the overall goal is to achieve a profit from its activities through the delivery of a need-satisfying product/service to the consumer in a manner that leaves the customer satisfied with the experience. To do this, the business needs to use its resources and capabilities to develop a need-satisfying product in a manner that delivers value to the customer. From the outset, it is essential that any business carefully selects its strategic direction to ensure that appropriate strategies are developed in accordance with the chosen direction. The strategies that are developed need to be developed in such a way that they make use of the business's core competencies to establish a sustainable competitive advantage in the markets that are served.

The focus of chapter five was on the quantification of the LCC and FSC models in air transport market, which included a review of the global industry (section 5.2.3), the African industry (section 5.3), and the South African industry (section 5.4.2). In this chapter, the focus is on addressing the theoretical aspects relating to the core business strategies being utilised in the air transport industry with a particular focus on the strategic approaches being followed by the LCCs and FSCs. Attention is given to outlining the LCC model and how it differs from the traditional FSC model in terms of the approach to strategy composition. In addition to this, comment is given on the impact that the development of the LCC model has had on the industry (as introduced in section 1.7.4.3 of this study). From a consumer perspective, this chapter will build on the broad introductory discussion given on the changing consumer market in section 1.2.3 of this study. Insights will be given on how the development of the LCC model and advances in technology have changed consumer behaviours and expectations, with a number of emerging passenger segments identified.

## 6.2 STRATEGIC DIRECTION

There are many strategic options for the business to consider when determining its strategic direction and thus the business model adopted. Over time, old theories have evolved into new models appropriate for the changing times in which the global business environment currently operates. Looking at the nature of the global air transport industry, particularly in the context of this study, it can be seen that two distinct business models are in operation; the LCC model and the FSC model. A review of these models shows that they closely follow the generic strategies identified by Porter (1985) in his competitive strategies model. In addition to this, it can be seen that some airlines following the LCC and FSC models are evolving into what are termed 'hybrid carriers' (*see* section 2.2.2). The hybrid strategy is in effect, a low-cost differentiation strategy, which also forms part of the Porter generic competitive strategy model.

The classification of business strategies is not always as straightforward as it may seem. Each industry, and indeed business, has its own strategic approach to business and formulates its strategies using a variety of approaches that incorporate strategic elements from a number of strategic alternatives. The focus of attention in this section is to put the key concepts into context and then outline the main generic strategies being utilised by the various airlines.

### 6.2.1 The importance of customer value, competencies, and sustainable competitive advantage

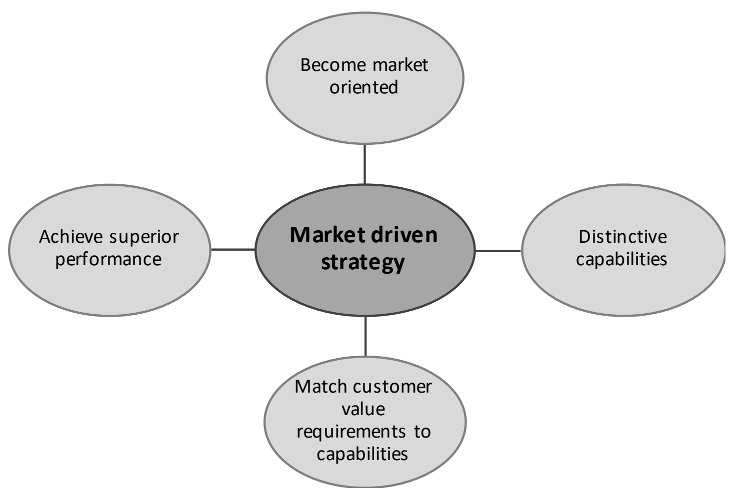
In this section, a discussion will be given on the key concepts in strategic management that are instrumental in establishing the strategic direction taken by a particular business. This will provide a platform for the discussions in the rest of the chapter. These key concepts are identified in the model developed for the thesis (*see* figure 1.2 on page 23) in the 'strategic options' block and include: market focus, capabilities and competencies, customer value, and competitive advantage.

#### 6.2.1.1 Being market focussed

With the development of technology has come greater understanding of the world around us and the ability to produce more sophisticated products and services to satisfy the needs and wants of the consumer. A spin-off of this has been a more knowledgeable consumer who has come to expect more from the products and services they purchase. Consumers have also evolved in the way in which they respond to marketing messages. Under these circumstances, businesses have had to adapt their approach to the way in which they operate and thus build on their existing business model, or even develop a new business model, to adapt to the changing business environment and nature of competition. As referred to in section 1.7.2 of the study, with such demands being placed on the business by the consumer, the market, and competitors, it is essential that businesses adopt a market-driven approach to their business operations and strategy development (Cravens & Piercy, 2013:2).

Important to a market-driven approach to business and strategy development is that the market and customers in the market form the basis of the strategies that are developed (Cravens & Piercy, 2013:4). Cravens and Piercy further identify four characteristics of market-driven strategies. These are summarised in figure 6.1. Through becoming market-oriented, the business is able to match its distinctive capabilities to the value requirements of customers in the market. By obtaining this match between market requirements and distinctive capabilities, the business is able to develop a market-driven strategy and thus achieve superior performance in the market.

**Figure 6.1: Characteristics of market driven strategies**




**Source:** Cravens and Piercy (2013:5).

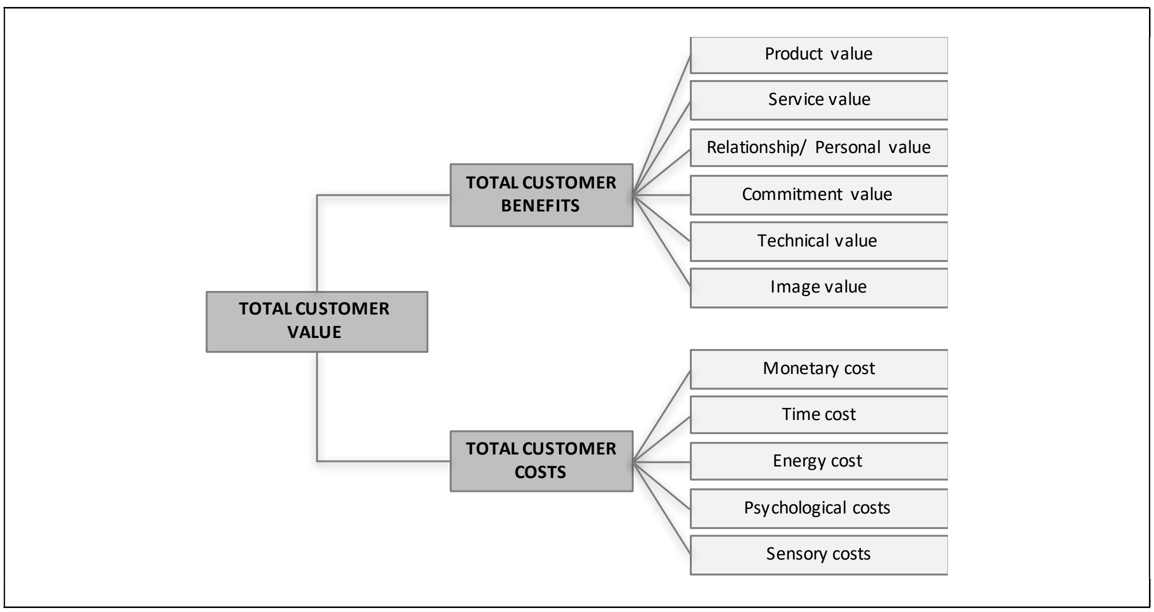
Cravens and Piercy (2013:4) state that becoming market-oriented is the essential starting point of a market-driven strategy. In this regard, they highlight four requirements that are crucial if a market-orientation is to be achieved. Firstly, to become a market-oriented business requires a focus on the customer and their needs so that superior customer value is delivered through the products and services. Secondly, a market-orientation also requires that a business recognises the need to obtain intelligence on the market, its customers and competitors. This intelligence serves as an input to the market strategy decision-making. Thirdly, achieving a market-orientation requires that there be 'cross-functional co-ordination'. Individual functions need to co-ordinate their actions and work together to achieve superior customer value. Finally, becoming market-oriented implies a continual assessment of the market and a collaborative approach to analysing markets, customers, and competitors as well as collaboration in deciding on which strategic actions to take based on the assessment.

#### 6.2.1.2 Creating customer value

The discussion in the previous section highlighted that a market-oriented approach to strategy development requires a match between the value requirements of the customer and the capabilities of the business. This match should lead to a sustainable competitive advantage over competitors and the achievement of superior performance (as per figure 6.1). This section puts the concept of 'customer value' into context for this study.

The seminal work of Piercy in 1997 (1997:65) stated that in the course of discovering needs and how to satisfy them, customers develop specific value expectations and base their purchases on their perceptions of the benefits a product or service offers in relation to the total costs associated with the purchase of the product or service. Simply stated, customer value is the difference between the perceived benefits the customer receives from the purchase of the product and the cost of acquiring the product relative to competing offerings (Armstrong, Kotler, & Opresnik, 2017:41). This relationship between customer costs and customer benefits is illustrated in figure 6.2.

**Figure 6.2: The relationship between customer benefits and customer costs**




**Source:** Adapted from Lovelock and Wirtz (2011:164), and Louw and Venter (2013:293).

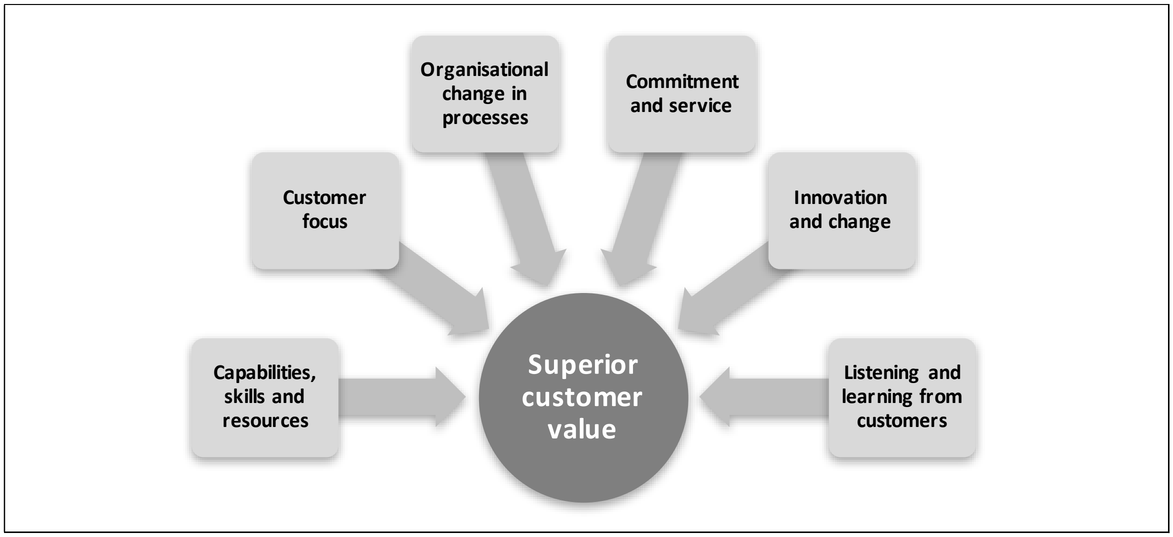
As can be seen from figure 6.2, the authors highlight that the benefit or value the customer receives takes on many forms. Product value relates to the features that form part of the product. Service value refers to the support offered to the customer during, and after, the purchase of the product. Technical value relates to the technical specifications of the product. For example, old or obsolete technology does not add much value to the customer compared to the latest technology, which offers more advanced benefits. Commitment value is reflected in the way in which the business relates to its customers and their efforts to ensure a high-quality product. The value offered by the image of the product or service links in with social perception and self-esteem issues associated with the use of the product. Looking beyond the main categories identified, Louw and Venter (2006:186) highlight a number of specific factors that add value for the customer. These include robustness, price, lead time, flexibility, process design, reliability, product design, service empathy, and information systems.

The second component of the customer value equation relates to the costs to the customer associated with the purchase of the product or service (as opposed to costs to the airlines as addressed in section 3.5.1). The costs to the customer can be reflected in the monetary value that is paid to the seller – the actual price of the item. Internal costs include aspects such as time spent in the process of purchasing the product, the cost of maintaining the product, or effort spent to learn how to gain optimal use of all the features of the product. Psychological costs refer to the potential risk involved in the purchase, which could be group or individual related (social or self-esteem related). Sensory costs to the customer include the risk of unpleasant smells during use of the product/service or uncomfortable conditions (like an uncomfortable seat on a plane for example) (Lovelock & Wirtz, 2011:164).

To meet the customer value expectations, it is essential that the value received outweighs the cost of acquiring and using the product. Hollensen (2010:138) states that this customer value determination is made more difficult by the fact that different customers view value differently. Additionally, it is highlighted that circumstances change and what is viewed as high value today might be viewed as insufficient tomorrow. Additionally, they state that what one customer considers to be value adding is viewed differently or less important by another customer. This all reinforces the point made earlier that to be market-oriented requires a customer focus and continual intelligence gathering on customers, markets, and competitors to remain in-tune with the market and the market's value expectations. The final point to be emphasised is that value is customer-based and not business based. In other words, value is based on what the customer views as being of value as well as the customer's perceptions of the value a product or service offers at a particular time.

Simply delivering customer value is, however, not sufficient. Delivering customer value puts the business in the game, but does not guarantee success or customer loyalty. Excellent customer value does not make the business stand out from its competitors if all competitors are delivering excellent customer value. For a business to be successful, it needs to deliver more customer value than its competitors; it must deliver superior value. Superior customer value is achieved when a customer's value experience exceeds expectations and continuously exceeds the value offered by competitors (Piercy, 1997:43; Hollensen, 2010:37). To achieve this superior customer value, the business needs to be aware of the sources or bases of superior customer value. Figure 6.3 visually identifies six sources of superior customer value. By addressing each of these bases and applying them to the business's product/ service, a business will be in a better position to deliver superior customer value.

**Figure 6.3: Bases of superior customer value**




**Source:** Piercy (1997:66).

A review of the bases identified in figure 6.3 will show that they are very closely linked to the characteristics of market-driven strategies identified in figure 6.1. The goal of achieving superior customer value is to achieve a sustainable competitive advantage over competitors. To achieve this superior customer value and sustainable competitive advantage, the business must develop appropriate market strategies that utilise their core competencies in a way that maximises customer benefits and minimises customer costs (Hollensen, 2010:37).

#### 6.2.1.3 Determining capabilities and core competencies

In simplistic terms, a capability of a business refers to what the business does well. Specific competencies, for example, relate to the technology utilised by the company, the quality of the staff working for the company, financial resources, or access to raw materials in the production process. Whilst a business may have many capabilities, not all of them are core competencies. Competencies are defined in Cravens and Piercy (2013:6) as "complex bundles of skills and accumulated knowledge, exercised through organisational processes, that enable firms to co-ordinate activities and make use of their assets". Baker (2014:81) defined a core competency as, "a bundle of skills and technologies that enables a company to provide a particular benefit to customers. It represents the sum of learning across individual skill sets and individual organisational units". Hitt, Ireland, and Hoskisson (2015:84) took this definition a bit further by stating that core competencies are "activities the company especially compared to competitors and through which the business adds unique value to the goods or services it sells to customers. Dess, Lumpkin, Eisner and McNamara (2012:206) add that core competencies are the "strategic resources of a business that reflect the collective learning in the business". These resources or capabilities can be classified as strategic, functional, or operational and that they may lie with individuals, groups within the business, or at the corporate level (Blythe & Megicks, 2010:51; Grant, 2013:122–126).

Core competencies are those that, when combined with other competencies, play a significant role in the survival of the business in the market in which it operates. Work done by Prahalad and Hamel (1990:83) as far back as 1990 set the foundation for understanding and identifying core competencies. Their work suggested that a resource should undergo three tests in order to identify a core competency. These three tests essentially seek to identify core characteristics among a business's resources, assets, and capabilities to identify those that will provide the business with an advantage over competitors. The tests were originally identified and explored by Prahalad and Hamel and have been addressed and re-explored in many texts by different authors including Kotler and Keller (2006:39); Hooley, Piercy and Nicoulaud (2012:264); Dess et al. (2012:206); Mooradian, Matzler, and Ring (2012:220); Baker (2014:81); Hollensen and Opresnik (2015:82). Over time, as the field has developed, a fourth test has been added (Gamble, Peteraf, and Thompson, 2015:72; Hitt et al., 2015:86). These four tests are as follows:

1. **Is the resource or competency competitively valuable?** The use of the resource must add value to the customer if it is to be considered to be a core competency.
2. **Is the resource or competency unique?** It must be relatively unique to the business and can be applied in a wide variety of markets in which the business operates.
3. **Is the resource or capability difficult to imitate?** A core competency is not easily imitated by competitors. One that is easily copied can quickly be eroded by competitors thus rendering the advantage obsolete.
4. **Is the resource or capability non-substitutable?** There should be no strategic equivalent and thus not be substitutable by different types of resources or capabilities.

In addition to these four tests or characteristics, a business could consider whether a particular competency can enhance customer value through the combination with another skill or resource. The thought in this case is that a particular competency on its own might not meet the criteria for a core competency, but when combined with another competency it adds significant value to the business's competitiveness (Hollensen & Opresnik, 2015:82; Gamble et al., 2015:73).

Hooley et al. (2012:33) emphasise that it is important to identify a business's core competencies as they set the boundaries on the strategic options that are open to the business and establish the strengths that need to be taken advantage of and the weaknesses to be minimised. This is reinforced by earlier work by Hollensen (2010:31), which stated that by knowing their business's core competencies, managers can develop strategies that focus on the competencies and outsource activities where they are lacking.

In this regard Hollensen (2010:31) identified three attributes of competencies that are important to understand:

- Proprietariness – the competence is company-specific and can relate to a number of resources.
- Learning – a competency develops over a period of time through experience.
- Pervasiveness – the competency is seen throughout the entire business and is spread over the numerous business units.

Prahalad and Hamel (1990:83), in their early work, state that businesses probably only have about five to six core competencies and if they identify more than this they are merely developing a list of things they can do. Other sources suggest, that in many cases, only one or two core competencies should be identified (Blythe & Megicks, 2010:52; Louw & Venter, 2013:237). Ultimately, the core competencies that are identified must be agreed upon on a business-wide basis and utilised across the strategies of the business. In conclusion, core competencies are extremely important for a business as they guide strategy selection and serve as the basis for a sustainable competitive advantage.

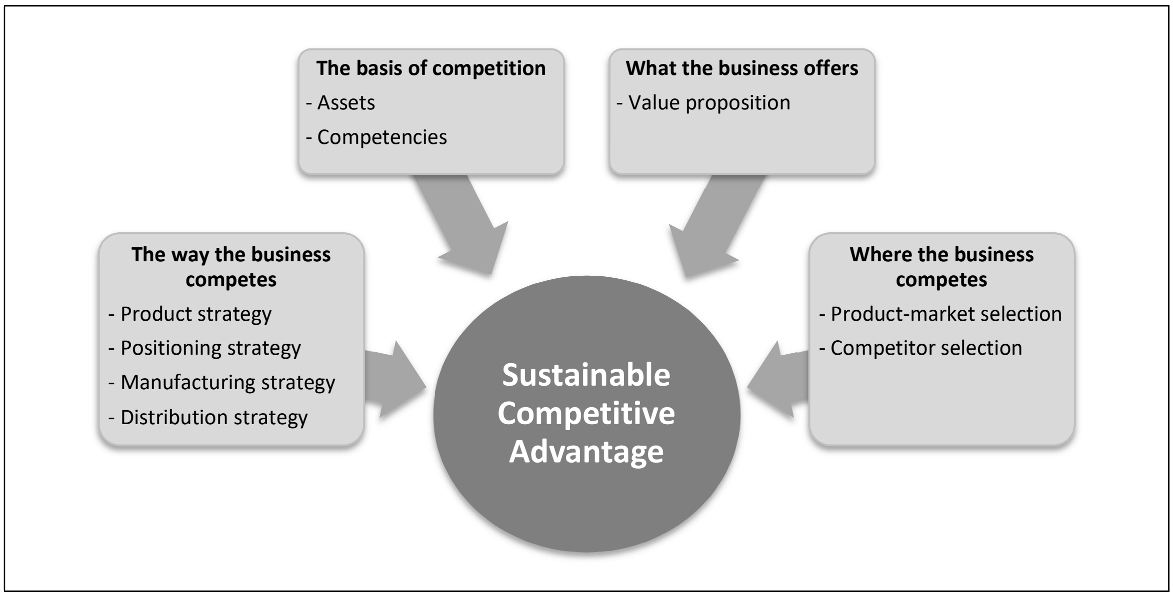
#### 6.2.1.4 Creating a Sustainable Competitive Advantage (SCA)

It was stated at the beginning of the section that to achieve superior performance in the market a business needs to be market-driven and match core competencies to customer value expectations. By doing so the business is in a position to establish a competitive advantage in its markets over competitors (as introduced in section 1.7.2 of this study). To be successful in the long term, this competitive advantage needs to be sustained over an extended period of time. A competitive advantage can be defined as "the prolonged benefit of implementing some unique value-creating strategy not simultaneously being implemented by any current or potential competitors along with the inability to duplicate the benefits of this strategy" (Baines & Fill, 2014:169). Jobber (2010:52) defined it as, "the achievement of superior performance through differentiation to provide superior customer value, or by managing to achieve the lowest delivered cost."

Of the numerous definitions put forward by various authors, the common thread between them all is that the advantage must deliver superior value over a period of time (Jooste, Strydom, Berndt, & Du Plessis, 2012:204). This necessitates that for a competitive advantage to be sustainable it must be something that a competitor cannot copy, or at the very least, cannot copy in the short or medium term. If it can be copied in the long term, then it should be something that requires an extreme effort and high level of investment to reach the same level.

A single core competence on its own may not necessarily lead to a sustainable competitive advantage. It is the manner in which the core resources and competencies are combined to carry out an activity that determines how successfully a business competes in a market. A sustainable competitive advantage is therefore a combination of a number of elements, including the business's core competencies, into meaningful competitive strategies that enable the business to outperform its competitors in the long term by delivering superior customer value. The composition of a sustainable competitive advantage, as addressed by Aaker (2005:142) in his early work on the topic is given in figure 6.4. It is essential that an airline marketer review their business in terms of the key points raised in figure 6.4 to ensure that they are developing and pursuing the most appropriate strategies to stand apart from competitors in the consumer's mind.

**Figure 6.4: The composition of a sustainable competitive advantage**




**Source:** Aaker (2005:142).

Core competencies are not necessarily always going to remain as strong as they initially were. In order to sustain a competitive advantage, the business must modify or add to the combination of core competencies to ensure that the best combination of core competencies is available to maintain a competitive advantage. This requires that the core competencies be measured against the three characteristics of a core competency to ensure that it still meets the criteria identified in section 6.2.1.3.

Keeping the strategic options that are available to a business, like an airline, to pursue in mind, it is prudent to identify a number of key areas where a sustainable competitive advantage can be developed. Whilst they are similar to those relating to a core competency, in this section the key areas are more narrowly identified to make a more direct link to strategic options and the direction of strategy development. Wilson & Gilligan (2009:55) identified three main groups that can serve as bases for developing a sustainable competitive advantage. These include organisational advantages (e.g. size, financial strengths, and economies of scope), departmental and functional advantages (e.g. marketing, human resources, and production), and advantages based on relationships with external bodies (e.g. relationships with customers, preferential treatment from political bodies or financial institutions). Whilst all bases offer the potential to achieve an SCA, history has shown that the most significant areas where an SCA can be achieved are those identified in table 6.1. In line with the principle of being customer-driven and seeking to ensure customer satisfaction, it is essential that a sustainable competitive advantage be considered in terms of the customer and how it is of benefit to the customer and the value they perceive.

**Table 6.1: Sources of the most significant potential sustainable competitive advantages**

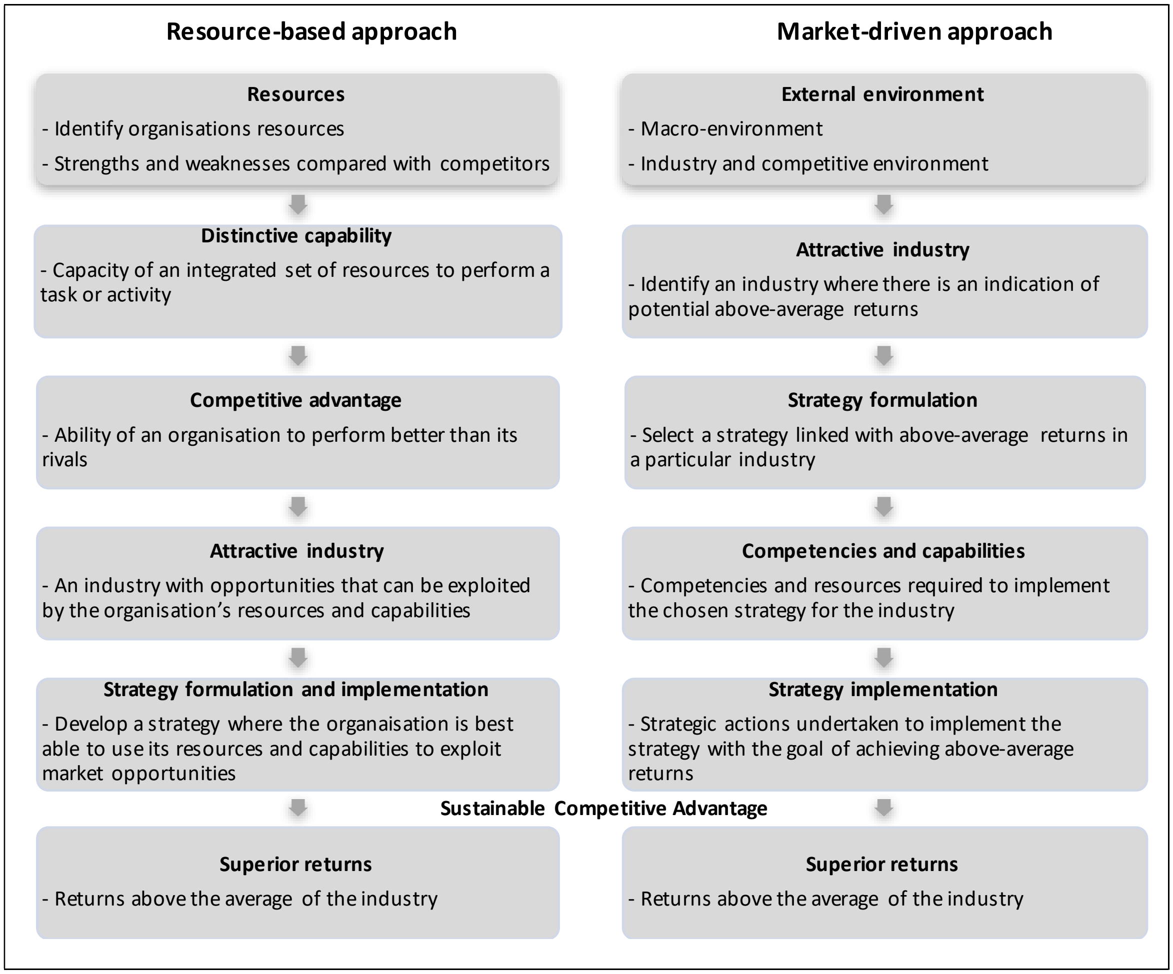
| Source of competitive advantage | Application |
|---|---|
| Superior product or service benefit | Robustness or endurance linked to product |
| Perceived advantage or superiority | Perceived image associated with a brand |
| Low-cost operations | Low overheads, streamlined distribution methods |
| Legal advantages | Patents, copyright, tariff protection or exemptions |
| Experience in global operations, global skills and global reach | Experience, skills, and knowledge of different markets and the ability to adapt |
| Superior contacts and relationships | With suppliers, financiers, government departments |
| Superior competencies | Superior information gathering and analysis systems, stock managing systems etc. |
| Scale advantages | Long production runs, mass production which reduce per unit costs |
| Offensive attitude | Sheer willingness to succeed and outperform competitors |
| Superior assets | Better quality assets in terms of sophistication or newness for example |

**Source:** Jooste et al. (2012:221–224).

The goal of achieving a sustainable competitive advantage, and ultimately superior performance, can be addressed from a market-driven perspective and a resource-based perspective. With reference to the model developed for the thesis in section 1.7.2, these perspectives a can also be viewed as an 'outside-in' and an 'inside-out' perspective respectively (Louw & Venter, 2013:23–30; Hitt, Ireland, & Hoskisson, 2015:14–15). In section 6.2.1.1 the focus was on the need to be market-driven and was illustrated in figure 6.1. Whilst each approach takes a different perspective on how to achieve superior returns in the market, there are number of key commonalities between the two perspectives. The difference between these two approaches is illustrated in figure 6.5.

From figure 6.5 it can be seen that the resource-based approach entails the development of strategies around the resources and capabilities of the business, whilst in the market-driven approach, the focus is on customer needs and events in the external environment. It is clear in both approaches that a sustainable competitive advantage and superior returns are dependent on the business making use of its resources and core competencies to formulate a strategy focussed on an attractive market to achieve a competitive advantage. Ultimately, no matter which approach is preferred, the key to achieving an SCA is to ensure that the strategy developed is consistent with the internal and external environments of the business (Louw & Venter, 2013:23).

**Figure 6.5: Market-driven and resource-driven approaches to superior performance**




**Source:** Blythe and Megicks (2010:47–54), Louw and Venter (2013:23–32), and Hollensen and Opresnik (2015:80).

To summarise, the overall goal of a business is to achieve superior performance in the market. This is done by delivering superior value to the customer in a way that maximises customer satisfaction and maximises profit to the company. In order to achieve a sustainable competitive advantage, the business has to identify its key resources and core capabilities that will give it an advantage over its competitors in the market. The business must then implement strategies that utilise these resources and core competencies. The business and marketing strategies that are developed will utilise the core competencies of the company to develop targeted marketing programmes and deliver exceptional customer value. It should be clear that the choice of a strategic direction and the selection of strategy alternatives requires a thorough understanding of the business's core competencies and how they can be used to develop a sustainable competitive advantage. With this in mind, the next section provides a context for the selection of a strategic direction. The strategic direction determines the business model selected. In the case of this study, it is the choice between the FSC model, the LCC model, or the hybrid model. The theory relating to each of these models is explored in detail in sections 6.3.4, 6.3.5, and 6.3.6 respectively.

### 6.2.2 Context for strategic direction

As stated in the previous section, the aim of this section is not to address all the theory relating to strategy and strategy development, but rather to put the key issues to be considered when adopting a business model and the basic foundations of the selected business model into perspective. In this case, the FSC model, the LCC model, or the evolving hybrid model. An understanding of the nature of the various airline business models and their strategic approaches means that an understanding of the context and roles of planning at the various levels in an organisation is essential. The standard levels of planning in an organisation take place at the corporate, business unit and functional levels with each lower hierarchical level guided by the direction provided by the level above and within the overall organisational framework (Louw & Venter, 2013:19–20). This is simplistically outlined in table 6.2. The crux of the matter is that when the strategic direction of a business is being planned, it is essential that it be done with the resources, assets, and core competencies of the business as a foundation.

**Table 6.2: Levels of strategy in context**

| Level of planning | Strategic perspective |
|---|---|
| Corporate level | • Overall purpose, scope, range, and diversity of the organisation |
| Business level | • Determining competitive strategy and achieving competitive advantage – business/ product/ service |
| Functional level | • Source of competitive advantage in terms of activities, processes, practices, and resources |

**Source:** Louw and Venter (2013:19–20), and Solomon, Marshall, Stuart, Barnes, and Mitchell (2013:51).

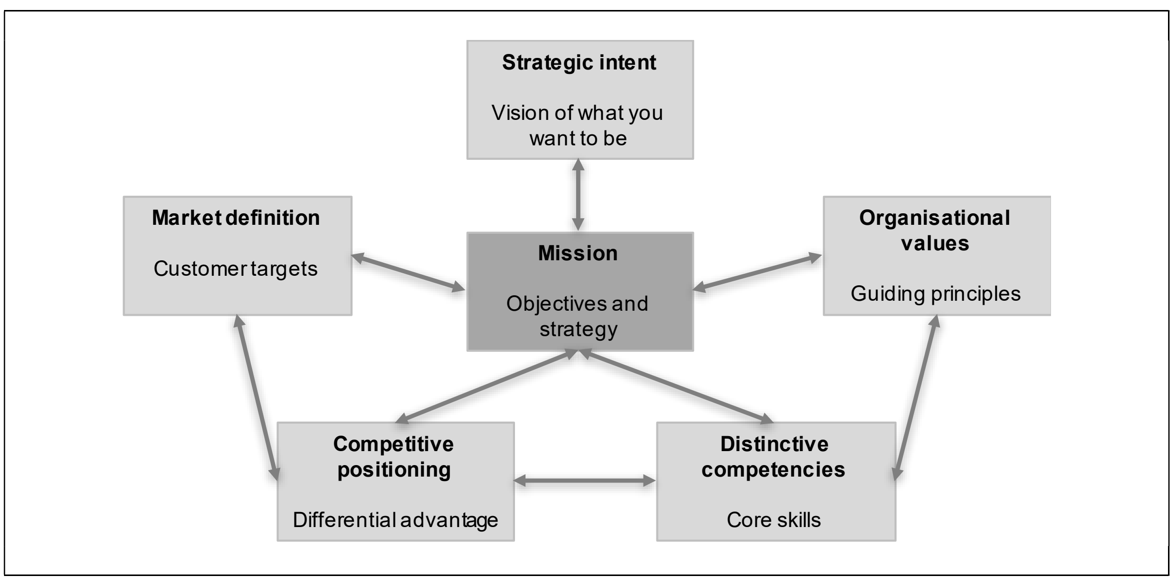
At the outset, strategic direction needs to be established for a business (as identified in section 1.7.2 in the model for the thesis). This starts at the corporate level. Mullins and Walker (2013:40–41) state that corporate direction consists of a number of broad statements that establish the position of the organisation on a number of issues that will guide the development of objectives and strategies at all levels of planning in the organisation. In earlier work, Jain (2000:186) highlighted that the statement of strategic direction is important for a number of reasons:

- It helps identify what fits and what the organisation is capable of doing based on its resources and assets.
- Aids in the analysis of potential synergies.
- The undertaking of risks that otherwise could not be justified.
- Provides the ability to act fast and take advantage of opportunities that present themselves.
- More clearly focuses the search for opportunities and strategic options.

Prahalad and Hamel (1989) in their early seminal work referred to the concept of 'strategic intent'. This concept expresses the direction that the business wishes to take, what it aspires to be, and what actions it intends taking to get there. In formal terms, the strategic direction and intent of an organisation is encapsulated in the organisation's vision and mission (*see* section 1.7.2 of this study). Cravens and Piercy (2013:12) view the vision as defining "what the organisation is, what it does and provides important guidelines for managing and improving the organisation". Louw and Venter (2013:106–107) add to this by stating that the vision states the main overall goal of the business and provides a vivid description of the direction of progress and the core ideology to be preserved. From another perspective, Baines and Fill (2014:154) state that the vision is a statement identifying what the business wants to become and gives shape and direction for the future. They identify that the vision should challenge the business, but ensure that employees feel involved and motivated to be part of the business's future.

The basic premise of the mission is to define the business in which the business currently operates and then to define the business it wants to be in. In the context of determining the strategic direction of the business, an organisational mission is considered the starting point of strategic planning and thus plays a crucial role in defining the selected strategic direction of a business. The development of the business mission should take the organisation's history, distinctive competencies and environment into account (Peter & Donnelly, 2013:9). In Jooste et al. (2012:172), an effective mission is identified as consisting of four key components. These include core purpose, core strategies, core values, and core standards and behaviour. Similarly, Hooley et al. (2012:30) suggest that an effective mission comprises five key components – strategic intent, organisational values, distinctive competencies, a market definition, and competitive positioning. These components are outlined in figure 6.6.

**Figure 6.6: Key components of the organisational mission**




**Source:** Hooley, Piercy, and Nicoulaud (2012:30).

From figure 6.6 it can be clearly seen that the mission has a direct link to the concepts addressed in section 6.2.1 and the inter-relatedness between the components highlights the importance of considering them in conjunction with each other to ensure the selection of the most appropriate strategic direction.

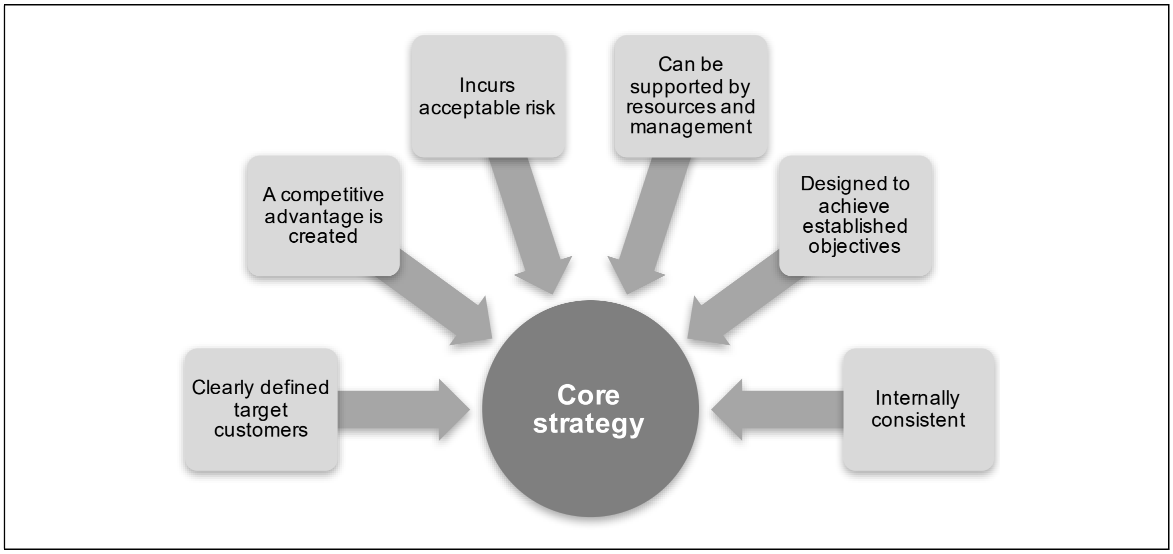
The mission should be developed based on markets, and not products, to be in line with the market-driven focus of an organisation (Armstrong, Kotler, & Opresnik, 2017:69). Flowing from the mission is the establishment of the corporate objectives that state how the mission will be carried out. These objectives, which are long-term in nature, state what the business wants to achieve through its operations and guide the development of objectives and strategies at the lower levels (Jooste et al., 2012:172).

Once the strategic direction of the business has been determined, and the mission and corporate objectives established, the core strategies need to be decided upon and developed (as stated in section 1.7.2 and outlined figure 1.2, which presents the model for the thesis). Peter and Donnelly (2013:12) state that at this stage of the process a business has established the direction it wants to take and now needs to develop a 'grand design' to realise its objectives. In essence, the finalisation of the strategic direction and corporate objectives prescribes which business model will be followed by the business, which further sets the parameters for the core strategy and strategic options that can be selected in strategy development. Core strategy is described in Hooley et al. (2012:33) as, "a statement of the organisation's objectives and the broad strategies to be followed to achieve them". The selection of the core strategy to achieve the objectives involves a number of key decisions that will have a significant impact on the business's chances of success or failure. It is also at this stage that key success factors need to be clarified. Key success factors are described in Gamble et al. (2015:62) as the "strategy elements, product attributes, competitive capabilities or intangible assets with the greatest impact on the future success in the marketplace".

The core strategy that is decided upon needs to be in line with the business's strategic direction and objectives established at the relevant levels. This includes ensuring that it is targeted at clearly defined markets, uses the available resources, and leads to the envisioned competitive advantage. When assessing the potential effectiveness of the core strategy to ensure that it is in line with the planned strategic direction of the business, Jobber (2010:53) stresses that the business needs to ensure that the selected strategy meets six key requirements, as highlighted in figure 6.7. These six requirements emphasise the need to undertake a comprehensive analysis of both the resources and markets of the organisation. In addition to the requirements identified in figure 6.7, Aaker suggested a number of additional requirements. This includes the generation of an attractive ROI, and that scenarios suggested by strategic uncertainties and environmental occurrences be taken into account (Aaker, 2005:31).

Strategy has the main role of closing the planning gap, that is, the gap between where the business currently finds itself and where it plans to be based on the established objectives (Blythe & Megicks, 2010:118; Mooradian et al., 2012:24). The task of selecting the core strategy is not an easy one given the importance of strategy to the success of the business. The next section outlines the core strategic options that are available to a business in order to achieve its goals and objectives.

**Figure 6.7: Key requirements of an appropriate core strategy**




**Source:** Jobber (2010:53).

### 6.2.3 Strategic options

Each business has its own vision, mission, resources, competencies, goals, and objectives that they wish to utilise to achieve customer satisfaction and profit maximisation. The reality in the market place is that there are multiple businesses pursuing multiples objectives so it is therefore not surprising that there are multiple strategic options that can be utilised to pursue these objectives. Whilst the number of strategic options available to utilise in the pursuit of a business's objectives are numerous and differ between situation and context, there are a number of strategic options that are used more than others as they have shown to be successful over time. For the purposes of this study, the strategic options that can be pursued by organisations are broken down into three main categories, as identified in section 1.7.2 of this study. These three categories are summarised in table 6.3.

**Table 6.3: Categorisation of strategic options**

| Categorisation | Strategy |
|---|---|
| Strategies based on value disciplines | • Operational excellence<br>• Product leadership<br>• Customer intimacy |
| Strategies based on products/markets | • Growth strategies<br>• Market penetration strategies<br>• Market development strategies<br>• Product development strategies<br>• Diversification |
| Strategies based on competitive advantage | • Differentiation<br>• Low-cost<br>• Focus |

**Source:** Author interpretation.

This categorisation in table 6.3 is based on the approach used by Peter and Donnelly (2013:12–15) in the chapter on strategic planning in their book. A review of many books, papers, and discussions on the topic (all referenced in the discussions that follow in this section) show that this categorisation serves as an effective approach to addressing the most common strategic options available to a business in the pursuit of its goals and objectives. This approach also neatly categorises the strategies that are most commonly pursued by the carriers in the air transport industry. The focus in this section is on outlining the main categories of strategic options available to a business (like an airline). It is not the intention to explore option in detail, but rather to establish the broad strategic options available and then focus in on the options that form the basis of the business models being followed by the LCCs, FSCs, and hybrids.

#### 6.2.3.1 Strategies based on value disciplines

This approach to strategy development spawned from research conducted by Treacy and Wiersema in 1993 and showed that in order to be a market leader a business does not need to outperform on every aspect of an industry (Louw & Venter, 2006:63). What they were saying is that a business cannot satisfy everyone and must therefore find and deliver the unique value that the business can offer the market. The basis of this approach to strategy development revolves around three core value disciplines that are used to increase customer value. Each of these value disciplines, which require different resources and capabilities, attempts to satisfy the needs of a particular customer type (Blythe & Megicks, 2010:123). These three core value disciplines are identified in figure 6.8 and are briefly discussed in the paragraphs that follow.

**Figure 6.8: Strategies based on value disciplines**


**Source:** Kotler & Armstrong (2014:557).

The discussions in this section are based on a combination of the work of Treacy and Wiersema (1993), Blythe and Megicks (2010:122), Ferrell and Hartline (2011:135–136), Hooley et al. (2012:132), Mullins and Walker (2013:61), Kotler and Armstrong (2014:557), and Hollensen and Opresnik (2015:153).

- **Operational excellence.** The focus of this option is the pursuit of operational excellence by providing middle-of-the-road products or services at the best prices in the most convenience manner to the customer and business. Businesses following this approach are not the product innovators in the industry, nor do they seek to develop intimate relationships with the customer. Cost reduction, efficient delivery systems, transaction processing, and supply-chain management are key to the success of this approach.

- **Product leadership.** Businesses selecting this option are focussed on providing the best product or service to the customer. Continual innovation is part of the business's approach to business and they seek to obtain peak product performance. Businesses following this option typically invest significantly in R&D, innovation programmes, and staff. It is crucial that the business is able to identify new product needs and then develop and launch the new product quickly into the market to obtain the leader position. Whilst they are not unimportant to the business, price or customer service are not the main focus of this option.

- **Customer intimacy.** The core focus under this option is on providing products and services to satisfy specific customer's needs and wants. This is not a mass market approach. Market segmentation is as detailed and precise as possible. Focussed efforts are made to develop relationships with customers and maintain these relationships over time. The unique needs of customers are established from the closeness of the relationship that is developed with the customer. This type of strategy is pursued by airlines when focussing on customers that travel in first and business class on an airline.

In their early work on the topic, Treacy and Wiersema (1993:91) state that the choice of value disciplines to pursue is a choice that is based on an acute understanding of the business and its markets. They further state that the greatest challenge is not the selection of the value discipline, but in sustaining the focus on the selected value discipline throughout the business. Another point made relating to the value discipline approach is that the strategy categories are not mutually exclusive. It is possible to pursue two of the disciplines as a push towards customer value. The pursuit of all three is however viewed as potentially difficult and risky as it could lead to reduced profitability. Table 6.4 provides a summary of the key aspects relating to the three core value disciplines.

**Table 6.4: Key aspects of the core value disciplines**

| | Operational excellence | Product leadership | Customer intimacy |
|---|---|---|---|
| **Strategy direction** | Streamline distribution systems and provide hassle free service | Idea nurturing, translation of ideas into products, and skilful marketing of new products | Provide solutions and help customers run their businesses/lives |
| **Organisational arrangement** | Strong central authority and a finite level of empowerment | Acts in an ad-hoc, organic, and ever changing way | Empowerment close to customer contact facilitated |
| **Systems support** | Maintain standard operating procedures | An individual's innovative capacity and new product success is rewarded | Measuring of the cost of providing service and maintaining loyalty |
| **Corporate culture** | Acts in a predicable manner. Believes in one size fits all. | Experimental orientation with out-of-the-box thinking | Flexible and thinks "have it your way" |

**Source:** Mullins and Walker (2013:61).

### 6.2.3.2 Strategies based on products/markets

The second category of strategic options that a business can consider relates to strategies based on the products being offered or the markets being served. It is logical to assume that businesses want to grow and that growth objectives form part of the corporate objectives. The mere concept of growth conjures up images of success and power and is a word that managers, directors, and shareholders want to hear. So, as a strategic option, the selection of a growth strategy holds great appeal.

In general, growth strategies are suited for organisations that have strong opportunities and strengths at their disposal (Louw & Venter, 2013:339). The success of a growth strategy is not measured on growth alone, but in terms of whether the growth has been faster, slower, or equal to the rate of growth in the market in which it operates (Blythe, 2003:142). Beyond this, the success of a growth strategy is also determined by the growth being achieved over more than just the short-term, but instead requires a long-term focus. Machado (in Jooste et al., 2012:285) states that in order to sustain growth over the long term it needs to be, "tempered with good operational efficiency".

Growth strategies present the business with two main options: (i) do what you are currently doing better or (ii) do something new. Choosing which growth strategy to follow entails a decision on whether to focus on current customers or look for new ones and a decision on whether to focus on current markets or new markets (Louw & Venter, 2013:335). The option exists to select more than one alternative. Table 6.5 provides a summarised matrix framework that arranges the four main growth strategies available for consideration by a business. The vertical axis distinguishes between existing markets and new markets, whilst the horizontal axis distinguishes between existing products and new products.

**Table 6.5: Growth strategy alternatives**

| | Present products | New products |
|---|---|---|
| **Current markets** | **Market penetration strategies**<br><br>• Increase market share<br>• Increase product usage<br>o Increase the frequency used<br>o Increase the quantity used<br>o Revitalise the brand<br>o Find new applications for current users | **Product development**<br><br>• Line extensions<br>• Add product features<br>• Expand the product scope<br>• Develop new generation products<br>• Develop new products for the same market |
| **New markets** | **Market development**<br><br>• Expand geographically<br>• Target new segments<br>• New distribution channels | **Diversification strategies**<br><br>• Diversification into related businesses<br>• Diversification into unrelated businesses |

**Source:** Aaker (2005:245), West, Ford, and Ibrahim (2010:129), Jooste et al. (2012:286), and Solomon et al. (2013:73).

A review of the literature identifies numerous ways in which to pursue the specific growth strategies. The discussions in this section are based on a combination of the discussions of Aaker (2005:243–258), Dess et al. (2012:204), Mooradian et al. (2012:179–181), Louw and Venter (2013:339–345), Peter and Donnelly (2013:12–14), Solomon et al. (2013:73–75), Hollensen and Opresnik (2015:146–149), Wensveen (2015:296–298), and Armstrong, Kotler and Opresnik (2017:75–76). The main options include:

- **Growth in existing product markets: market penetration strategies.** The logical way to achieve growth is to encourage existing users of a product to purchase more, or to increase consumption of the business's product. Seeking growth in existing product markets is an attractive option is because the business already has good knowledge of its customers and its own products. This is the least risky of the growth options available to a business because it is not moving into unknown territory and no substantial investment in new resources is required.

  Growth in existing markets can be achieved in one of two ways; (1) increasing market share, and (2) increasing product usage. In the case of the former, growth can be achieved through the use of temporary price cuts, sales promotion tactics, and advertising in an effort to increase market share. The downside of this approach is that share gains achieved using these methods are short-term gains and are at the expense of competitors who will probably retaliate. In terms of increasing product usage, the thrust behind this strategy is to encourage customers to buy and use more of the business's products. The key approaches to achieving this are encouraging customers to increase the frequency with which they use the product, increase the quantity used on each usage occasion, revitalise the brand by making it seem newer and fresher in the minds of the customer, and to find new applications of the product for the consumer.

- **Growth in new markets: market development strategies.** This strategy entails focussing on selling existing products to new markets. These new markets may be found in geographical areas not previously targeted by the business or through the identification of new market segments which were not previously served. A market development strategy may simply require a slight modification to the business's current strategy before duplicating it for the new market. This strategy has the advantage that the business can use its existing skills, knowledge, and experience in the new market. Logically, this strategy alternative only makes sense if the business has achieved success with the current strategy in the current market.

- **Growth through the introduction of new products: product development strategies.** Product development is a strategy that aims to achieve growth by offering new products to the business's existing markets. The crux of this approach is that a new product is developed, or the existing product itself is modified through, for example, the addition of new features, better performance, higher quality, or greater variety. Businesses follow this approach if they are trying to maintain a leadership position in the current market or are simply trying to bring back life to a maturing market. In this regard, four key approaches to this type of growth can be identified: line extensions, developing new generation products, expanding the product scope, and developing new products for existing markets.

- **Growth through diversification.** This approach entails the development of new products for new markets and is viewed at the riskiest of all the growth alternatives. By implementing a diversification strategy, the business is moving into an area where they have no previous knowledge, experience, or expertise. The risk is considered to be particularly high when the diversification is not based on the business's core competencies. This approach is most effective when done in conjunction with a strategic partner to enter the new markets.

  Two types of diversification are generally identified; related diversification and unrelated diversification. Related diversification refers to the situation when a business moves into a new line of business that has 'meaningful commonalities' with the existing business and its strategies. Whilst the products and customers in the new product-market are not related, there is a strong potential for synergy between the new and the old product-markets based on shared production facilities, brand names, marketing skills, and other pooled resources. Unrelated diversification entails the business moving into totally unrelated lines of business. This type of diversification usually occurs through takeovers and mergers. The overriding motive behind the choice of the unrelated diversification option is profit. The business seeks to acquire another organisation simply because it represents a potentially profitable situation. Finding commonalities and potential synergies between the businesses is co-incidental, but is of far lesser concern.

#### 6.2.3.3 Strategies based on competitive advantage

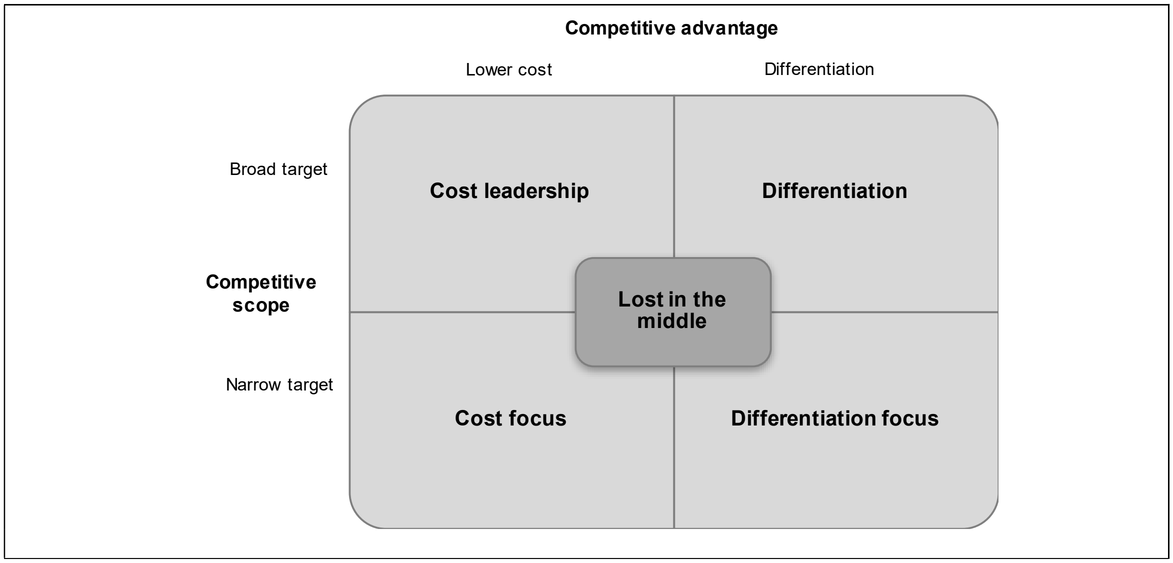
The third strategic option to be addressed is that of strategies based on competitive advantage. Section 6.2.1 gave particular emphasis on the need for a business to make use of its core competencies to establish a competitive strategy in order to achieve a sustainable competitive advantage. This need to establish a competitive advantage within the market is viewed as one of the core drivers towards achieving superior performance (Jobber, 2010:713). Louw and Venter (2013:266) note that a review of the various strategy options shows that when the strategies are viewed at their most basic, the differences among them are based on;

- whether they focus on a broad or narrow market,
- whether the competitive advantage being pursued is based on differentiation or low-costs,
- whether they are a combination of the first two options.

This perspective reinforces earlier work by Hall (quoted in Jobber, 2010:713) who found that successful businesses based their competitive advantage (and resultant success) on offering high product differentiation or operating at the lowest cost. Michael Porter (1985), in his well-known work on competition, focussed heavily on this topic and developed a model for application in the development of competitive strategies to achieve a sustainable competitive advantage (as introduced in section 1.7.4.1 of the study). Porter views cost-leadership and differentiation as the two basic types of competitive advantages that a business can have, and when these are combined with the planned scope of activities by the business, they lead to the identification of three generic strategies that can be pursued (Porter, 1985:11). These three generic strategies are cost leadership, differentiation, and focus. The focus strategy can be sub-divided into either a cost focus or a differentiation focus. Figure 6.9 illustrates Porter’s generic strategy model. From this figure, it can be seen that when operating in a broad range of market segments (industry-wide), the cost-leadership or differentiation strategies are appropriate, whilst the focus strategy is pursued when operating in a narrow segment (Dess et al., 2012:162; Baines & Fill, 2014:170–171).

This generic strategy model, as developed by Porter, postulated that organisations should firstly conduct a thorough analysis of the industry in which they compete and then, based on this analysis, develop their strategies based on cost-leadership, differentiation, or focus. The main point however, is that achieving a competitive advantage is the core of the model and the business must select its strategy and scope and then make sure it consistently focuses on achieving the selected option (Peter & Donnelly, 2013:14). Businesses that drift between the strategies end up having no focus and ultimately no competitive advantage.

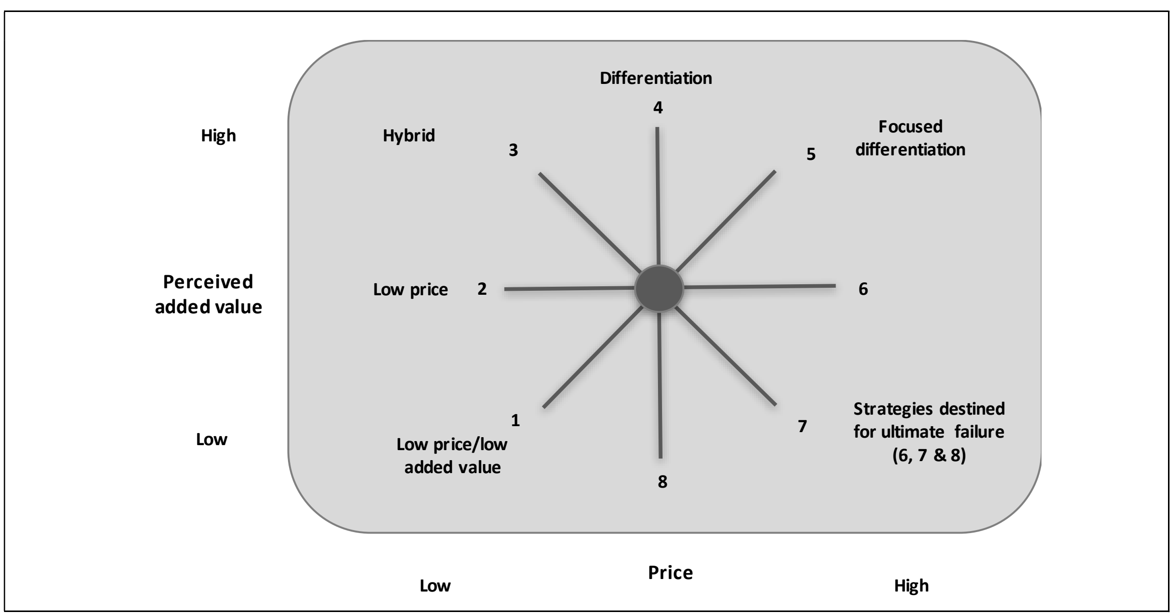
**Figure 6.9: Porter's generic strategy model**




**Source:** Porter (1985:12).

A variation on the generic strategy model proposed by Porter (as identified in figure 6.9) focuses on the price of the product/service and the perceived added value in order to identify strategic options. This approach, as outlined in the 2006 edition of Louw and Venter (2006:248), is referred to as the 'strategy clock' (see figure 6.10) and identifies a number of strategy alternatives that are roughly similar to those proposed by Porter, with the main difference being the variables used to define them. In this case, the matrix is defined by price and perceived added value. As can be seen from figure 6.10, this approach identifies eight individual options that the business could be pursuing – not all of them positive.

**Figure 6.10: Strategic options according to the 'strategic clock'**




**Source:** Louw and Venter (2006:248).

A simple overview of the strategies will show a direct link to the strategies being pursued by the various airlines in the commercial air transport industry (each model is discussed in detail in section 6.3). As will be seen in section 6.3, the true LCCs utilise option 1 whilst others have veered towards option 2. The 'strategic clock' also addresses the hybrid option (3), which is a business model that is gaining momentum in the air transport industry. The traditional FSCs operate using options 4 and 5 as the basis of their strategies. Unfortunately, there are also many airlines that have found themselves stuck in the territory of options 6, 7 and 8. South Africa's Nationwide Airlines found themselves in this territory and were unable to survive.

Subsequent research has resulted in many refinements and criticisms being given on Porter's approach. Many of the criticisms revolve around Porter's view that a business attempting to follow the low-cost and differentiation strategy will end up 'stuck-in-the-middle' and thus be at a competitive disadvantage in the market. Others (as addressed in Parnell, 2006:1141) argue that the two strategies can indeed be combined and generate significant synergies and benefits for the business. In this regard, Parnell quotes research by Bowman & Faulkner that referred to the importance of value activity competitive strategies. This research argued that because customers see price, and not costs, sustainable competitive advantage is obtained from developing products/services that the customer perceives as either;

- better than those offered by competitors irrespective of the price of the product,
- equal to that of the competitors but offered at a lower price level, or
- better than the competitive products and offered at a lower price.

In this context, the suggestion is that price and perceived quality form the basis of the consumer's decision-making and thus should receive more consideration in Porter's model and the identification of the various strategy alternatives. From an airline's perspective, this makes good sense. The argument in Parnell (2006:1143) highlights that in the long term, all successful businesses show some form of differentiation, be it based on differentiation or low-cost approaches. Cost leadership, it is argued, can be combined with a differentiation strategy and, in fact, could be viewed as a form of differentiation. In reconceptualising Porter's model, Parnell suggested that the dimensions of market control and value form the emphasis of a business's strategy, with Porter's generic strategies being viewed as component parts of the value proposition of the business (Parnell, 2006:1149). Earlier work by Dostaler and Flouris (2004) supports this position and points to a position of 'integrated cost leadership/differentiation' in the place of the stuck-in-the-middle position. This option is now identified as a fifth competitive strategy option where the business attempts to achieve differentiation in the market, whilst simultaneously achieving low costs. In the airline context, this strategy is what has become known as the hybrid strategy and is followed by airlines like JetBlue and kulula.com. Magretta (2012:115) further supports the option of following the low-cost and differentiated strategy simultaneously by highlighting that work by Porter in the 1990s clearly linked the value proposition and the value chain. Thus, when a business decides which customer needs will be served and then adapts its value chain around those needs, pursuing a differentiated low-cost strategy is possible without being 'stuck-in-the-middle.

Research by Kim and Mauborgne (2005) further explored the nature of competitive strategy and touched on the overlap of the cost leadership and differentiation strategies explored in the previous paragraph. From their research flowed the concepts of red ocean and blue ocean strategy. Kim & Mauborgne (2005) state that the traditional approach to competition and competitive strategy was that in order to gain market share and achieve growth, a business had to beat its competitors in the defined and congested marketspace (red ocean) by taking something from them (sales, market share etc.). One wins and others lose. Their approach suggested that instead of fighting numerous competitors in a 'bloody red ocean' for a piece of a defined and limited marketspace, they should rather seek to move beyond the existing 'pie' and do something so different and unique that they move into their own uncontested marketspace - a 'blue ocean'. In effect, this approach to strategic innovation makes competitors 'irrelevant' because the business has moved into a position where they have substantially added value to the customer by doing something new and different in the market (Louw & Venter, 2013:294). This does not mean that competitors should be ignored. Overtime, competitors may imitate the value innovator, and when this happens, the business needs to seek out, and move, into the next 'blue ocean'. The core differences between the traditional approach to competitive strategy and blue ocean strategy are given in table 6.6.

**Table 6.6: The contrast between red ocean strategy and blue ocean strategy**

| Red ocean strategy | Blue ocean strategy |
|---|---|
| • Compete in existing marketspace | • Create uncontested marketspace |
| • Beat the competition | • Make the competition irrelevant |
| • Focus on existing customers | • Focus on non-customers |
| • Exploit existing demand | • Create and capture new demand |
| • Make the value-cost trade-off (cost leadership or differentiation) | • Break the value-cost trade-off (simultaneously seek cost leadership and differentiation) |
| • Align the entire system of an organisation's activities with its strategic choice of differentiation **or** low-cost | • Align the whole system of an organisation's activities in pursuit of differentiation and low cost |

**Source:** Kim and Mauborgne (2005:18).

Value innovation is identified as the cornerstone of the blue ocean strategy. As the name suggests, 'value innovation' requires that equal importance be placed on both value and innovation to set the business apart from competitors (Louw & Venter, 2013:296). The basis of value innovation is that the business reduces cost on the factors the industry competes on, whilst customer value is increased by creating unique and differentiated elements that have not been utilised in the industry before. In other words, blue ocean strategy entails the establishment of value innovation through the simultaneous pursuit of both a differentiation and cost leadership approach to strategy. As sales volumes increase, due to the delivery of superior value, the business will realise economies of scale which further reduces costs (Kim & Mauborgne, 2005:16).

The move to a new marketspace requires that the business reconstructs the boundaries within which it operates so that it can move away from the competition in the 'red ocean' into the new 'blue ocean' environment. In simple terms, a business needs to change the assumptions on which they have previously based their strategy development and look across the old boundaries to seek the new marketspace in which to operate (Kim & Mauborgne, 2005:48). Once this has been done, the business is in a strong position to refocus its efforts and develop strategies to move into the blue ocean marketspace. This focus on redefining the marketspace and looking across existing boundaries towards a blue ocean strategy approach is summarised in table 6.7.

**Table 6.7: Redefining the marketspace – moving to blue ocean creation**

| | Red ocean strategy | | Blue ocean strategy |
|---|---|---|---|
| **Industry** | • Focus on rivals within its industry | → | • Looks across alternative industries |
| **Strategic group** | • Focuses on competitive position within strategic group | → | • Looks across strategic groups within the industry |
| **Buyer group** | • Focuses on better serving the buyer group | → | • Redefines the industry buyer group |
| **Scope of product or service offering** | • Focuses on maximising the value of product and service offerings within the bounds of its industry | → | • Looks across to complementary product and service offerings |
| **Functional-emotional orientation** | • Focuses on improving price performance within the functional-emotional orientation of its industry | → | • Rethinks the functional-emotional orientation of its industry |
| **Time** | • Focuses on adapting to external trends as they occur | → | • Participates in shaping external trends over time |

**Source:** Kim and Mauborgne (2005:79).

The concept of strategic innovation refers to radically new ways of competing in an industry (Louw & Venter, 2013:292). Value innovation is one form of strategic innovation. The concept of 'disruptive innovation' is another school of thought linked to strategic innovation and is frequently used to describe the development of the low-cost carrier model (addressed in sections 6.3.3 and 6.3.5.1). In simple terms, disruptive innovation is the disruption of existing markets through innovation that results in the nature of competition in an industry changing and the incumbent businesses losing value (Louw & Venter, 2013:306). The result of disruptive innovation is the creation of new markets and it is for the business to utilise the results of a disruption to create value that satisfies customer demand (Airline Leader, 2015a:53). The basic idea behind disruption, as described by Christensen when originally developing the idea of disruptive innovation, describes a process in which smaller companies are able to challenge the larger incumbent businesses by focussing on the segments overlooked by the incumbent businesses (Christensen, Raynor, & McDonald, 2015). In this regard, they state that the new entrants focus on targeting the neglected segments by delivering "more-suitable functionality" at a lower price. The incumbents, due to their focus on the larger more profitable and differentiated segments, offer minimal response, which in turn offers the new entrant the opportunity to move up-market and provide the customers of the incumbent business with the level of performance that they require. Christensen et al. (2015) state that, "when mainstream customers start adopting the new entrant's offerings in volume, disruption has occurred". They stress the point that disruptive innovations have their origins in two types of markets that the incumbents overlooked; (i) *low-end footholds* that arise from incumbents paying little attention to less demanding customers, and (ii) *new-market foothold*s where disrupters create a market by turning non-consumers into consumers. Porter (in Magretta, 2012:197–199) and Pisano (2015) both highlight the key point that disruptive innovation requires a new business model but is not always based on a technological breakthrough. The process described in this paragraph reflects the emergence and development of the LCC model as a disruptive innovation, primarily originating with a low-end foothold. A review of the disruptive emergence of the LCC model is given in section 6.3.5.1.

Whilst a number of different approaches are addressed in this sub-section, the focus of the discussion will be on the three generic strategies identified by Porter. Porter's model encapsulates the crux of the strategies based on 'competitive advantage' and provides a sound basis for reviewing the strategic models used by airlines in the air transport industry. Given the close link to the business models utilised by the LCCs and FSCs, the generic strategies identified in this section are addressed in more detail than the strategic options covered in sections 6.2.3.1 and 6.2.3.2.

- **Differentiation strategy**

Achieving a competitive advantage using a differentiation strategy involves a business striving to find some sort of uniqueness in its industry so that it stands out from its competitors. This uniqueness or 'something different' that the business does must be in terms of something that the consumer perceives as being of value to them (Porter, 1985:14). The business then positions itself as being able to meet the customer's needs by developing strategies focussed around the points of uniqueness. Grant (2013:194–198) and Hitt et al. (2015:117) state that this differentiation needs to be done at an acceptable cost and within the business's ability to provide the differentiation. As a result of the strategy requiring a point of uniqueness and focussing on something that the customer values the business is able to charge a premium price for the product or service. Porter emphasises the fact that a differentiation strategy goes beyond just the product and marketing effort. He states that businesses must look for differentiation throughout the value chain (Porter, 1985:119).

The key to the differentiation strategy is that the business must be able to convince the consumer that the price premium is justified in terms of the product that is on offer (Jooste et al., 2012:231). The disadvantage, however, is that in achieving this uniqueness through differentiation, the business incurs higher costs due to special processes or skills that are needed. The logical conclusion from this scenario is that in order to achieve increased market share (and ultimately superior performance), the business must deliver a differentiated product to the consumer in a manner that enables them to achieve a price premium which is higher than the associated cost (Porter, 1985:14; Blythe & Megicks, 2010:122; Hooley et al., 2012:273; Dess et al., 2012:170). Porter further specifies that a business must still keep an eye on its costs so as not to erode the benefits of the differentiation. He states that the differentiating business should "aim at cost parity or proximity relative to its competitors" through the reduction of costs that have no impact on the differentiation (Porter, 1985:14).

To achieve a differentiation strategy, the business needs to ensure that it engages in well planned, precise market targeting that is focussed on technological and market research (Louw & Venter, 2013:272). Earlier comments by Jain (2000:236) suggested that a differentiation strategy requires that the business has strong brand loyalty and be willing to forego high market share (as a trade-off for the premium it can demand based on its uniqueness). In Louw and Venter (2013:272) it is stated that the success of a differentiation strategy is dependent on the business's ability to identify the customer, understand what the customer values, and to have a thorough knowledge of who its competitors are. Armstrong, Kotler, and Opresnik (2017:217) reinforce this thought by stating that when seeking points of differentiation, businesses need to consider the customer's entire experience with the product/service and seek to differentiate the business at every customer-contact point. Michael Porter, quoted in Piercy's early work (1997:197), highlights the point that to achieve a sustainable competitive advantage with differentiation requires that competitors should not be able to copy (or match) the point of differentiation with their existing level of operations and that the business is able to support its point of differentiation with its capabilities and resources. The key skills, resources, and organisational requirements for the differentiation strategy are summarised in table 6.8.

**Table 6.8: Skills, resources, and organisational requirements for the differentiation strategy**

| Skills and resources | Organisational requirements |
|---|---|
| • Strong marketing expertise<br>• Product engineering abilities<br>• Creativity and innovation<br>• Reputation for quality and technical leadership<br>• Long tradition in the industry or a unique combination of skills learned from other industry operators<br>• Strong relationship with channel members | • High level of co-ordination between research and development, product development, and marketing<br>• Subjective measurement and incentives<br>• Ability to attract highly skilled labour, creatives, and product engineers<br>• Sufficient R&D funds |

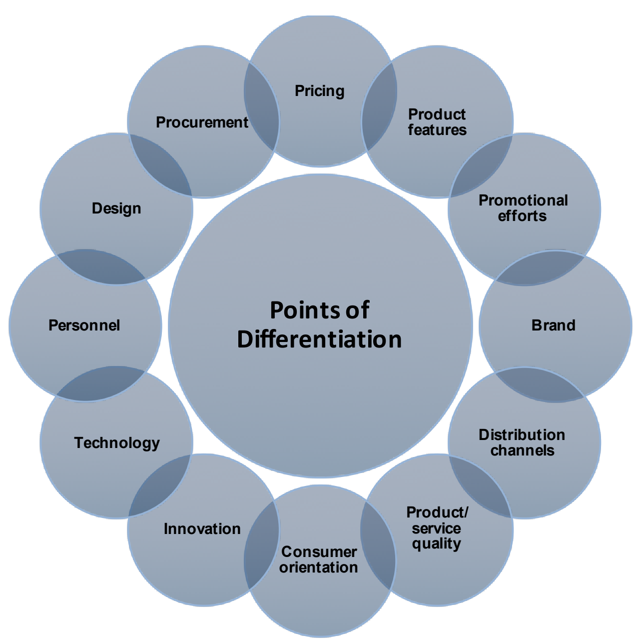
**Source**: Rix (2004:436), West et al. (2010:123) and Mooradian et al. (2012:165).

In order to develop a differentiation strategy, the business has to identify the point or points of differentiation that will be used to position the product or service. In this regard, numerous points of differentiation can be identified for consideration. In Piercy (1997:197) a relatively broad view was taken to differentiation with a variety-based, need-based, and access-based approach being suggested. Kotler and Keller (2006:319) suggested that points of differentiation can based on two broad categories: product features and best quality. Blythe and Megicks (2010:122) identified two sources for differentiation: product features and strong promotional efforts to highlight the point of differentiation to consumers. From a slightly broader perspective, Louw and Venter (2013:272) outlined three ways in which the differentiation strategy can be achieved; (1) uniqueness or improvements in products, (2) a marketing-based approach, and (3) a competence-based approach.

Ultimately, each of the above-mentioned boils down to differentiation based on product or quality. Differentiation based on quality (intangible) is easier to maintain than differentiation based on product attributes and features. This is because it is easier to copy a physical product than the internal culture and belief systems of a business, which are less visible. When using product features as a point of differentiation, it is crucial to establish what consumers view as the core product, what consumers would regard as 'beyond expectations', and how easily the product or specific features can be copied (Hooley et al., 2012:275). Using quality as a basis for differentiation requires that the business understands the dimensions of quality that are important to consumers when evaluating quality. These include functional performance, conformance to specifications, durability, features, reliability, serviceability, fit and finish, and the quality and reputation of the brand (Mullins & Walker, 2013:440–441). In terms of a service, like an airline, service quality dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Wilson, Zeithaml, Bitner, & Gremler, 2012:79; Solomon et al, 2013:358).

Figure 6.11 identifies the main options that can be considered when utilising the differentiation strategy. It is by no means a complete list of all possibilities. A differentiator that is becoming increasingly important in the context of the airlines is 'organisational velocity', i.e. the speed at which an airline does business (Lovelady, 2015a:35). The speed of social media and other business technologies has drastically reduced the amount of time a business has to identify, analyse, and respond to problems or opportunities. An airline that can use technology to quickly identify and respond to problems or opportunities has a competitive advantage.

**Figure 6.11: Options as basis for a differentiation strategy**




**Source:** Based on Kotler and Keller (2006:318), Hooley et al. (2012:269–277), Dess et al. (2012:169), Mooradian et al. (2012:164), Grant (2013:195–196), and Gamble et al. (2015:101).

In the context of the commercial air transport industry, each point of differentiation can be applied to the many airlines across the globe and across both LCCs and FSCs. Quite clearly, given the state of the industry, some airlines have managed to gain a differential competitive advantage over others in the industry whilst others have failed. The Middle East carriers like Emirates, Etihad, and Qatar Airways have achieved significant levels of differentiation from their global competitors, whilst mainline the carriers in the United States and Europe have battled to gain any differentiation other than short-term price advantages.

Whilst the development of the differentiation strategy requires strong efforts to identify and then develop the point of differentiation, it does offer the business a number of key benefits. The following benefits of the differentiation strategy can be identified (based largely on Dess et al., 2012:170–171; Louw & Venter, 2013:274; Gamble et al., 2015:100):

- ⇒ The development of a sustainable competitive advantage over competitors.
- ⇒ Differentiation develops loyalty towards a product, which links the customer to the product and reduces the chance of substitution and customer defection to another brand. Loyal customers are more willing to accept a price premium.
- ⇒ Differentiators have greater price flexibility as consumers are more willing to accept a price premium. The differentiator therefore has the ability to absorb cost increases on the supply side.
- ⇒ Differentiation, if done properly, offers a form of protection against the competitive forces within an industry.
- ⇒ The business distances itself from the competitors in the industry.

Flowing from the advantages to be obtained from the differentiation strategy are a number of dangers or pitfalls associated with the strategy if it is not properly developed. The following pitfalls can be identified (based on Porter, 1985:160; Jooste et al., 2012:238; Louw & Venter, 2013:273; Gamble et al., 2015:105; Hitt et al., 2015:121):

- ⇒ If the point of differentiation is not strong enough, then the possibility exists that competitors can simply copy the product and undermine the business's strategy.
- ⇒ The price premium that is asked might become too high, resulting in customers defecting to alternative brands.
- ⇒ The business might select a point of differentiation that is not considered to be valuable or relevant to the consumer.
- ⇒ The business might simply provide too much differentiation – too many points of differentiation, which is beyond what the consumer wants and is prepared to pay for.

- ⇒ The brand image may ultimately become tarnished due to too many product line extensions capitalising on the brand name.
- ⇒ Different people see things differently. What is considered different and unique by one person is a commodity to another.
- ⇒ The business's perception of what is unique and valuable might not be unique and valuable in the eyes of the consumer.
- ⇒ The business might not properly communicate the value on offer to the consumer.
- ⇒ The danger exists that too much focus is put on the product and its features and other areas that could add to the delivered value are ignored. i.e. the entire value chain for points of differentiation needs to be considered.
- ⇒ The business can lose sight of the cost of the differentiation that they are trying to deliver, resulting in the cost exceeding the perceived value.
- ⇒ It is extremely difficult to maintain a point of differentiation over the long term.

Naturally, the aim of any business is to maintain its source of differentiation over the long term. This is made easier if the point of differentiation introduces some form of barrier to entry that inhibits competitors from competing. It is also easier to sustain a differential advantage if the business has some form of cost advantage with the product or service. Differentiation can also be sustained when the business has the opportunity to incorporate more than one point of differentiation into its strategy. Finally, another way in which a business can entrench its point of differentiation, is to ensure that there is some form of switching cost that arises with the differentiation, which makes it undesirable for the consumer to switch to competing alternatives (Porter, 1985:158; Jooste et al., 2012:236–237).

In summary, the aim of a differentiation strategy is to achieve a competitive advantage over an organisation's competitors by delivering a product or service that stands out from competitors and delivers value beyond the customer's expectations. To achieve the goal of superior performance through differentiation, the value perceived by the consumer must exceed the cost of the differentiation.

- **Low-cost strategy**

The low-cost strategy, as a means to obtain a competitive advantage, is a strategy that forms the basis of many of the LCCs (*see* section 1.7.3 for the definition of the model and section 6.3.5 for the detailed theoretical discussion) in operation around the globe today. Whilst many LCCs that started out as LCCs have subsequently evolved towards the emerging hybrid strategy, their roots are still in the low-cost strategy. The hybrid strategy is explored further in section 6.3.6.

Section 1.7.4.1 of the study introduced the concept of the generic low-cost strategy as a basis for the LCC airline model. Porter (1985:12) states that the basis of the low-cost strategy is the obtainment of a competitive position in the market based on having the lowest costs relative to competitors. Jooste et al. (2012:239) distinguish between a cost leadership strategy, where the business serves many segments, and a cost-focus strategy, where the business obtains a cost advantage by focussing on one or a few narrow segments. The focus of the low-cost strategy is to deliver a standardised, no-frills, and low-cost product/service in the most efficient manner possible (Peter & Donnelly, 2013:14). In a 2004 article by Peccei (2004:38), they state that when following a low-cost strategy, businesses need to be careful when cutting costs by clearly identifying 'good' and 'bad' costs. The elimination of 'good' costs might result in the erosion of the business's core capabilities and thus reduce competitiveness. It is important to note that a cost leadership strategy involves more than offering current customers the opportunity to purchase their product/service at a lower price. Kachaner, Lindgardt, and Michael (2010:2) refer to the low-cost strategy as one that is a "truly new value proposition that addresses both existing and new customers and is supported by a novel operation model". They highlight four golden rules for businesses pursuing the cost leadership model, by defining what the strategy is not. Low cost (i) does not imply low profit, (ii) does not mean low quality, (iii) does not mean cheap imitation, and (iv) does not mean that the products/services are unbranded.

A successful cost leadership strategy will put the business in a strong position to defend against the five competitive forces[1] within an industry (Hitt et al., 2015:114). Success with the cost leadership strategy requires that the business must continually ensure that it is the cost leader in the industry/segment, whilst at the same time still delivering a product/service that the consumer perceives to be of value to them in comparison with competitive offerings. Clearly, if in the process of reducing costs the quality of the product is reduced to an extent that it is no longer valued by the consumer, then the business will be at a competitive disadvantage (Louw & Venter, 2013:269). The task of continuously ensuring that the business is the cost leader is an intensive one and requires a systematically managed approach towards cost-cutting. Koehler, Esquivias, and Varadarjan (2009:41) set out a process for businesses to follow when engaging in the cost-cutting process. This cost-cutting process is shown in figure 6.12.

A cost leadership strategy refers to the business having the lowest cost. This does not mean that it has to have the lowest price; but by having the lowest cost base, the business is in a position to be the price leader if it so chooses (Hollensen, 2010:307). The focus of the business should still be on delivering customer value. By having the lowest costs, a business is in a position to offer a lower price and still maintain a good profit margin (Blythe & Megicks, 2010:120). As identified in section 1.7.4.1 of the study, businesses following this strategy have the option of either lowering prices to be the low-price leader or used the higher profit margins to invest in more efficient equipment and materials so that the business can further drive down its costs (Porter, 1985:13). In this regard, two options are identified for

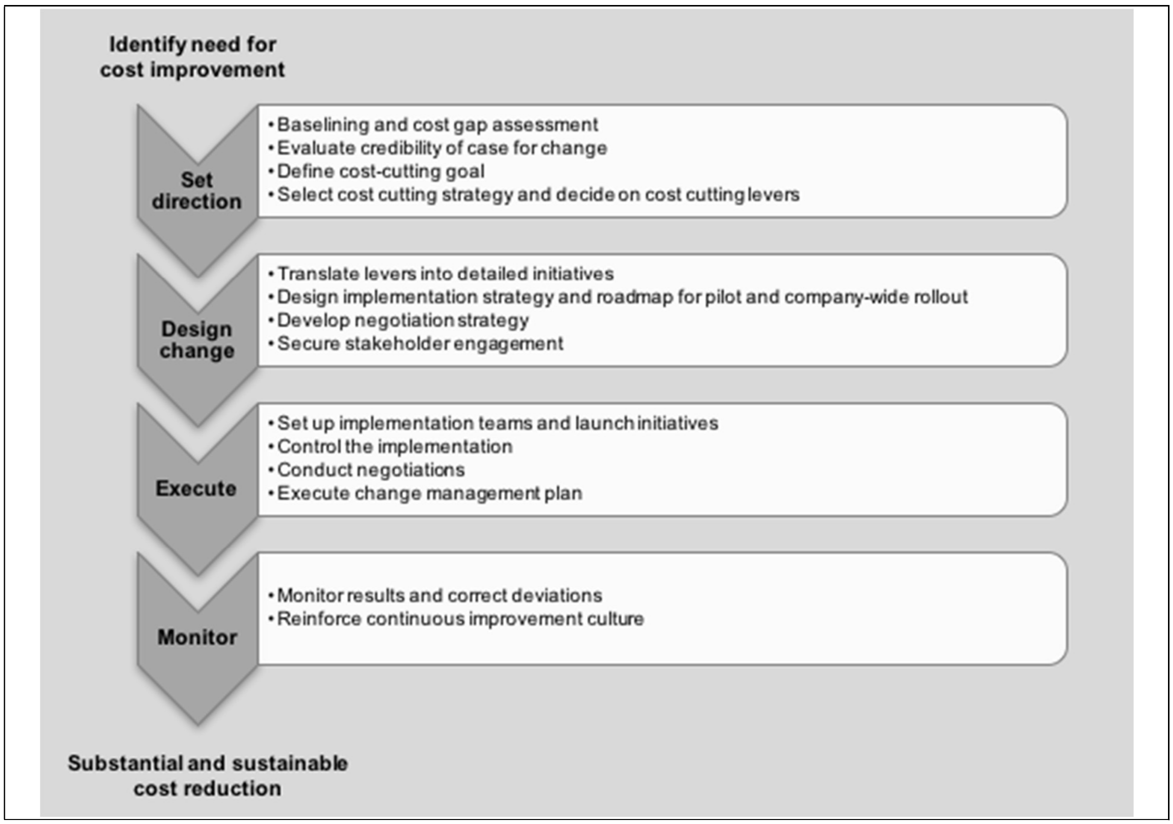
[1] Refers to the five competitive forces in Porters model for the structural analysis of an industry. The competitive forces include the threat of new entrants, the bargaining power of buyers, bargaining power of suppliers, the threat of substitute products, and the intensity of rivalry within the industry (Gamble et al., 2015:43).

the organisation to consider in its approach to the cost leadership strategy (Jooste et al., 2012:239; Gamble, 2015:94):

⇒ **Lower margins/higher market share.** The business has lower profit margins than those following the differentiated route, but this enables the business to gain market share. Prices are lowered to build volume in order to gain market share.

⇒ **Lower costs/higher margins.** The business reduces costs as much as possible, but tries to ensure that costs decrease faster than prices so that the profit margin is increased. Whilst this approach might lead to higher profit margins, it does not necessarily lead to higher market share.

**Figure 6.12: Key steps in the cost-cutting process**




**Source:** Koehler, Esquivias and Varadarjan (2009:41).

A successful low-cost strategy requires that the business be more efficient than its competitors (Mullins & Walker, 2013:242). A number of requirements for a cost leadership to be successfully implemented. These include dedicated management efforts, pursuit of cost reductions based on experience, favourable access to the required raw materials, tight cost and overhead control, significant capital expenditures (particularly in the case of an airline), and aggressive pricing (Dess et al., 2012:164). It is also important to ensure that scale-efficient facilities are available to allow the benefits of scale to be achieved. A low-cost strategy is a multi-faceted approach and the success of a cost leadership strategy relies on the development of a low-cost culture that permeates the entire business (Jooste et al., 2012:239). Staff need to be part of the strategy and continuously look to reduce wastage and implement ways of reducing costs.  Table 6.9 summarises the key skills, resources, and organisational requirements essential for the development of the cost leadership strategy.

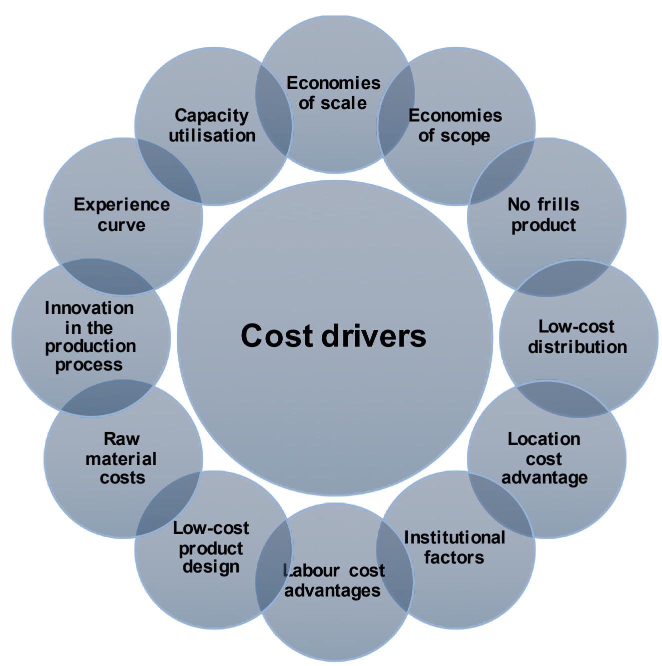
**Table 6.9: Key skills, resources, and organisational requirements for the low-cost strategy**

| Skills and resources | Organisational requirements |
|---|---|
| • Continuous capital investment and access to capital<br>• Process engineering skills<br>• Close supervision of labour<br>• Simplified product design for ease of manufacture<br>• Low-cost distribution system<br>• Facilities for scale-efficiency | • Intensive cost controls across all areas of the value chain<br>• Finely structured organisation and allocation of responsibilities<br>• Incentives based on adherence to strictly defined targets<br>• Top management commitment and establishment of appropriate low cost values<br>• Training and motivation of staff<br>• Ambitious sales and growth targets need to be set to enforce the need for growth focussed cost management |

**Source**: Porter (1985:115), Rix (2004:436), West et al. (2010:123), and Mooradian et al. (2012:165).

The development of the cost leadership strategy needs to be based on a number of cost drivers, or factors, that affect costs (*see* section 1.7.4.1 of the study for introductory comments).  These are factors, that in combination, will form the basis of the strategy and lead to a competitive advantage due to the lower costs.  Whilst, figure 6.13 identifies some of the most common cost drivers to be considered when utilising the cost leadership strategy, it is by no means does it provide a complete list of all possibilities. Porter (1985:13), in his original work on the topic, stated that the cost leadership strategy requires that the business must, "identify and exploit all sources of cost advantage".

**Figure 6.13: Cost drivers as the basis of the cost leadership strategy**




**Source:** Porter (1985:70), Jooste et al. (2012:240–242), Hooley et al. (2012:265–269), Mooradian et al. (2012:163), Mullins and Walker (2013:445–447), Grant (2013:179–187), and Gamble et al. (2015:96).

Two of the most important drivers of low-cost are economies of scale and economies of scope (Hollensen, 2010:306). Economies of scale arise from the business being more efficient and are based on volume and size. This increased volume can lead to the business having bargaining power over its suppliers due to the volume of purchases from them (Hooley et al., 2012:266). Economies of scale are realised when input costs (like marketing or maintenance) can be spread over more units (resulting from increased production), thus reducing the overall per unit cost (Grant, 2013:180). A large-scale operation on its own does not necessarily lead to lower costs. Scale offers the business the opportunity to learn more about its operations and to identify areas where improvements can be made to make it more efficient and thus reduce costs. There is, however, a limit beyond which scale becomes complex and starts adding costs (Hooley et al., 2012:267). Economies of scope refer to the synergies that a business can achieve due to linkages within the business itself. Shared resources and image can be applied across the business and thus lead to lower costs.

A low-cost driver of note in the context of this study, is the no-frills option (strategy 1 in figure 6.10). The pursuit of this option is the basis of the LCC model. Ryanair is a key proponent of the no-frills strategy. This cost driver entails the removal of any unnecessary frills and extras from the product or service on offer (Jooste et al., 2012:241). In the case of airlines, if the consumer still wants some of the stripped-out product features, they can be purchased at an added charge. Snacks served on a LCC like FlySafair are not part of the ticket price, but sold separately on-board. At the heart of this strategy, is the offering of a product/service with little added value at a low price to a price sensitive market (Louw & Venter, 2013:269). In markets where consumers would otherwise be unable to afford these types of services, this is an attractive option. The low-price option (strategy 2 in figure 6.10) is roughly similar to this, but differs in that whilst maintaining a low price, the business attempts to offer customer value at a level on par with the other competitors in the market (Mango for example). kulula.com has moved through this strategy on ‘route’ to a hybrid strategy – strategy 3 in figure 6.10.

Following a cost leadership strategy can offer a business significant benefits if it is successfully implemented. In many industries, the rise of the low-cost competitors has been met with uncertainty and many have been underestimated with the result that these low-cost businesses have made strong progress in the markets they target. Kachaner, Lindgardt, and Michael (2010:3) referred to this as the ‘denial trap’. The low-cost business is able to achieve this rapid growth by utilising innovative methods to overcome the full-service/premium business’s unique capabilities, and by obtaining support from suppliers looking for more growth and customers looking for more affordable choices (Ryans, 2010:3). Some of the benefits of a low-cost strategy include (Wilson & Gilligan, 2009:389; Jooste et al., 2012:239–242; Dess et al., 2012:168; Louw & Venter, 2013:270–271):

⇒ Lower prices with a standardised product that are more appealing to price sensitive markets.

⇒ Protection against competitive forces in the industry.

⇒ The erection of barriers to competitor entry.

⇒ Higher profits, due to reduced costs, which lead to more capital being available to invest into the business through the acquisition of more cost-efficient resources or to exploit additional market and product opportunities.

⇒ Stronger channel negotiating power based on volume purchases.

Whilst the benefits to be gained from the successful implementation of the strategy can be lucrative, there are a number of pitfalls and key issues that need to be kept in mind when following this approach (based on Porter, 1985:115; Peccei, 2004:35; Kachaner, Lindgardt & Michael, 2010:4); Dess et al., 2012:168–169; Jooste et al., 2012:243–244; Louw & Venter, 2013:271; Gamble et al., 2015:99). These pitfalls and issues include:

⇒ Improperly planned and executed cost cutting might bring short-term profits but can lead to longer term efforts to build a competitive advantage being undermined.

⇒ Market fragmentation makes it difficult to maximise market share with a standardised product.

⇒ The low-cost base can be easily copied resulting in no real cost advantage.

⇒ Businesses must avoid thinking that new products or product improvements should be more sophisticated than the original version (innovation trap). More sophistication generally means more costs (Kachaner, Lindgardt, & Michael, 2010:4).

⇒ Rapid changes in technology can erode the cost advantage of a business as new cost-efficient technology is introduced and utilised by competitors. Continual replacement of old technologies can result in increased costs.

⇒ A narrow focus on costs can lead to changes in the market, or changes in customer needs, being missed.

⇒ The focus of cost cutting needs to extend beyond just manufacturing costs and consider the entire value chain.

⇒ Insufficient attention being given to procurement of inputs into the value chain.

⇒ Businesses need to ensure that they consider both large-cost activities and small-cost activities.

⇒ Businesses need to guard against misunderstanding the nature of its costs and how they can be reduced. A distinction must be made between good and bad costs.

⇒ All cost-cutting activities must be in support of each other to ensure that they do not counteract each other and ultimately add costs. The business must not assume that a cost cutting measure identified in one area can be duplicated across all areas.

⇒ A danger that exists is that a lower-cost competitor can enter the market with lower prices and thereby undercut the business. The resultant price wars negatively affect all involved – a regular occurrence in the South African air transport industry.

⇒ A cost leadership strategy can result in reduced flexibility due to the cost constraints, which reduces its ability to adjust to significant changes in the market.

⇒ Cost reduction is not a once-off effort. It is a continuous task that needs to be monitored to ensure a sustained competitive advantage.

A cost leadership strategy can only be considered successful and value adding if it is sustainable. The strategy can only be viewed as being sustainable if the cost advantage cannot be copied by competitors. From the very beginning, Michael Porter (1985:97) has emphasised that a cost advantage will, "lead to superior performance if the organisation provides an acceptable level of value to the customer so that its cost advantage is not nullified by the need to charge a lower price than competitors". Experience has shown that when engaging in a cost leadership strategy, the business needs to understand that the low-cost offering cannot be successful if it has to operate within the traditional 'full-service' environment (Kachaner, Lindgardt & Michael, 2010:4). The many LCCs that attempted to compete head-on with the FSCs when they entered the market bears testimony to this point. Hooley et al. (2012:44) and Mullins and Walker (2013:242) state that the cost leadership strategy is most appropriate for commodity markets where the nature of the product is such that there is very little difference between the competing products in the market. The airline industry can be given as an example in this regard as airlines, be they a FSC or LCC, offer a standardised service – transport from point A to point B. Whilst it is clear that product differentiation is not the focus of this strategy, the business needs to ensure that the product/service that they do offer is not of such poor quality and value that consumers view it as not worth purchasing (Porter, 1985:13; Louw & Venter, 2013:269).

- **Focus strategy**

Some businesses are simply unable to compete in the broader markets with the bigger competitors due to issues like financial limitations, production facilities, and strong competitive forces at work in the industry. The crux of the focus strategy is that the business focuses its efforts on one or a limited number of similar segments in the market with a limited product range (Jooste et al., 2012:244). Porter's early work (1985:15) stated that the success of the focus strategy rests on the ability of the business to exploit what makes the niche segment unique from the broader market/ industry. The premise of the focus strategy is that by focussing on a narrowly identified niche, the business will be more efficient, profitable, and better placed to defend its position against competitors that compete in the broader market. This option is particularly attractive when the larger competitors do not see the niche as being cost effective or important to their broader operations, or view the needs of the niche market to be too specialised to warrant the commitment of resources (Louw & Venter, 2013:274). Porter further stated that the mere act of focussing on a niche does not guarantee superior performance.

Clear strategies on how to compete in the niche are required. To this end, Porter sub-divided the focus strategy into two variants; a cost focus and a differentiation focus. In simple terms, under the cost focus option, the business seeks to achieve a cost advantage in the chosen niche. The narrow focus on the selected niche means the business can search for, and exploit, differences in cost behaviour in the niche segments (Baines & Fill, 2014:171). Similarly, under the differentiation focus option, the business seeks differentiation within its selected target market. By focussing on the segment's specialised product needs, the business can significantly differentiate its products from competitors targeting the broader market (Porter, 1985:15). This alternative allows the business the opportunity to charge a premium price for the added benefits and service delivered to the customer.

Key to the success of either option, is that a business implementing the focus strategy needs to provide better service than broad-based competitors who, as part of their larger cost leadership or differentiation strategy, might overlap into the business's niche (Dess, 2012:174). In addition to this, it is essential that when utilising the focus strategy that management be disciplined and remain committed to serving the chosen segment. For the focus strategy to be successful, it is important that the business decides where and how it wants to achieve its focus. Jooste et al. (2012:246) outline four ways in which a focus strategy can be achieved; (i) focussing the product line, (ii) targeting a very specific market segment, (iii) operating in a very limited geographic area, and (iv) targeting low share competitors.

The selection of a focus strategy holds many potential advantages for a business. Some of the most important, as addressed in Jooste et al. (2012:247); Dess et al. (2012:175); and Louw and Venter (2013:274), include:

- ⇒ The business can gain an in-depth knowledge of a market and therefore gain a competitive advantage in competing in that market (Wilson & Gilligan, 2009:389).
- ⇒ Attention and resources are focussed on one goal, which limits distraction and strategy dilution.
- ⇒ The narrow focus allows the business to stay close to its customers, which makes it easier to respond to their changing needs.
- ⇒ Businesses with limited resources can make an impact in the niche market, which they could not make in the broader market.
- ⇒ Provides the business with a positioning device and thus becomes synonymous with a specific product, segment, or region.
- ⇒ Specialist knowledge of a particular market creates barriers to entry for competitors.

Whilst there are many advantages for certain businesses in pursuing the focus strategy, there are some pitfalls that represent a significant threat to their success if they are not properly managed. These pitfalls include (Dess et al., 2012:175–176; Louw & Venter, 2013:275; Gamble et al., 2015:108):

- ⇒ A business might become a victim of its own success if it performs well and grows as a result. In this case, the business outgrows its niche and, because of its size, loses customer intimacy (Wilson & Gilligan, 2009:394).

⇒ The erosion of cost advantages within the niche.

⇒ A focus strategy requires smaller volumes, which means that production costs per unit could be more expensive.

⇒ The strategy is still vulnerable to competition from new entrants and imitators.

⇒ The business is vulnerable to changing consumer needs and technology.

⇒ The business can become too focussed to satisfy consumer needs.

⇒ If the cost advantages/ points of differentiation are not strong, then they are vulnerable to broader-based competitors who can provide a wider range than the nicher.

The focus strategy is most appropriate for smaller businesses that are more flexible than large businesses and can quickly respond to the particular needs of a niche market. When deciding to utilise a focus strategy, the business needs to ensure that the selected segment is small enough so as not to attract the attention of competitors in the broader market, but big enough to warrant investment and offer the prospect of growth and profits (Gamble et al., 2015:108). Importantly, the business should not only make sure that it has the ability to segment the market, but also make sure that it has the necessary resources and expertise to effectively focus on the selected segment (Hooley et al., 2012:287). Finally, markets are dynamic, technology evolves, and people's needs and wants change. It therefore important that businesses continuously monitor their chosen niches to ensure that they are still meaningful and have not become too broad as they have grown (Porter, 1985:271).

#### 6.2.3.4 Implementation tactics for Porter's competitive strategies

An article by Obasi, Allen, Helms and Spralls (2006) back in 2006 states that Porter's generic strategy model had a number of gaps, including the absence of specific tactics to be followed for each alternative and the identification of tactics that are associated with the achievement of superior performance. Their research explored these issues and they were able to identify a number of tactics that are essential when following a specific generic strategy as identified by Porter (introduced in section 1.7.4.1 of the study). These tactics are identified in table 6.10. This table also highlights (in green) those tactics that were identified as being particularly important by Porter (Obasi, 2006:45) towards the achievement of an SCA, and ultimately, superior organisational performance.

From table 6.10 it can be seen that tactics for cost leadership include the pursuit of cost reductions, strong control over overheads, and the minimisation of distribution costs. The minimisation of distribution costs has proven to be particularly important to the low-cost airline model and has been aided by the development of the internet and internet booking systems. These systems have significantly reduced industry costs and reduced the need for reliance on expensive third party intermediaries. Obasi et al. (2006) also highlighted tactics for businesses following a combined focus/low-cost strategy. This strategic option is being selected and utilised by many more LCCs, particularly those moving in the direction of the hybrid model. The research highlighted a number of key tactics, which included outstanding customer service, the improvement of operational efficiency, control of product/service quality, high levels of training for front-line staff, and high levels of supervision over front-line staff. The first four of these were identified as being significantly related to higher organisational performance. As will be shown further into this study, these tactics are particularly relevant to the airline industry – for both the LCC and FSC sectors.

**Table 6.10: Generic strategies and their associated tactics**

| **Differentiation strategy** | |
|---|---|
| • Extensive training of marketing personnel<br>• Developing a broad range of new products or services<br>• Refining existing products or service<br>• Developing brand identifications<br>• Innovation in marketing technology and methods | • Utilising advertising<br>• Building a positive relationship within the industry for technological leadership<br>• Forecasting existing and new market growth<br>• Building high market share<br>• Fostering innovation and creativity |
| **Cost leadership strategy** | |
| • Vigorous pursuit of cost reductions<br>• Tight control of overhead costs | • Minimising distribution costs |
| **Focus/cost strategy** | |
| • Providing outstanding customer service<br>• Improving operational efficiency<br>• Controlling the quality of products and services | • Extensive training of front-line personnel<br>• Intensive supervision of front-line personnel |
| **Focus/differentiation strategy** | |
| • Providing specialty products and services<br>• Producing products and services for high price market segments | • Dropping unprofitable customers<br>• Targeting a specific market |

**Source:** Obasi et al. (2006:45).

## 6.3 AIRLINE STRATEGY

The focus in section 6.2.3 was on the core strategies that could be selected by a business on its path to achieving a sustainable competitive advantage and desired superior performance. The foundations of the strategies addressed were based on the generic competitive strategies described by Porter (1985). It was identified that the differentiation strategy was the basis of the FSC's business model, whilst the cost leadership strategy logically forms the basis of the LCC's business model. Regarding the evolution of the hybrid strategy, subsequent studies led many authors to conclude that despite Porter's initially assertions that the focus and differentiation strategy were mutually exclusive, they could in fact be combined into an 'integrated cost leadership/differentiation position'. Lee and Mauborgne (2005) referred to the need to establish a blue ocean strategy. This was also addressed in the discussion on the strategy clock, which showed the position of the hybrid strategy in terms of perceived added-value and price. The focus in this section will be on linking these generic strategies directly to the LCCs, FSCs, and hybrid carriers in terms of their unique characteristics and strategic approaches.

The main development in the airline industry has been the emergence of the LCC sector over the past 15 or so years (*see* section 1.7.4.2). This growth of the LCC market has had significant impacts on the domestic operations of many FSCs around the globe and caused a permanent change in the consumer's flying patterns and behaviour (as outlined in section 1.2.3.1). This impact of the evolution of the LCCs has also had an impact on the South African domestic air transport industry (as outlined in section 1.2.2.3 and quantified in section 5.4.2.2 of the study) and has affected the way in which the local airlines approach their strategy development. With this in mind, this section is addressed with emphasis on the development of the LCC model and its contrast with the FSC model.

### 6.3.1 Airline strategy foundation

In sections 6.2.1.2 to 6.2.1.4 attention was given to the need to establish a sustainable competitive advantage in order to achieve superior performance. Specific reference was given to establishing the way in which the business competes, the basis of competition, identifying the value proposition, and determining where the business competes. Understanding these elements helps the business determine, or set, its strategic direction and therefore the strategic options to be selected. This applies equally to the air transport industry as any other industry. In the airline context, before determining the specific strategic options to pursue, it is important that the airline understand what business it is in and who its customers are. Shaw (2011:9) states that when an airline is identifying which business it is in, it should go beyond simply stating that it is in the aviation business. He suggests that such a basic description would be too simple and result in the true nature of the business being insufficiently understood. In this regard, he states that airlines should instead define the business they are in from the perspective of the needs that they are attempting to satisfy and the type of competition that will be faced in the market. To this end, when defining its business, airlines should consider that they are attempting to satisfy the following types of needs (Shaw, 2011:9–12):

- **Transportation.** From point A to point B. This can be by air, road, sea or rail. Domestic travel is strongly influenced by other transport modes.
- **Communication.** Airlines bring people together to socialise or conduct business. Technology is becoming a strong competitor.
- **Leisure.** Airlines facilitate the leisure activities of the consumer but face competition from other options on how these leisure activities can be engaged in.
- **Logistics.** Airlines transport freight, but is expensive compared to other modes like sea or road. Time and speed is an airline's advantage.
- **Information.** Prior to the growth of information technology, airlines were involved in the speedy distribution of information. This has declined significantly, but as part of a freight business, airlines still move documents and other bulk information across the globe.

- **Selling services.** As a source of income, airlines can sell their knowledge and skills in the industry to other airlines. Pilot training, maintenance procedures, maintenance of other airlines aircraft, and management consulting for example.

When identifying customers, Shaw (2011:12) identifies four broad customer decisions that need to be reviewed in order to gain a proper understanding of the customer and their thought processes when seeking travel solutions. These include: will a trip be made, what mode of transport will be used, what class of travel will the customer purchase, and which airline will be chosen. Whilst they might seem overly simplistic points, an in-depth analysis of the customer's motives and needs behind each point will indicate who the customer is and give direction on the appropriate strategic direction. It is important to note the differences between the needs and wants of customers travelling for the purposes of business or leisure, as they will require different strategic approaches, especially when they consider travelling in different classes with an airline (economy, premium economy, business, or first class).

### 6.3.2 Strategic context: framework for competitive strategy[2]

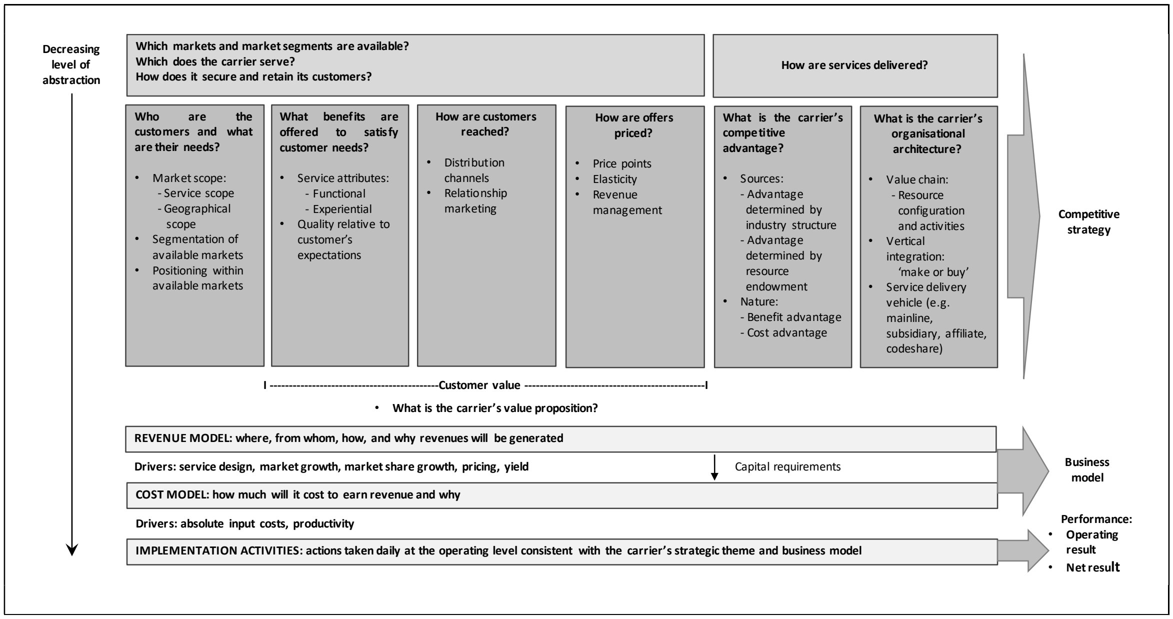
Considering the broader context of airline management, all airlines make use of competitive strategy to build a competitive advantage in their markets (Holloway, 2010:7). This process of establishing a competitive advantage is achieved through the development of a competitive strategy, the selection of a business model, and the development and implementation of an operational strategy. This relationship is highlighted by Holloway (2010:8) and forms an important framework against which to understand the core strategies and business models adopted by the various airlines operating within the industry. Figure 6.14 represents this relationship between competitive strategy, business model, and operational strategy.

The establishment of the competitive strategy dominates the framework, which is not surprising, as this is the manner in which the business will strive to ensure its sustainable competitive advantage (SCA) in the market. In section 6.2.1.4 (figure 6.4), the composition of a SCA was given. These components of a SCA form the basis of the competitive strategy. From figure 6.14, the core of the competitive strategy is based on:

- **The product and geographical markets in which the airline will compete.** In terms of geographical scope, it could be either a wide-market (multiple) or a niche market (focussed routes). In terms of product markets, the carrier could, for example, serve numerous market segments (wide-market) or niche markets by focusing only on a single class of travel. Effective market segmentation is crucial.

[2] This section is based on the work of Holloway (2010:7–29).

**Figure 6.14: Framework for competitive strategy, business model, and operational strategy**




**Source:** Holloway (2010:8).

- **The value to be delivered to the targeted markets.** This refers to the bundle of benefits and attributes offered to the consumer that are perceived as need-satisfying, and ensuring that the costs associated with obtaining the service are lower than the benefits received. Total customer benefits should outweigh the total customer costs (*see* section 6.2.1.2).
- **How the competitive advantage in the markets will be obtained and sustained.** Sources of competitive advantage in the air transport industry are complex, and in many cases, a competitive advantage on one route does not necessarily translate into a competitive advantage on any of its other routes. Competitive advantages in the air transport industry are based on the industry structure in which it operates and the resources available to the airline. Key to the air transport industry is the nature or source of the competitive advantage, that is, is it a cost advantage and/or a benefit advantage. As will be seen, this break down clearly matches to the low-cost strategy followed by the LCCs and the differentiation strategy of the FSCs.
- **How is the business structured to optimally produce and deliver the promised customer value at a profit?** The way in which the business is structured influences the way in which the strategies are implemented, and indeed the types of strategies that can be implemented. Airlines have to establish which activities will be performed internally and those which will be carried out by external suppliers. Attention also has to be given to the co-ordination of the internal activities to maximise the use of resources to achieve the best outcomes in terms of competitive advantage and value delivered.

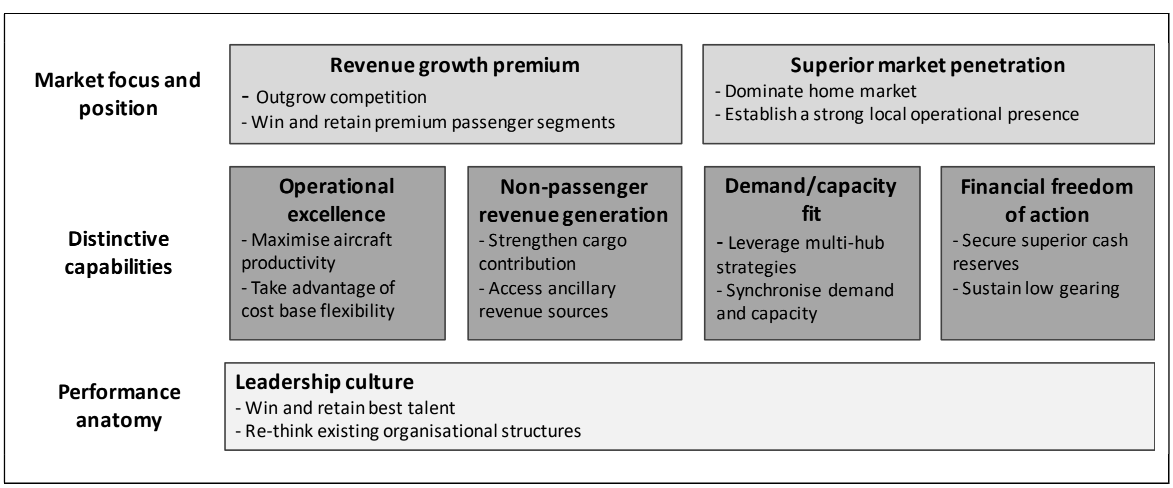
The second component of the framework is the business model. Holloway describes the business model as "a simplification of reality". It is a basic description of how the airline buys, produces, and sells the service (Holloway, 2010:25). In effect, the business model is what gives the business's strategies coherence. Holloway further states that the business model of an airline is a "description of the value a company delivers to targeted customers, and of how it configures resources internally and externally to achieve this". As per figure 6.14, this can be divided into two components; a revenue model and a cost model. The former describes how revenue will be earned and the latter addresses the financial consequences of the revenue model. In the context of the air transport industry and this study, this refers to the LCC model, the FSC model, and the hybrid model.

The third and final element of the framework identified in figure 6.14 identifies implementation activities that are undertaken on a continual basis to ensure the implementation of the business's strategies and adherence to the business model. These issues are not discussed in this document as they fall beyond the scope of the research.

Building onto this framework identified by Holloway in the previous paragraphs, work done by consulting company Accenture (2009:3) considered the components required to achieve high performance in the air transport industry. The work identified three building blocks of high performance and outlined the key characteristics of high performers in the market. These three building blocks and the key characteristics are illustrated in figure 6.15.

From figure 6.15, the three building blocks are identified as market focus and position, distinctive capabilities, and performance anatomy. Each of the characteristics given reflects an area where an airline needs to focus in order to obtain a competitive advantage in the market. The building blocks of high performance and associated characteristics are identified for the industry as a whole. This includes all airline business models, namely; LCCs, FSCs, and the hybrid carriers. The airline business models are addressed in sections 6.3.3 – 6.3.6 where the characteristics will be given more context.

**Figure 6.15: The building blocks of high performance in the air transport industry**




**Source:** Accenture (2009:3).

### 6.3.3 Airline business models

In section 6.3.2, the concept of a business model was described and the two main business models in the airline industry were established. Reference has been made to these two business models throughout this document thus far and they were defined in section 2.2.2 in chapter 2. Whilst the definitions are not repeated here, it is noted that FSCs were identified as carriers that use differentiation as their main strategic thrust and they typically use a hub-and-spoke system to feed their main routes (Belobaba, Odoni, & Barnhart, 2015:5u). LCCs, on the other hand, refer to airlines that have their focus on achieving a low-cost operating structure with the aim of offering low fares to the consumer. The evolving hybrid model, which will be addressed in section 6.3.6, is defined as a new generation of airline that is a blend of the full-service carrier and low-cost carrier. Each of these three models can be seen in the context of the study in figure 1.2 (*see* section 1.7.2), which outlines the approach to the thesis. FSCs are discussed in detail in section 6.3.4 and LCCs in section 6.3.5.

Prior to liberalisation and deregulation, competition between airlines was structured, protected, and largely based on attempted differentiation. The vast majority of these airlines were FSCs. LCCs were practically unheard of, and those that did enter the market were quickly overcome and exited the market. The business environment has drastically changed since those times, and as a result, business models have drastically changed over the past two decades, culminating in the rapid rise and success of the LCC model. Holloway (2010:26) identifies three main reasons behind the changing nature of the business models adapted in today's air transport industry; (i) deregulation and liberalisation, (ii) the growth of the internet, and (iii) developments in aircraft technology. The combination of these 'forces' was highly disruptive to the air transport industry and gave rise to the development of the LCC business model.

Disruptive innovation (*see* section 6.2.3.3) in the air transport industry is viewed as happening at a slower rate compared to many other industries due to issues like regulatory policy constraints, constrained infrastructure, and the control of hard assets by traditional airlines (Taneja, 2015:28). Disruption in the air transport industry over the past 40 years has been categorised into four phases (Airline Leader, 2016h:26):

- Phase 1 – Sixth freedom disruption (late 1970s and 1980s),
- Phase 2 – Gulf carrier disruption with the arrival of the ultra-long-haul aircraft (late 1990s),
- Phase 3 – LCC disruption and the competition between the A320 and Boeing 737 that reduced aircraft prices (2000s),
- Phase 4 – (2016–2025) – China's influence and big data transformation.

Each of these four phases of disruption occurred as a result of market conditions at the time of the disruption being unstable. Each phase, including phase 3 which resulted in the emergence of the LCC model (*see* section 6.3.5.1 for the detailed discussion on the emergence of the LCC model), had four key factors in common that led to the disruption; (i) a technical step change (Boeing 737 and A320), (ii) an operational innovation by some airlines (new distribution methods), (iii) regulatory structure changes (liberalisation and deregulation within the EU), and (iv) changes in the manner in which the airline product is distributed (online distribution directly to the consumer) (Airline Leader, 2016h:28). These four factors correspond with the three reasons identified by Holloway at the end of the previous paragraph. The 'phase 3' disruptive changes had clear implications for airline business models and strategies utilised by the airlines at the time.

Shaw (2011:97) provides a link between Porter's model of generic strategies and the business models of the air transport industry. One of the key points made by Shaw is that prior to liberalisation and deregulation (*see* section 5.2.1), Porter's model did not work properly for the airline industry because the model is based on competition and the unhindered interaction of the five competitive forces in an industry. With substantial government regulation and market interference, the competitive playing field was strictly controlled and manipulated to protect an airline (strong and weak), thus resulting in unfair competition and the inability of new airlines to effectively compete using the competitive strategies. The South African market is a case in point, where South African Airways is supported and protected by state guarantees, and smaller airlines like the now defunct 1time and Skywise, who did not have similar financial aid, battled to compete in a market that has unfair competition. Had the competitive forces been allowed to work freely and fairly within the market, it would probably have been South African Airways that would have collapsed (especially given their numerous financial and managerial problems). With the advent of deregulation and liberalisation, markets have become more open (although not yet fully open or deregulated) and subject to normal competitive forces, leading to Porter's model becoming more relevant to the industry. Porter's model, as was seen in section 6.2.3.3, referred to the stuck-in-the-middle strategy, where a particular competitor has neither a cost advantage or point of differentiation. This position is one in which many airlines currently find themselves, with much uncertainty existing on which route to follow to remain competitive in markets where either strong LCCs or strong FSCs dominate.

With this basic overview in mind, the next few sections focus on the key elements of the FSC strategy and the LCC strategy. The key differences between them will be highlighted.

### 6.3.4 The full-service carrier (FSC) model

Throughout this study so far, it has been highlighted that the FSC can be generally identified as following the differentiation strategy as identified in Porter's model of generic competitive strategies (*see* section 1.7.3 for the definition of the model). Additionally, under the generic concept of the 'full-service carrier', some airlines following this approach are referred to as legacy carriers and national carriers[3] based on their development prior to liberalisation and deregulation. These legacy and national carriers operated in a protected environment in which they could charge high fares and did not have cost control as their main focus. With deregulation and the growth of liberalisation, these 'legacy' carriers were exposed to increased competition, but were 'stuck' with the huge cost disadvantages and bloated infrastructure that arose from being behind the protection of regulated markets and home governments (Holloway, 2010:47). These negative factors have made it challenging for them to compete effectively in this new environment. Hence the reference as 'legacy carriers' because they are stuck with the 'legacy' of high costs, bloated infrastructure, and excessive networks. Many of these carriers still remain as their nation's so-called 'flag carriers' despite the changes in the operating environment (O'Connell & Williams, 2011:62). FSCs that emerged after the advent of deregulation and liberalisation are thus not hampered by these legacy problems and are able to compete more effectively in the market. An example in this case would be the success of post-liberalisation airlines like Emirates, Qatar Airways, and Singapore Airlines compared to legacy/national carriers like Alitalia, Air France, SAS, and notably South African Airways. Even large carriers like Lufthansa have large legacy costs and infrastructure that they are finding difficult to unravel and reduce. Whether an airline is a pre- or post-liberalisation/deregulation carrier, airlines in this category are classified as following, or attempting to follow, the differentiation strategy approach. This approach to strategy has a number of characteristics.

Some of the main characteristics of airlines operating as FSCs include a distinction between travel classes (economy, premium economy, business, and first), a strongly developed network capable of feeding its traffic through a hub to the various destinations, and transport cargo (O'Connell & Williams, 2011:62). FSCs have enhanced their networks through the establishment of alliances with other airlines to gain access to passengers in markets that individually the two partners do not cover. O'Connell & Williams further state that due the nature of the business model, FSCs attract high yield passengers. Specific characteristics that make the FSC model so attractive to the high yield passenger include the large networks, connectivity to many destinations resulting from partnerships and alliances, multiple distribution channels, flexible tickets, convenient location of airports, frequent flyer programmes, and enhanced product features that include business lounges, fast-track security, in-flight entertainment, seat assignment, complimentary in-flight snacks/meals, flat beds, and more flexible baggage allowances (Belobaba et al., 2015:5u; O'Connell & Williams, 2011:62). FSCs also tend to have a mixed fleet of aircraft to serve the various routes that they operate and are faced with higher labour costs in order to provide the services that a differentiated strategy demands. Given the nature of the product on offer, a FSC's costs are higher and they charge a higher fare than their low-cost competitors.

As discussed in section 5.2.1 of the study, liberalisation and deregulation changed the competitive landscape in the industry, opening it up to more competition. FSCs with high cost structures faced difficult situations as they attempted to reduce their costs and focus on their points of differentiation,

[3] 'National carriers' are carriers that were run and controlled by the national governments of a particular nation.

which were practically none existent. On domestic routes, in particular, FSCs are finding it very difficult to compete with the LCCs, where a lot of the services that were traditionally provided (and charged for in the fare) are no longer expected by the short haul passengers who are happy to forego them on the cheaper LCCs. FSCs, in order to remain competitive, need to reduce these costs but are faced with the dilemma that their passengers still expect these additional product and service components, thus making it difficult to reduce costs and thereby increase profitability or reduce losses (as the case may be). To compound these issues, the customer is becoming more demanding and more aware of the options available to them (O'Connell & Williams, 2011:63; Shaw, 2011:138). The current economic and political turbulence in many markets has made this change in consumer behaviour more pronounced, with greater levels of price sensitivity being felt across all segments.

Sections 3.2.2 and 3.4.2 of the study highlighted the fact that many airlines in the industry suffer from excess capacity. This stems from the pre-liberalisation and deregulation period, but also from airline's obsessive desire to increase market share and market presence through route frequency. The fluctuating nature of air travel demand, coupled with the relatively fixed nature of supply, compounds this tendency towards excess capacity. A combination of a number of factors has affected the profitability of many FSCs in the period from 2005 to 2016. Many of these have been touched upon in chapters 2–5 and referred to in the previous paragraphs. The key contributory factors put forward for the FSC's testing circumstances include the challenging economic and business environment, terrorist activity and the resultant security clamp-downs, and the impact of LCCs. Airlines following the differentiation strategy approach have, however, been criticised for expanding too rapidly in the good times and focussing too much on the premium customers (Shaw, 2011:138), and then being at a disadvantage to the LCCs when challenging economic circumstances arise and the premium customers defect to cheaper cabins or cheaper airlines. The problem is compounded by the FSC's relatively higher unit costs compared to LCCs, who are also more flexible when it comes to adapting to changing circumstances (*see* figure 5.11 of section 5.2.3.10 for an illustration of the cost gap between the models). Considering all these issues in conjunction with the changing nature of the customer, it is clear that a 'business-as-usual' approach is no longer an option for the FSCs because the underlying theories and processes of the FSC model have become outdated (Lovelady, 2013:17). The FSC model needs to be adapted to meet the needs of the new customer and the new operating environment caused by the disruptive nature of the LCC model.

Building on the fact that success in the FSC sector is extremely challenging in the prevailing economic environment and affected by the influx of low-cost competitors, a number of key success factors can be identified that are important for an airline if they are seeking to be successful with a differentiation strategy in the FSC sector. In this regard, Binggeli and Pompeo (2005:6) state that FSCs must firstly consider the stance they should take in response to low-cost competition (co-exist, limited competition, or head-on competition) and secondly, they should adapt their overall business designs to be more competitive. Shaw (2011:121) identifies four key success factors:

- **FSCs need to be innovative.** This includes the use of new aircraft, new designs and layouts, on-board services, distribution methods, and even marketing efforts for example. Emirates is given as an example of an innovative airline with their use of the A380/777ER aircraft, significantly higher baggage allowances for passengers, and on-board entertainment services (ICE) to name but a few.
- **FSCs need to offer high levels of personal service.** This is particularly important for FSCs as they offer business and first class products that are tailored to high yielding passengers. Customer service is a crucial element of a market driven focus (*see* section 6.2.1.1), is a crucial part of delivering superior customer value (*see* figure 6.3), and a core competency (*see* section 6.2.1.3) that leads to the development of a sustainable competitive advantage (*see* section 6.2.1.4). Given the high levels of customer interaction in the delivery of the air transport service, it is essential that customer service be of the highest standard to ensure a level of differentiation.
- **FSCs need to engage in brand building.** In a market where most airlines are generally perceived as being the same, it is essential that airlines pursuing a strategy of differentiation engage in brand building.
- **FSCs need to be active in each of the main market segments.** This includes the business travel, leisure travel, and freight segments. Whilst operating in all three segments can add complexities to an airline's operations, there are synergies that can be obtained and the airline is opened up to multiple streams of revenue that have different peaks and troughs allowing the airline to smooth the effects of the income cycles to an extent.

Shaw (2011:142) states that FSCs following the differentiation approach have a number of advantages that operate in their favour in their attempts to be more competitive. These include existing slot allocations at airports, traffic flows resulting from their hub networks, alliances with other airlines, and a long history of operations with the resultant brand equity. The competitiveness of LCCs on short haul routes presents a difficult task, but on longer-haul routes, the FSCs have opportunities to establish a competitive advantage. From a strategic perspective, Holloway (2010:29) states out that FSCs need to adapt their business strategy by revising their revenue and cost models. In terms of the revenue model, FSCs need to adapt their old pricing approach (high unrestricted fares with highly restricted lower fares) to a new approach where there is a low basic fare which is increased as the departure date approaches and charges added for additional unbundled service attributes. In terms of the cost model, FSCs need to reduce costs by streamlining their operations and ensure more effective use of their capacity. Holloway highlights the fact that, whilst costs are cut, they need maintain a level of service that meets the needs of their customers and the requirements of the differentiation strategy. Doganis (2010b:148) stresses the need for FSCs to learn from the LCC model and adopt some of their practices in order to be more competitive. In particular, he states that FSCs need to cut labour costs, aircraft ownership costs, maintenance costs, and passenger-related costs. Many FSCs are finding that their attempts to reduce their ‘traditional’ or ‘legacy’ costs are being met with strong resistance from the employee unions who fear significant job losses in the process.

Binggeli and Pompeo (2005:7), Holloway (2010:360), Shaw (2011:142), and O’Connell and Williams (2011:141–142) highlight the fact that FSCs have a number of options to consider in order to operate successfully in the market. These options include:

- Organisational restructuring and consolidation of their current position by focusing on their core activities and restructuring current operations.
- Establish their own low-cost subsidiary to compete more effectively in the short-haul markets (South African Airways with the establishment of Mango for example). Lovelady (2013:18–19) emphasises that the key to his approach is simplicity and the avoidance of ‘operational contamination’ that could introduce costs and complexity.
- Process reengineering. Reduce their costs and complexity so that they are able to compete more effectively on price or achieve higher margins.
- Engage in more effective segmentation of product offerings with a focus on personalisation that enhances the value proposition (Binggeli & Pompeo, 2005:7; Thomas & Catlin, 2014:4). A more distinct difference between business and economy classes for example.
- Redesign of the airline’s network to eliminate non-profitable routes and sub-contract those that can be better managed by regional partners.
- Sub-contract the short-haul component of their operations to other operators that have a more competitive cost structure in the market.
- Outsource non-core functions to organisations that are better structured to manage those functions. This can include maintenance, catering, property management, and advertising for example.
- Off-shore relocation. This includes is the relocation of facilities that handle back-office activities that can be handled offshore (call-centres are an example of this) and the use of offshore staffing, which reduces costs (specifically in the case of international carriers).
- Become a member of an alliance and establish cooperation agreements on smaller routes to obtain greater efficiencies.
- Aggressive response to the new LCCs entering the market through price discounting and capacity increases to drive them out of the market. This last option is a dangerous option, as not only might it drastically reduce their revenue, but might attract the attention of the regulators who do not allow anti-competitive behaviour or the abuse of a dominant position in the market – an allegation South African Airways has faced in the past.

Gogbashian and Lawton (in O’Connell & Williams, 2011:141) indicate that research conducted by them shows that for FSCs to revive themselves and succeed in the new market environment, they need to have a focus on profit maximisation as the foundation of their efforts, and not political or social concerns.

They emphasise the point that this entails aggressive cost-cutting, revenue-maximising initiatives, and key investment in information technology. Their research also stressed the need to maintain a high quality of service. Whilst cost-cutting is viewed as essential, it needs to be done in a manner that upholds high quality standards and even improves them where possible. A streamlined and simplified approach is advocated. Another point to be highlighted, is the need for strong and effective leadership to establish and communicate the desired direction and culture. Finally, they emphasise the need to invest in the development of staff and the relationship between management and employees. Whilst this can be a costly exercise, the benefits of having happy staff, that are appropriately trained, can save lots of money in the medium- to long-term. The benefits of good employer-employee relations and communication are essential for the successful implementation of new strategies and cultures, and serve to gain staff acceptance of the changes being implemented.

Above all, Thomas and Catlin (2014:2) emphasise the need for the FSCs to enhance their points of differentiation around the provision of a service that focusses on the "holistic passenger experience". To this end, they highlight the need of a customer-centric approach that takes advantage of technology-enabled approaches to effectively manage the entire travel experience of the customer (*see* section 6.4 for more detail on the need for a customer-centric approach).

### 6.3.5 The low-cost carrier (LCC) model

The cost leadership strategy was discussed in section 6.2.3.3, with attention being given to the basis of the strategy as a competitive strategy and the various drivers that can be used by businesses to achieve cost leadership. The advantages associated with the strategy and its various pitfalls were outlined. The main point made was that the cost leadership strategy can only be considered successful if it is value-adding and sustainable. It is re-emphasised that the strategy refers to cost leadership and that this does not necessarily always mean the lowest price. In the context of the air transport industry, the cost leadership strategy has formed the basis of the LCCs that have entered the market and been posing competitive challenges for the more rigid, legacy-burdened FSCs. Section 1.7.3 provided a definition of the model. In section 1.7.4.2, the broad background of the LCC model was introduced to provide context for the study. The LCC sector was quantified in sections 5.2.3.10 (global), 5.3.6 (African), and 5.4.2.2 (South African). This section explores the theory regarding the LCC model in detail.

#### 6.3.5.1 The emergence of the low-cost carrier model

It was stated in chapter one that the low-cost airline model has been in existence for many decades, but that it is only since the late 1990s that it has really sprung to prominence as a successful airline model (also see Shaw, 2011:100). The impact of the low-cost model has resulted in a major shift in the way in which airlines are operated, particularly in the context of domestic short-haul travel (O'Connell, 2011:63). At a superficial level, the rise of the LCC could be explained as airlines exploiting latent consumer demand for inexpensive travel (Ciancimino, 2008:14), but at a deeper level, a number of other forces were at work. Southwest Airlines in the USA, which was established in 1971, is considered the trailblazer of the low-cost airline model that is followed today. LCCs like EasyJet and Ryanair in Europe, and Air Asia in Asia, along with Southwest in the USA, are generally viewed as the leaders in the LCC industry across the globe. It is however, generally recognised that the low-cost airline phenomenon began in the United States of America shortly after airline deregulation (Doganis, 2010b:131; Vasigh, Fleming, & Tacker, 2013:374).

Initially after deregulation and liberalisation in the USA, the existing airlines used their existing dominant position to shore up their positions and, through their actions, in effect raised the barriers to market entry and competition (Holloway, 2010:359; Doganis, 2010b:132). However, as Holloway states, new entrants were able to overcome these barriers through the use of innovative thinking (disruptive innovation as highlighted in section 6.3.3) and developed the low-cost alternative by changing the manner in which an airline operated. This included point-to-point operations, cheaper fares, and direct selling (Doganis, 2010b:132). In this period, with the newly emerging low-cost option, there was an opportunity for new airlines to enter the market. The resultant sudden influx of capacity saw fares declining, with the airlines operating on a low-cost base reaping the benefits. In this case, Southwest Airlines in particular made rapid gains and emerged as the leader in the industry. The bursting of the technology bubble in 2000, and the twin towers attack in 2001, had negative consequences for the FSCs and saw the LCCs burst onto the scene and begin their rise in popularity.

Prior to liberalisation (explored in section 5.2.1), Europe was also highly regulated, with competition between carriers restricted by numerous bilateral agreements between the various countries (ELFAA, 2004:3). With the liberalisation of intra-European airspace between 1987 and 1997, the low-cost model began to expand into Europe with airlines like Ryanair, Easyjet, Go, and Buzz entering the market. The rapid growth of these low-cost airlines in the USA and Europe saw investors across the globe trying to launch their own carriers to take advantage of the success in the market. This included carriers like Air Asia in Asia, Jetstar in Australia, and kulula.com in South Africa in 2001. In response to the rapid number of low-cost airlines in the market (and their apparent success), numerous FSCs launched their own LCCs in an attempt to reach markets that they could not reach with their long-haul FSC model (Lovelady, 2013:15). Many of them failed and they soon returned to their original focus on the differentiated full-service model. A key reason behind these failures was the FSCs not fully adopting the low-cost model as part of their culture, whilst still being restricted by the existing cost intensive full-service model and its ‘legacy’ (Vasigh et al., 2013:377). In addition to this, the extreme competition in the low-cost sector meant that these ‘legacy’ airlines faced intense competition from the pure LCCs, which ultimately detracted from their core full-service offerings.

Much has been said in the previous paragraphs about the effect that liberalisation and deregulation had on the emergence of the LCC model and the subsequent industry disruption. Section 6.3.3 gave reference to disruption in terms of the air transport industry as a whole. The focus in this case is on disruption specifically related to the LCC model. Whilst the LCC model itself is considered to be a disruptive innovation in the air transport industry, it was the disruptive impact of the growth of the internet as a direct distribution channel to the consumer that really saw the LCC model take-off. A case of one disruption leading to another. An article in CAPA's May–June 2015 '*Airline Leader*' publication highlights the point that a feature of any disruptive innovation is that the 'disruptors' have a tendency to directly target the consumer (Airline Leader, 2015:53). The fact that the LCCs bypassed the traditional Global Distribution Systems and travel agents, and were the first to sell tickets directly to customers via the internet meant that the effect of the disruption was industry changing. Through this disruptive innovation, the customer has been empowered and consequently has radically changed the way in which consumers behave (Airline Leader, 2016h:22). This point is reinforced by Taneja (2015:29) who states that, "the key to disrupting the business landscape is changing customer behaviour". Taneja further states that, in a world where the consumer has access to information and knowledge of the product options available, that consumer is actively seeking (i) products and services that are personalised to meet their unmet needs, (ii) control over their entire travel experience, and (iii) a good price and a satisfactory experience.

In summary, the LCC sector has shown remarkable growth in the past two decades and this trend looks set to continue into the near future. Harbison and McDermott (2009:63), Shaw (2011:101), and Airline Leader (2016h:28) identify the following reasons to explain the rapid emergence of the LCC model:

- Regulatory liberalisation.
- The development of the internet and the cost benefits it offers airlines in terms of reduced distribution costs.
- Changing consumer behaviour, particularly that of the business market traveller.
- Low priced fuel and relatively low priced aircraft (737 and A320).

LCCs were identified in section 1.7.4.2 as a key catalyst of growth in the air transport industry over the past decade. It was shown in section 5.2.3.10 of the study that LCCs have been showing stronger annual growth in terms of global passenger numbers (RPKs) and global capacity (ASKs) than their FSC competitors over the past 10 years. Globally, the number of scheduled LCC seats has grown by an average of 9% per year between 2000 and 2014 (Leigh Fisher, 2015:2). Section 5.2.3.2 also highlighted that a large number of planes are on order for delivery to LCCs, with Boeing highlighting in 2012 that LCCs are a driving force behind strong future demand for new single-aisle aircraft (Boeing, 2012c:14). Boeing, in their 2012–2031 forecast, expect the total aircraft share of LCCs to rise from 14% to 19% by the year 2031. The 2016–2035 Boeing Market Outlook forecasts that the LCC market share of the total in-service fleet for single aisle aircraft will increase from 26% in 2015 to 32% in 2035 (Boeing, 2016:25). Section 5.2.3.10 put the LCC sector into context with the FSC model. Whilst not all LCCs have met with financial success, the model is seen as the most viable strategy for the short-haul market. That being said, airlines like EasyJet, JetBlue and South Africa's kulula.com have moved towards the hybrid model, which includes the addition of features beyond the traditional specifications of the LCC model. Ryanair is one example of a LCC that is sticking rigidly to the cost leadership strategy.

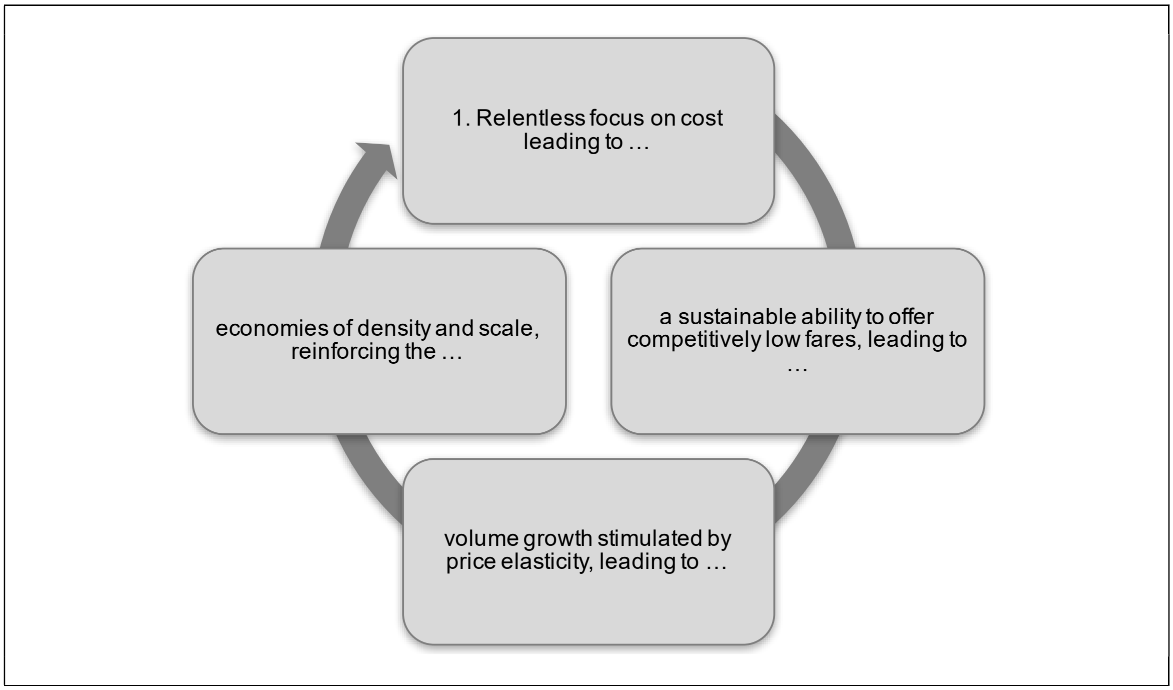
#### 6.3.5.2 The low-cost carrier model described

In section 1.7.4.2 of the study, Michael O'Leary, the CEO of Ryanair, was quoted by Calder (2002:18) as stating that he views low-cost airlines as offering a bus service. A point highlighted in section 1.7.4.2 was that because of the wide availability of low fares and the high number of competitors in the European and American markets, air travel is evolving into a commodity product with little difference between the airlines other than price. This is an important influence of the LCC model on the commercial air transport industry.

There are many terms in the industry used to describe the phenomenon of the low-cost airline model. Some of these include low-cost carrier, no-frills carriers, low fares carrier, and budget airlines. Whilst the definitions of these names differ slightly, they all refer to an airline that is pursuing the cost leadership strategy by eliminating costs and offering highly competitive fares to the consumer. Shaw (2011:100) made the observation that for the past decade the vast majority of start-up airlines have been in the LCC category. This trend has continued up to 2017, with five LCCs starting up in 2016 alone (Flight Global, 2017:8). This has been spurred by the fact that LCCs in general have experienced a period of strong financial performance, even during times of economic turmoil (O'Connell, 2011:66). The benefit of this strong financial performance has been the increase in the number of investors that have been willing to invest money into the sector, thus allowing LCCs to rapidly expand their operations and be more competitive against the FSCs.

Reiterating the description given in section 1.7.3, the basic premise of the LCC model is that the airline cuts out all the unnecessary costs and frills from its product offering and supporting operations, thereby minimising the cost of operations and offering the airline more scope to offer competitive fares. O'Connell (2011:64) describes LCCs as operating on a "different operating platform" to FSCs where they embrace the low-cost concept into the entire organisational structure and functioning of the airline. O'Connell (2011:64) further highlights the point that the LCC model is grounded on the principle of cost leadership, where operational simplicity and high productivity are matched with the exclusion of frills (as discussed in section 6.2.3.3). Doganis (2010b:132) also highlights the concept of 'simplicity'. Conor McCarthy (IATA, 2014d:23), a former director of group operations for Ryanair, emphasises the fact that a LCC model is one that sticks to the basics, avoids all forms of complexity, and has 'lower costs' as its mantra. Holloway (2010:32) describes the model as one that is based on keeping processes as simple as possible, whilst resisting the urge to add complexity to the airline's operations. He describes the low-cost model as forming a virtuous circle which is illustrated in figure 6.16. The cornerstone of the model is the relentless focus on costs from which flows the benefit of being able to charge lower fares and achieve economies of scale and density. The circle illustrated in figure 6.16 is a closed circle, with problems being experienced when the flow of the circle is broken.

**Figure 6.16: The link between sustainably low costs and a positioning based on price leadership**




**Source:** Holloway (2010:359).

Schlumberger and Weisskopf (2014:13), after reviewing the work of many other researchers, conclude that despite the fact that there are a number of commonalities across the various LCCs, each airline adopts its own unique set of strategies resulting in it being impossible to identify or provide a single definition of the model. In effect, there is no definitive LCC model, and besides having the focus of achieving low costs, there is no 'driving element' that can be identified as being the LCC model's definitive competitive advantage. Schlumberger and Weisskopf (2014:13–15) therefore suggest distinguishing between different types of LCCs and identify (i) the purist model, (ii) the Southwest model, and (iii) the JetBlue model. This classification is simplified in mainstream terminology and stated as ultra-low-cost carriers, mainstream low-cost carriers, and hybrid low-cost carriers (or simply hybrid carriers) (Thomas & Catlin, 2014:1).

#### 6.3.5.3 Characteristics and strategic approach of the LCC model

The previous section highlighted the concept of operational efficiency and simplicity when referring to the low-cost model. In conjunction with this description, the LCC model can be described according to a number of standard characteristics that distinguish it from the FSC model. The basic characteristics have been refined over the years into a list of main characteristics that describe the key features of airlines following the cost leadership strategy as their business model. It is important to note that the LCC model is dynamic and constantly evolving. Not all of the model characteristics apply equally to all LCCs and some may be applied differently according to the relevant markets.

The list that follows is based on a compilation of the most common characteristics identified by a number of authors and sources (and builds on the introductory comments given in section 1.7.4.2). These include ELFAA (2004:5), Harbison and McDermott (2009:31–32), Holloway (2010:323–34 & 359), Doganis (2010b:134–136), O'Connell and Williams (2011:117 & 187), Shaw (2011:102–111), Airline Leader (2011:52), Vasigh et al. (2013:377–388), IATA (2014d), Schlumberger and Weisskopf (2014:3–12), Wensveen (2015:303), Fageda, Suau-Sanchez, and Mason (2015:290–291), and Belobaba et al. (2015:5u–5z). Of these authors, Holloway (2010:358–359) provides a useful framework for categorising the characteristics of the LCC model and will be used in presenting these characteristics. The characteristics are as follows:

***Service design***

- Non-stop, point-to-point route structure, usually on a high frequency service between the two points.
- The use of secondary airports to reduce airport fees and other passenger-related handling costs. Some LCCs, including those moving towards the hybrid model, have introduced major airports to their route structures. Even Ryanair has added numerous primary airports to its route network whilst still serving the nearby secondary airports, Frankfurt-am-Main and Frankfurt-Hahn for example (Dunn, 2016a). Secondary airports are less congested and therefore allow for faster turnaround times and thus increased flying time or asset utilisation for revenue generation. In many markets, like South Africa for example, there are limited secondary airports, which forces the LCCs to utilise the primary airports.
- A simple pricing structure which focuses on one-way sectors. There is only one fare on offer at a point in time, which the passenger either accepts or rejects. Complexities like fare conditions are largely eliminated so that only one fare type is on offer to the potential passenger. The exact fare will vary over time depending on the demand management model being used, but generally it rises as the departure date approaches.
- Provision of a low-frills, or no-frills, service. This entails service components like free in-flight meals and drinks being eliminated. In turn this requires the airline to carry less food items and

therefore smaller galleys are required. This also reduces the amount of cleaning and clearing out to be done at the end of a sector.

- Traditionally a single class service with no business or first class product on offer. In an evolution of the model, some LCCs have experimented with the addition of an enhanced product to appeal to the business market as the model has matured. A distinctive example in this case is the addition of the 'business-plus' product by the LCC model leader, Ryanair, in response to the success achieved by Easyjet in the business travel market (Low Cost and Regional, 2016a:13). Whilst the Ryanair business-plus product is not a traditional business class product, it does offer additional features like flexibility to change flight time or destination, reserved seating, priority boarding, and a free 20kg baggage allowance.
- High seating density, which is achieved from a tighter seat pitch, smaller galleys, and reduced storage space.
- No frequent flyer programme and the associated administrative burden (although some have introduced this "frill" in a move towards a hybrid model but is usually done in conjunction with a 3rd party provider or partner).
- Fewer check-in staff at the airport, with online check-in being encouraged (compulsory in the case of Ryanair).
- No business lounges. Some LCCs offer business lounge access to 3rd party or partner lounges at an additional charge to the ticket price.
- Limited assistance to passengers in the case of missed flights, flight cancelations, or rebooking. The penalties for changes are high and tickets are usually non-refundable.
- Restricted luggage allowances with excess baggage fees strictly applied.

***Process design***

- Lower ticket distribution costs. This is achieved through cutting travel agent commissions and focussing on direct sales via the internet. In recent times however, some LCCs have begun utilising global distribution systems as they have seen their markets grow and evolve beyond their original scope.
- No interlining connections (no transfer of passengers or baggage to a different flight). Each sector is handled as a different flight. The effect of this is that complexities and labour-intensive tasks are removed from the airline. (code-sharing is used)
- Hubbing is generally not utilised. Each route is an individual standalone route. As with the previous point, passengers and their baggage are not transferred, they must check-in for each individual sector that they fly.
- Utilising simpler and cheaper processes by not using premium services offered at airports. For example, the use of stairs instead of air bridges to embark and disembark passengers.

- No seating assignment, which reduces the administrative burden at the airport and speeds up the check in process. This also speeds up the plane boarding process thus, ensuring quicker turnaround times and improving overall efficiency.
- Lower landing fees obtained through negotiations with airports. Particularly relevant where the LCC utilises secondary airports that would not normally have the higher number of passengers passing through the airport.
- Point-to-point service allows cabin crew to return to their homes each day thus avoiding the expense of crew overnight layovers.
- Use of external suppliers and service providers to perform non-core and specialised tasks.
- Simplified and tight management of the administrative processes.

***Productivity***

- Lower labour costs. In this case, lower labour costs can be realised due to the overall lower wages paid due to fewer services needing to be provided by employees. Labour cost savings can also be achieved through greater employee productivity and efficiency.
- Simplified management structures coupled with strong leadership and characterised by fast decision making and implementation (IATA, 2014d:22).
- Increased aircraft utilisation. This is achieved through quicker turnaround times and longer flying hours for the aircraft per day (more sectors flown). The use of uncongested secondary airports contributes towards the achievement of this increased utilisation.
- Strictly managed cabin load factor targets.

***Fleet structure***

- Common fleet type. This results in maintenance cost savings due to fewer spare parts from different manufacturers being required. Other cost savings arise from staff training being standardised across the one model of aircraft, pilot training is cheaper, and discounts from manufacturers when purchasing aircraft can be negotiated.
- One class layout with simple galleys and optimised stowage (IATA, 2014d:10).
- High-density seat configuration standardised across all aircraft in the airline's fleet.

***Other characteristics***

- A strong focus on ancillary revenue generation. This includes the unbundling of the traditional air travel product and selling the different services at separate rates, for example, additional baggage, food and drinks, travel insurance, and extra-legroom seats. Other examples include the selling 3rd party car hire, hotel rooms, and other travel packages on the airline's website. The levying of credit card charges for the use of a credit card has been a more controversial revenue generating method. For the average LCC, ancillary revenue for 2016 made up approximately 11.8% of their total revenue, whilst for 'ancillary revenue champs' like Ryanair, ancillary revenue made up 25.5% of total revenue for 2016 (IdeaWorks, 2016:2).

- LCCs thrive on high awareness levels through the use of eye-catching and sometimes controversial advertising and publicity campaigns. Their livery is bold and stands out from the more traditional FSC liveries. The green of kulula.com, the orange of Mango, and the red of the now defunct 1time serve as a perfect example of this point.
- LCCs, through the lower prices charged, have opened up new markets that include people that have never previously been able to afford air travel. LCCs characteristically are viewed as being responsible for generating new traffic flows.
- Interactive Marketing Agreements (IMAs). Whilst LCCs do not engage in interlining or other contractual alliances, many of them have started engaging in IMAs where the one LCC agrees to promote another LCC's services in non-competitive areas. In this case, airline A promotes airline B on their website by offering the passenger onward destinations not offered by Airline A.

As will be addressed in section 6.3.6, not all LCCs have adhered to these points identified above. Over time, as the model has evolved and the competitive landscape changed, airlines have adapted to their circumstances and some remained loyal to the pure low-cost model and others have evolved into what is termed the hybrid model.

#### 6.3.5.4 Issues to consider regarding the LCC model

The overall success of the cost leadership strategy, and thus the LCC model, in surviving, and in many cases growing during difficult economic periods suggests that the model will continue to thrive into the near future. At a superficial level, it is obvious to state that the future success of the LCC sector relies on a relentless focus on cost reduction. Schlumberger and Weisskopf (2014:17) state that there has been a convergence in costs between the LCC and FSC models over the past decade as the FSCs have become more sensitive to costs. The arrival of more efficient aircraft, coupled with fuel cost declines and FSCs unbundling part of their fares, has resulted in the FSCs partially eroding the LCC's cost advantage. A 2014 report by Oxford Economics (2014a:28) highlights the same points and adds that by reducing their turnaround times, FSCs have further 'streamlined' their operating costs, resulting in the narrowing of the gap between the two models. An article by Binggeli and Pompeo (2005:4) in 2005 groups the challenges for the LCC sector into four specific hurdles to be overcome to ensure success. These are (i) controlling costs, (ii) identifying new sources of revenue, (iii) reassessing the design of the business, and (iv) negotiating the consolidation occurring in the industry. A further review of the writings of some of the leading authors (as addressed in the bullet points below) on the topic suggests that they all share a positive outlook for the LCC model, but they all raise a number of key issues that will need to be considered if LCCs are to continue to be a success story. As stated by Dunn (2011), an integral part of the low-cost model is an understanding that there is not a one-size-fits-all answer to establishing an LCC and planning the way forward. Some of the key points and issues to be considered include the following:

- Authors like Shaw (2011:115) and Doganis (2010b:148), whilst recognising that the growth of LCCs has been spectacular, question whether the rate of growth is sustainable by suggesting that LCC model is reaching the maturity phase of its life-cycle. The suggestion that LCCs are reaching maturity in many markets is supported by many commentators (including airline managers) in a 2011 article by Dunn (2011). Shaw suggests that the growth stimulated by a LCC eventually reaches a peak and the average fare on a route eventually returns to the pre-LCC average. Doganis (2010b:148) suggests that the long-term cost advantage of LCCs is dependent on two factors; (i) the ability of FSCs to reduce the cost gap and become more competitive against the LCCs, and (ii) the LCC's ability to keep their costs down and prevent them from rising due their growth in size and capacity. The cost gap between FSCs and LCCs has declined over the years, but given the nature of the two models, there should always be a difference. Belobaba et al. (2015:597f–597g) confirms the cost gap decline by showing that with the exclusion of fuel-related expenses, the difference in the cost per ASK in the USA market between each model has nearly halved, but is still significant. Analysis by KPMG's *Global Aviation Practice* lead them to the conclusion that, whilst both models are continually focussing on costs, the cost gap between them will never be eliminated because (i) FSCs will be unable to fully move away from their 'legacy costs' and practices, (ii) only LCCs will be able to maintain the efficiencies gained from single fleet types, and (iii) LCCs are not limited by large and complicated networks and can therefore seek out lower cost routes and airports (KPMG, 2013:23). A 2014 report on the future of air travel by Oxford Economics reinforces this analysis and states that structural factors will maintain the distinction between the two models and they will continue to compete on their traditional competitive advantages (costs and price for the LCCs and service for the FSCs) (Oxford Economics, 2014a:28).

  Doganis (2010b:154) states that LCCs will continue to capture short-haul market from poorly managed FSCs, but stresses that there are currently too many LCCs that are too small and not properly structured to successfully compete against the larger established LCCs, and therefore predicts that many LCCs will exit the market. In markets where there are too many LCCs, competition will be intense, which will put downward pressure on yields and ultimately airline profitability. He suggests those that have established themselves in the market (mainly the first movers) will be the most likely survivors.

- The question also needs to be considered whether LCCs can continue to negotiate favourable lower costs with suppliers like airports and manufacturers when it is so apparent that the airlines are achieving such high growth, and in many cases, profitability. As the market reaches its maturity, LCCs will be less able to deliver the high levels of growth which will reduce their initial negotiating power over suppliers. In an environment of fluctuating fuel prices, rising employee pay demands, and a maturing market, LCCs will find their cost advantage being eroded.

- Doganis (2010b:148) adds to this by emphasising that in a maturing market, with increasing competition, the LCCs may be forced to look for service improvements in order to differentiate themselves in the market. This will imply a strategy deviation and the addition of costs. Many airlines have found the need to do this and have in effect moved towards the hybrid model in order to remain competitive. Shaw (2011:117) highlights the discrepancy between various LCCs regarding attitudes towards service. Some take the approach of maintaining a level of low promises but ensuring that they keep them, whilst others provide the most basic of service and are not too worried about service failures as new customers will replace defecting customers due to the overall lower fares on offer.

- Another important issue that LCCs need to consider into the future is the nature of customer demand. Careful attention needs to be given to what services and benefits customers will willingly forego in order to obtain a cheap ticket and how the customers change their expectations over time. LCCs need to determine the point at which customers will no longer sacrifice their comfort for a cheaper ticket and which services they are not willing to sacrifice (Shaw, 2011:119).

- A key issue that could have an impact on LCCs into the future is the price of fuel (*see* section 4.2.3 for the discussion on oil prices and section 3.5.3.1 for the discussion on jet fuel). An article by Dunn (2011) highlights the point that LCCs operate with a very high breakeven load factor in order to be profitable. An increase in the price of jet fuel will result in an increase in costs, which puts upward pressure on fares. In a challenging economic environment, it is difficult to increase fares and maintain the required load factors because consumers are also cutting back, seeking cheaper options, or cutting travel all together.

- Some LCCs are reconsidering the use of a single aircraft-type fleet (Dunn, 2011). Whilst there are many cost benefits to a single-fleet type, there are some opportunity costs in terms of the limitations on the type of routes flown. In this regard, a cost-benefit analysis that is tailored to the LCCs unique circumstances is required. Doganis (in Dunn, 2011) suggests out that a LCC needs to be a large operator if they are to consider the dual-fleet option for it to be beneficial.

- LCCs need to manage the customer's perceptions of safety regarding LCCs. Customer's may associate lower prices with lower safety or 'corners being cut' to save costs and therefore start to doubt the safety of the LCC's aircraft and staff training.

- Environmental issues (*see* section 2.3.3) and the impact of environmental taxes on ticket prices need to be considered as these taxes and associated costs can significantly add to the final fare paid by the customer (Shaw, 2011:120). Whilst these taxes are beyond the control of the airline, they need to be carefully monitored and managed as they can have an effect on overall demand for the LCC's price-sensitive markets.

- The topic of ancillary revenue is of great importance to LCCs. The income generated from ancillary revenues has contributed significantly to the coffers of many LCCs and been one of the key reasons behind their ability to keep the overall fares low (Doganis, 2010b:155). The opinion exists that whilst there is price sensitivity around the fare charged, there is currently a lot less sensitivity surrounding ancillary charges, which offers LCCs some scope in extra revenue generation (Dunn, 2011). Doganis issues the caution that at some point the amount of money that can be generated from ancillary revenues will reach a limit and then the LCCs will once again have to focus on ticket revenues, and their ability to offer low fares, in order to be competitive in the market. Thomas and Nevin (2016:1) emphasise the importance of ancillaries when they state that "ancillaries are no longer takeaways; they enhance the customer experience and provide more choices and options".

- Given the growth in many of the LCC markets, and the need for continued growth, some LCCs have considered looking towards the option of introducing the long-haul low-cost routes. The overall results of the early attempts to establish this model were, however, not particularly encouraging. The key difficulty facing carriers considering the long-haul LCC option revolves around the vastly different cost structures that are involved with short- and long-haul travel (Shaw, 2011:115). Early research showed that many of the benefits arising from the low-cost model diminished when applied to the long-haul model (summarised by De Poret, O'Connell, & Warnock-Smith, 2015:273), which therefore reduces the cost benefits, and ultimately the low-fare benefits, that can be offered to the passengers. Holloway (2010:39) highlighted numerous points on how the LCC model in its current format is not fully suited to the long-haul market. Some of the points identified include the added crew costs for overnight stays that would be required and the reduced ability to increase aircraft utilisation due to the sector lengths being long with no capacity to increase the daily flying times. An article on the topic by global strategy consultancy, Leigh Fisher (2015:2), states that long-haul routes require longer turnaround times for fuelling and cleaning, require more food and entertainment, and are limited in terms of daily aircraft rotations and crew utilisation due to longer flights – all of which add extra costs. John Strickland (quoted by Dunn, 2011) also addressed this point when he highlighted the fact that longer sectors have a cost factor. If the utilisation remains high, and can be distributed across the day to achieve the same number of revenue generating hours, it is viable, but if the number of trips that can be operated in a day are reduced, even with high utilisation in terms hours flown, the revenue is reduced and thus negatively affects the profitability of the operation. An article in CAPA's *Airline Leader* journal for July/August 2016 (Airline Leader, 2016g:15) highlights that the low-cost long-haul model is however starting to gain traction in the market place, with more than 11 LCCs now operating low-cost long-haul routes. One of the contributors to the recent growth in the model has been the availability of technologically advanced aircraft, like the Boeing 787, the Airbus A350 and the Airbus A330, that are more cost efficient and thus better suited to operation of the model. Whilst there are a number of well-known operators in this category (Jetstar, Scoot, AirAsia X, WOW, and Cebu-pacific for example), it is 'Norwegian' that is attracting the most attention within the industry, notably for its title as the first European transatlantic long-haul low-cost operator, as well as the resistance the airline is facing from North American carriers, airline pilot unions, and labour unions (Flight Global, 2017a). This long-haul low-cost model is perhaps an option for South Africa's domestic LCCs seeking growth opportunities beyond South Africa's limiting geographic position?

Taking all these issues into account, for LCCs to grow in mature markets they need to compete on more than just routes and price – a statement echoed by Kretschmer (2008:24) and Ciancimino (2008:14–16). They both state that this growth can be achieved by either organic or inorganic means. Organic growth can be achieved by growing the network operated, entering new markets, and expanding the customer base. Inorganic growth can be achieved by following a path of mergers and acquisitions. Clearly each of the inorganic growth options has a cost element attached and is in apparent conflict with the low-cost model. Growth in the LCC sector, and indeed the FSC sector, will require a strong customer-centric approach, especially in this age of information where the customer has instant access to information in the palm of their hand (smart phones or tablets for example). Thomas and Catlin (2014:3) highlight the need for LCCs to continue stimulating new demand and to 'embrace' mobile technology in order to enhance the entire travel experience. With big data transformation predicted to be the next disruptive innovation in the industry (*see* section 6.3.3), Taneja (2015:29) suggests that airlines that want to continue to grow in this consumer-empowered environment need to, "accelerate differentiation through technology-facilitated changes with rich, abundant, and integrated information" and "partner with technology proven experts to develop and flawlessly implement customer-experience strategies". In a similar vein, Barodawala (2016:39), highlights that as the LCC model is evolving, cost excellence will not be enough for a LCC to succeed. He notes that, after cost savings have been achieved and the LCC has thoroughly unbundled its product offering, future success will also require that the LCCs "seamlessly connect their inventory with the customers who want to purchase it" if they are to maximise their revenues. Technology is identified as the key strategy enabler.

Sections 6.3.4 and 6.3.5 addressed the FSC and LCC models respectively. The key characteristics of each model were addressed in these sections and as a result, the differences between them were identified. The key differences between the two models are summarised in table 6.11 (the condensed version of this table was given in 1.7.4.2 of the study as an introduction to the two models).

**Table 6.11: Low-cost carriers versus full-service carriers**

| Full-service carrier | Low-cost carrier | Low-cost advantage |
|---|---|---|
| Operates bulk of services from international hub airports. | Operates mainly from secondary and under-utilised airports. | Lower airport charges, faster turnaround times, fewer air traffic delays. |
| Turnarounds relatively slow due to use of congested airports and complex operations. | Fast turnarounds – less than 25 minutes is the target. | More efficient fleet utilisation. |
| Mix of long, medium, and short haul routes with connecting flights at the various hubs. | Point-to-point short-haul routes with no connection options offered | Lower complexity with higher capacity utilisation. |
| Mixed aircraft types with low seating density. | Standardised fleet with a high seating density. | Cheaper aircraft-related costs, which include lower maintenance costs, lower training costs, interchangeability of flight, and maintenance staff. |
| Low aircraft utilisation on short-haul routes. | High aircraft utilisation on routes – 11 hours/ day+. | More efficient capacity utilisation. |
| Tickets sold mainly through travel agencies or own ticket offices. (Internet growing rapidly) | Tickets sold through direct channels like call centres and the internet. Completely ticketless. | Lower distribution costs coupled with lower complexity. |
| Many frills, including entertainment, business lounges, different classes of travel, complimentary on-board food and drinks. | No-frills product with the option to purchase some frills at a fee. E.g. – on-board food, hold luggage, preferential seating. | Higher ancillary revenues and lower ancillary costs. |
| High labour costs with a variable percentage of less than 10%. Generally overstaffed. | Workforce is highly incentivised with a variable percentage up to 40%. | Higher employee productivity. |
| Complex fare structure with many restrictions. Lower fares at the last minute. | Low fares with a simple pricing structure. Tickets are sold as point-to-point one-way tickets. Fares increase prior to departure. | Lower complexity and less customer confusion. |
| Three or four classes of travel (Mixture of first, business, premium economy, and economy) | Single class of travel – economy. (some have introduced a limited business class option) | Lower complexity and reduced costs due to frills not being required to cater for premium classes. |

**Source:** ELFAA (2004:5), Doganis (2010b:135), O'Connell and Williams (2011:117), and Schlumberger and Weisskopf (2014:3–12).

#### 6.3.5.5 Impacts of the LCC model on the air transport industry

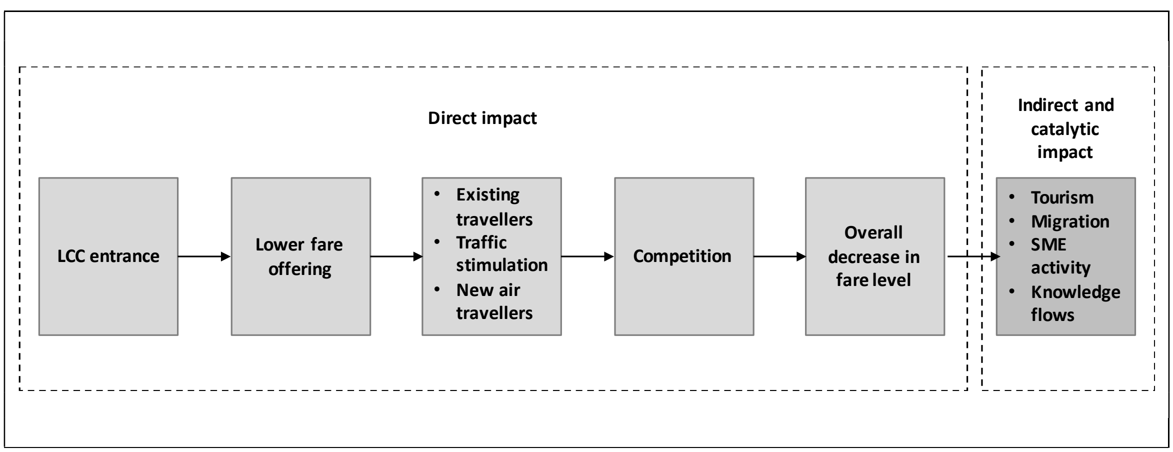
The impact of the development of the LCCs on the air transport industry has been significant (as was briefly identified in section 1.7.4.3 in the introduction to the study). Deimler and Koehler (2006:2–3), in their article for the Boston Consulting Group, identified a number of impacts of LCCs on the FSCs when competing on a common route:

- Large fare reductions on the route thus reducing revenue. The LCCs in effect became the 'price maker'.
- FSCs lose passengers to the LCCs and, as a result, market share.
- Even when passengers do remain loyal to the FSC, the average fare obtained from the loyal passengers is reduced and never fully recovers.

A study conducted by Dresner, Lin, and Windle (1996) in the United States as early as 1996 looked at the impact of low-cost carriers on airport and route competition. The focus of the study was on the impact of Southwest Airlines on route yields and traffic. A key finding in this instance was that the presence of a LCC on a particular route reduced yields by 38%. In general, the presence of a LCC reduced yields, but increased traffic levels. A further study by Hofer, Windle and Dresner (2007:9) looked at the relationship between price premiums and LCC competition. This study found that on routes where there are only FSCs (no LCCs), the fares on that route were the highest. On routes where there are FSCs with LCC competition, the fares were second highest, and on routes where there are only LCCs, the fares were the lowest. This confirms the findings of Deimler and Koehler (2006:2–3) identified in the previous paragraph.

It was highlighted in section 1.7.4.3 of the study that the LCC model has stimulated new demand in the air transport industry by attracting markets that have not flown before. Campisi, Costa, and Mancuso (2010:66) provide support for this statement in their 2010 research where they stated that they could not find sufficient evidence to conclude that LCCs cannibalise the market of the FSCs. Instead, they noted that a noticeable portion of the growing LCC traffic was from demand stimulation due to lower air fares. Similar findings were made by Alderighi, Centro, Nijkamp, and Rietveld (2012:232), who concluded that the entry of a LCC on a route uniformly reduced the average fare, particularly around the mid-segment fares. This impact relates to leisure and business fares. Schlumberger and Weisskopf (2014:27), on reviewing numerous studies on the effect of LCC market entry, noted that a sequence of common effects of LCC market entry on a route could be identified. Figure 6.17 illustrates the sequence of effects they identified as being common to most studies. The end result of the sequence is an overall decrease in fares on the routes where LCCs are in operation due to the increased competition.

**Figure 6.17: Sequence of LCC effects on market entry**




**Source:** Schlumberger and Weisskopf (2014:27).

The influence of low-cost carriers also extends to airports. Traditional FSCs operate the hub-and-spoke system, whereas LCCs mainly operate on a point-to-point system. In the global context, secondary and regional airports have shown good growth as LCCs utilise their airports. As result of the LCCs utilising secondary airports, the LCCs have significantly improved connectivity by expanding the market to airports/destinations that were previously not served by the traditional FSCs (Bottini & Morphet, 2016:27). In the early days of the emergence of the LCC model, research by Gillen and Lall (2004:50) highlighted that the differences between the FSC and LCC models has definite implications for airports, particularly the smaller secondary airports. They identified bargaining power and risk exposure as two points to be managed. The Gillen and Lall (2004:50) article further suggested that airports need to make a strategic choice on how to serve the two models in order to meet the differing infrastructure needs of the airlines. This sentiment was echoed by Harbison and McDermott (2009:126), who stated that the early LCC focus on secondary airports could divert traffic from the primary airports thus forcing the primary airports to identify how they could accommodate the LCCs without undermining their own core business. Adding to the pressure on the primary airports in deciding how to accommodate the LCCs is the risk of the FSCs expecting the same favourable airport charges as the LCCs. In the early years of the emergence of LCCs, the idea of low-cost airports and terminals was relatively popular as a means to accommodate the LCC model. As economic conditions changed, and the LCC model matured, this interest has declined in most regions of the world, with the exception of Asia, which has strong LCC growth (Centre for Aviation, 2015b). The emergence and growth of the hybrid model (*see* section 6.3.6) is seen as one of the reasons behind the declining interest in the development of low-cost airports and terminals. This is because the hybrid model has the business traveller as one of its targets who are willing to pay for the enhanced services a full-service airport provides. It is speculated that the future prospects of the low-cost airports and terminals hinge on (i) the future success of the long-haul low-cost carrier model, and (ii) the willingness of passengers to self-connect (Centre for Aviation, 2015:74). The development of low-cost airports in South Africa has been suggested, but to date there have been no developments in this regard. ACSA does not discriminate between airline models and treats all passengers the same, which is a disadvantage for the South African domestic LCCs in terms of lowering costs.

The success of the LCC model has seen airlines evolving from a transportation business to a 'retailer of services' (Doshi, 2016:22). Due to the closeness of the airports and airlines, airports are part of this new paradigm and are themselves becoming 'retailers of services'. This requires that the airports become highly customer-centric and design, and/or re-design, their facilities to meet the needs and changing nature of the travel experience of the passenger. In response to the increased flows passenger flows from both FSCs and LCCs, airports (secondary airports in particular) have had to build new or redevelop existing runways, construct new terminals, redesign existing terminals to accommodate LCCs in terms of their cost requirements, and reconfigure their operating processes and passenger handling infrastructure to handle the increased passenger flows (Gerra, 2015:41). The airport of the future will be more than just an aircraft boarding point.

As was discussed in sections 6.3.4 and 6.3.5, the points identified in table 6.11 relate to the key characteristics of each model. It was also stated that some of the carriers previously categorised as LCCs have added some ‘frills’ and features previously associated with the FSC approach to strategy. The term used to describe these carriers is ‘hybrid carriers’.

### 6.3.6 The hybrid strategy

In the early days of the LCC model, the airlines following this strategic approach stuck to the key principles of the model and steered clear of those that were associated with the high cost FSC model. As the LCC sector grew, and began to mature, some LCCs started looking at other options in order to remain competitive in the highly competitive LCC sector (Kretschmer, 2008:24). In this case, these airlines began to add some features and service attributes that were previously associated with the FSCs. The term used to describe this emerging model was the hybrid business model (*see* section 1.7.3 for the definition of the model). In simple terms, the hybrid model, “combines the cost-saving methodologies of a pure low-cost airline with the service, flexibility, and route structure of a full-service carrier” (Sabre Airline solutions, 2011:2). These hybrid carriers are not burdened with the ‘legacy’ costs of the old FSCs and benefit from the low-cost base of a LCC. Examples of airlines that have shifted from a LCC focus to this new hybrid model include Easyjet (Europe), Centralwings, Air Berlin (Europe), JetBlue (US), GOL in Brazil, and Virgin Australia. In the South African context, kulula.com can be considered to be moving in this direction; as can Mango with the Mango plus product. A study by Sabre Airline Solutions (Kretschmer, 2008:24) as far back as 2008 showed that of the 123 LCCs they surveyed, 59% of them had moved beyond the traditional LCC model to the hybrid model.

The key reasons put forward for the move to the hybrid model by some LCCs revolve around the highly competitive nature of the LCC sector in some mature markets and some of the limitations ‘imposed’ on airlines that follow the so-called ‘true low-cost model’. A particular limitation on airlines following the so-called true low-cost strategy is the inability to take advantage of the corporate business traveller market, which is a lucrative market and seen as an essential when looking to grow beyond the maturing LCC market (Shaw, 2011:112). The very nature of the LCC model (refer to the characteristics addressed in section 6.3.5.3) means that there is a mismatch between the needs of the corporate traveller and the product on offer by the LCCs. To bridge the gap requires deviation from the pure LCC model by adding some frills and operating from more traditional hub airports. As a result, the hybrid strategy evolved.

By developing the hybrid strategy, many LCCs have been able to tap the previously excluded business traveller. Easyjet, a hybrid carrier, has been particularly successful in this regard and in 2012 business travellers accounted for 18% of its passengers (Kingsley-Jones, 2012), with this figure improving to 20% in 2015 (Airline Leader, 2015:60). It is worth noting that Easyjet does not have a business class cabin, but simply offers its business travellers an all-inclusive bundled fare that includes many product enhancements aimed at making the business traveller's experience speedy and seamless. In order to tap into this market, a number of key developments have taken place that have altered the pure low-cost model. The main developments, as identified by De Boer and Browning (2010:5) include:

- Some low-cost carriers entering into strategic alliances.
- Some entries by low-cost carriers into the low-cost long haul market.
- Some low-cost carriers engaging in code sharing and interlining.
- Some low-cost carriers adding frills to their operations.

As the hybrid strategy has evolved, the airlines taking this new strategic direction have still focussed on maintaining the lowest possible cost base, but in order to compete effectively in the chosen markets, have added the following 'frills' that are in contrast to the 'true low-cost model' (Kretschmer, 2008:24; Holloway, 2010:34; Airline Leader, 2011:52–54; Shaw, 2011:113–114; Sabre Airline Solutions, 2011:3; Vasigh et al., 2013:396; Fageda, Suau-Sanchez, & Mason, 2015:290–291):

- Using hubbing or primary airports, which are more conveniently located for the business traveller in particular.
- Introduced frequent flyer programmes. Most of these are relatively simple and easy to administer compared to the comprehensive programmes offered by the FSCs. In many cases, they are linked to third party providers or partners.
- Some LCCs have introduced a two-class service where meals and other frills are offered to the business traveller. The Mango plus product provides an example of this point.
- Access to airport lounges has been added to the product offering, albeit at a price included in the final fare paid by the traveller. Again, Mango has this option as part of their offering.
- Significantly, many LCCs have begun utilising Global Distribution Services (GDS) instead of just direct selling and booking via the internet or a call centre. This also includes the use of travel agents using the GDS to make reservations on behalf of the passenger.
- The use of interlining has been introduced by many LCCs to link with larger airlines and thus providing connecting traffic at the main or hub airports that are now being utilised. These relationships range from informal relationships to code-sharing and in some cases membership of the large global airline alliances has been sought. South Africa's kulula.com have a code-sharing arrangement with Air France and Etihad for example (*see* section 5.4.4 of the study).
- Complimentary drinks and snacks are being offered on some LCCs.
- Increased baggage allowances, and in some cases 20 kg free baggage allowances, have been introduced.
- Increased seat pitch and some seating with additional legroom (at an additional charge).
- Seating assignment and preferential boarding options.
- The option of in-flight entertainment on the longer flights.

This evolution of the hybrid model is also based largely on the fact that most LCCs are adapting to the unique set of circumstances in their home markets and finding a position that allows them to maximise their profits and revenues under their given circumstances. It is recognised that different people in different markets/countries have different needs and wants and are thus willing to tolerate different levels of services and additional charges from airlines (Shaw, 2011:114). The development of the hybrid model is seen as a move by airlines to address these differences in customer demands in their specific markets instead of the one-size-fits-all approach to the implementation of the low-cost model. In doing this the airlines are attempting to generate greater loyalty from their markets. In 2008, Gidon Novick, the former joint CEO of Comair, went as far as stating that given the way in which the LCC sector and the market is evolving he expects that the low-cost category will eventually disappear as airlines seek out the optimal hybrid model (quoted by Peacock, 2008:24). Whether this proves to be the case will surely be the subject of many studies of this nature in the future.

In conclusion, Vasigh et al. (2013:397) state that there have been many successes in the LCC sector and there have also been many failures. They ascribe the failures to those carriers not being the cost leaders, not being efficient enough in their operations, and not retaining the characteristics of LCCs. The final point seems contradictory in terms of the move to the hybrid strategy and the successes being achieved by carriers following this approach. However, hybrid carriers do have a focus on cost reduction, efficiency, and importantly, are not hindered by the legacy costs of most FSCs. The key to strategic success for either the LCC or hybrid approach is to ensure that costs are continually reduced, that they continue to seek growth from markets that have not previously travelled, and actively seek out additional markets in which they can effectively compete. Thomas and Catlin (2014:3) argue that it is essential that hybrid carriers deliver a strong customer value proposition if they are to continue to enjoy success in the industry. They suggest that in order to do this, the hybrid carriers need to (i) establish a network of strategically aligned partners, (ii) develop innovative products and services, (iii) develop a loyalty scheme that is simple to manage and appeals to individuals and SMMEs, (iv) make use of innovative distribution strategies, and (v) establish unique revenue management policies. As with any model, customer knowledge is essential.

## 6.4 CHANGING CUSTOMER NEEDS

Section 1.7.4.3 of the study highlighted the point that the advent of the LCC model has changed the domestic air transport industry. Airlines had to adapt the way in which they competed. Airports had to adapt to the ways in which they served the airlines and their passengers. This impact also extended to service providers to the industry. One of the biggest changes accompanying the introduction of the LCC model, however, has been changes in consumer behaviour. This changing consumer behaviour has been the influenced by many factors, but the evolution of information technology has played a leading role requiring that airlines "organise around their customers in a manner that is enabled by technology" (Borgogna, Agarwalla, Stroh, & Jakovljevic, 2017:30). Air travel passengers were previously accustomed to a standardised product, with set prices, and limited options. The passengers of today expect (i) options during travel, (ii) expect flexible pricing options, (iii) place a high value on the ability to choose, and (iv) place a great deal of value on personalised experiences (LEK, 2016:2). An LEK survey identified a number of key phrases that describe 'today's passenger expectations'. The most important of these included:

- A seamless experience
- What I want, when I want it
- Know me
- Connected
- Accessible
- Effortless
- Instant
- Intuitive
- Flexible
- Hassle-free travel
- Available
- Easy

Barodawala (2016:39) states that it is crucial that airlines acknowledge that each customer travels for a specific reason, and that it is only when airlines understand their customer's motivations and seamlessly link them to the appropriate inventory, that they will be able to maximise revenues. This entails establishing what the customer actually cares about and then providing them with relevant communications that will lead them to a bookable fare as per their requirements. Whilst it is important to identify consumer needs and motivations, Shaw (2011:14) emphasises that it is crucial to understand the factors the consumers takes into account when making a decision, and that this entails understanding the difference between 'apparent' needs and 'true' needs. This statement acknowledges the point that consumers, when stating their needs, might provide what they feel is an acceptable answer rather than an answer that might reflect negatively on them. For example, it is easier to state 'seat comfort' as a requirement from an airline than it is to state 'ego-stroking'.

As was noted in section 1.2.3.1 of the study, understanding the customer has, however, been made more complex with the evolution of new technology and the resultant changes in consumer behaviour. These changes in consumer behaviour include a change in the way in which the consumer shops for products and services. This in turn requires that marketers adapt the way in which they interact with customers. Customers are exposed to a lot more information on the product options available and are engaging with the brands, before and after purchases, with their friends and reference groups via social media and other technology-related applications. In this context, Edelman and Banfi (2014), in a McKinsey and Company article, state that the traditional decision-making funnel has effectively been replaced with a 'Customer Decision Journey'. Within the customer decision journey, the consumer considers an initial set of brands, which are evaluated to expand the options for consideration, and then refined to a select few choices. The consumer then purchases a product based on the final decision and experiences the product, which then creates expectations that will be utilised in the purchase of subsequent products. Based on the customer's experience with the product, the customer will either advocate or speak against the product to their social groups and peers through the various social media and other interpersonal forums. They then either bond with the brand, which leads to repeat purchases, or they reject it and seek other options in a new customer decision journey. With information inputs from many sources, and many opportunities for marketers to input information, the customer decision process is no longer a linear process, but a network of touchpoints presenting many opportunities for marketers to establish a connection with the customer. Understanding the customer requires understanding the entire journey.

An article by Nguyen, Landry, and Munoz, (2014:4) reinforces the point that 'engaged customers' are 'repeat customers' and that efforts to improve the customer experience need to focus on creating deeper customer connections with customers before and after a purchase. Research by Maechler, Neher, and Park (2016:2–3) draws the conversation on 'the customer experience', 'the customer journey', and 'customer touchpoints' into one. They showed that businesses that focus on managing the entire customer journey, rather than individual touchpoints, provide the customer with the best customer experience and thereby have a distinctive competitive advantage over competitors. Their research further showed that even though some businesses were performing on key touchpoints and resolving issues that arose at a particular touchpoint, the cumulative experience across multiple channels and multiple touchpoints could result in a negative customer experience and ultimate customer defection. They state that businesses will only begin to understand how to improve their performance when they start managing the entire customer experience. This is particularly relevant in the current environment of technological development where the number of customer interaction points across different devices and channels is growing exponentially. This point is echoed by Lundy (Amadeus, 2015a:12), who notes that as customer connectivity through wireless devices (like cell phones and tablets) increases, the number of potential touchpoints in the service delivery process grows exponentially. For an airline, with an extensive number of touchpoints and potential sources of service failure, a focus on the entire customer journey and customer experience is essential in order to maintain a customer-centric approach.

Key concepts that have frequently been referred to throughout this chapter include customer-centricity, personalisation, customer experience, and customer data. Whilst it is not the goal of this study to explore these topics in detail, a few comments will be made on their applicability to the air transport industry. An article published in 2011 by the IBM Centre for Applied Insights (Pilz & Dyerfox, 2011:2) highlighted that in the process of ensuring cost reductions and focussing on profits, airlines have to a large extent neglected customer satisfaction. They argue that in an era where all airlines are focussing on costs and operational efficiency, airlines that take a customer-centric approach and focus on customer satisfaction will have a key differentiator over competitors. Whilst customers have enjoyed lower fares, they have also reached a point where their perception of the travel experience has become negative. Contributing to this negative perception are the numerous surcharges applied to the basic fare, crowding at airports, crowding on the aircraft, security controls, delays, and a bombardment of broad messages seeking to sell unrelated product add-ons. The combination of these factors lead Pilz and Dyerfox (2011:3) to suggest that airlines need to shift focus to the customer and improve the entire customer experience. This implies not just the on-board experience, but the entire trip from planning to final destination. A report by Oxford Economics (2014a:31–33) refers to this as ‘seamless travel’ and notes the importance of coordinating infrastructure and technology if this ‘seamless travel’ ideal is to be realised. The importance of this customer-centric approach is reinforced by the fact that even the global market leader in terms of ruthless cost-cutting LCCs, Ryanair, has recognised the need for this approach with the introduction of its ‘Always getting better’ customer experience improvement programme in 2014. The first two years of their strategy revolved around improving areas relating to customer service and the product on offer, with the third year focussing on digital acceleration and innovation (Hofmann, 2016). Four changes that airlines can consider when attempting to refocus their customer strategies include:

- Create perceived value by introducing services that are perceived as perks and not penalties,
- Deliver a better overall experience by obtaining a deeper knowledge of the customer,
- Make the entire customer journey more convenient and pleasant by expanding the airline’s role in the journey and improving customer engagement, and
- Make use of technology-related productivity improvements that reduce staff workload and make changes that increase the perceptions of value (Pilz & Dyerfox, 2011:4).

Building onto this, a research report written by The Economist Intelligence Unit (2014a:3) in conjunction with Sabre Airline Solutions in 2014, reconfirmed the position that customers want a more personalised and satisfying experience and that airlines that want to prosper in this new environment will need to provide customers with a more customer-centric and personalised service by helping customers across the entire travel experience (as noted in section 1.2.3.1 of the study). The report suggests three solutions that could be followed by airlines to improve the customer experience. Importantly, from the LCC perspective, the three solutions identified by the report are cost-effective and currently available (but under-utilised). The suggested solutions include (i) using existing technologies (like Wi-Fi and social media) to personalise travel before, during, and after the flights, (ii) using best practices from competitors and other industries to enhance customer experience, and (iii) utilising the mass of data that is collected from customers to provide personalised experiences (The Economist Intelligence Unit, 2014a:5–10). These solutions should be applied across the entire customer journey, that is, they should be used to improve the booking process, the airport experience, and the in-flight experience. Borgogna et al (2017:33) highlight the simple notion that a customer-oriented service culture needs to be developed in the business, that is, an internal desire to please passengers.

From a customer data perspective, Lundy (Amadeus, 2015a:16) emphasises that customer data will become an even more important resource to the airlines and will serve as the basis of a competitive advantage. He further states that technology is developing to such an extent that, in future, airlines will go beyond simple data collection to ‘machine learning’, which will provide airlines with an intensive knowledge of the customer and allow them to implement a finely personalised customer experience to ensure a satisfactory customer journey. Lovelady (2015:32) notes that airlines have a significant advantage over many industries when it comes to the collection and storage of customer data. This is largely due to the fact that most airline have at least 11 touchpoints across the customer journey where they can connect with the customer and collect information from them. Lovelady (2015:33) also states that, "data is the foundation of personalisation, which combines relevant content and product and service recommendations based on content, location, and interests to convert shoppers into satisfied customers". This is all encapsulated in a separate article by Lovelady (2015a:35) where she focusses on the topic of achieving competitive advantage through 'organisational velocity' (*see* section 6.2.3.3). In essence, this involves businesses using data for predictive and prescriptive analysis to enhance their speed and ability to respond to customer problems or opportunities in real-time at any point of the customer journey to ensure a satisfactory and personalised customer experience. An airline that is able to 'conduct business' faster than its competitors, be it a LCC or a FSC, will have a competitive edge.

The changes in consumer behaviour and travel needs, coupled with the changing nature of technological capabilities, clearly establishes that the current approaches to segmentation need to be revised to match the new paradigm. The need to adopt a new approach to segmentation has been emphasised on numerous occasions in this document, particularly in chapter one as part of the problem statement for the study (*see* sections 1.1, 1.2.3.1, 1.2.3.2, 1.3, and 6.3.4). To this end, numerous segmentation approaches, or frameworks, that focus on customer needs and can be used by airlines to assist in personalising the passenger experience, have been suggested. Table 6.12 highlights a framework of seven segments and their associated needs. The identified needs of each segment present the airlines not only with insights into consumer behaviours, but can also be utilised to identify additional opportunities to generate revenue through targeted value-adding services. Section 4.5.1 of the study identified the 'silver economy' and emerging markets as key areas to explore for future growth.

**Table 6.12: Sample passenger segments and needs**

| | Productivity | Comfort | Other |
|---|---|---|---|
| Road warriors (business) | "Frictionless leverage" | "Remember my desires" | "Make travel seamless" |
| Occasional business | "Enable my work habits" | | "Facilitate relaxation" |
| High-income leisure | "Do it for me" | "Something indulgent" | |
| Family and package | | "Help with the kids" | "Simplify the experience" |
| Young singles | "Keep me connected" | | "Enable my passions" |
| Visiting family/relatives | | "Streamline my journey" | |
| Retirees | | "Extra room to stretch" | "Reduce my travel worries" |

**Source:** LEK (2016:5).

Another traveller segmentation framework was outlined by Lundy in an Amadeus report (Amadeus, 2015a:7) and focussed on outlining broad groups of travellers, or 'tribes', that are emerging and need to be served by the air travel providers (as identified in section 1.2.3.1 of the study). The framework is based on traveller purchasing behaviours and motivations. This psychographic-based approach to segmentation makes use of a rich vein of available customer data to gain greater understanding of changing customer behaviours in a fast-changing consumer environment. The framework recognises that the 'tribes' are not mutually exclusive and that consumers can fit into different segments dependant on their reasons for travel (Amadeus, 2015b:27). Table 6.13 highlights the various traveller 'tribes' and the components of the travel experience most relevant to each tribe. The various traveller tribes are briefly described as follows (Amadeus, 2015a:7; Amadeus, 2015b:30):

- **Simplicity searchers:** They value ease and transparency in their travel planning and will out-source their decision-making to avoid having to do the research themselves.
- **Reward hunters:** Have a focus on self-indulgent travel. They often mix a focus on luxury with self-improvement and personal health. They are seeking a reward for working hard in other areas of their life.
- **Social capital seekers:** Realise that being well-travelled is an enviable quality and their choices are based on their need to obtain maximum social reward from their travel exploits. They use social media to document and communicate their travels.
- **Cultural purists:** See travel as an opportunity to thoroughly immerse themselves in a foreign culture and experience a different way of living.
- **Ethical travellers:** Their travel planning is influenced by their conscience. Their choices are moulded around either environmental concerns, political convictions, or awareness of causes for example. Are aware of their impacts on the visited environments.
- **Obligation meeters:** Travel for the purposes of achieving a very specific set objective related to the completion of an 'obligation'. For example, attending a funeral, a wedding, a religious event, or business travel. Business travellers form a large part of this group.

**Table 6.13: Future traveller tribes and the components of the travel experience**

| | **Traveller tribes (segments)** | | | | | |
|---|---|---|---|---|---|---|
| | **Simplicity searchers** | **Reward hunters** | **Social capital seekers** | **Cultural purists** | **Ethical travellers** | **Obligation meeters** |
| Opportunity to influence | Inspire shopping booking | Inspire shopping booking | Any time | Close to time of use | Inspire shopping booking | Shopping booking |
| Degree of personalisation | Very high | High | Very high | Very low | High | Very high |
| Purchasing experience | Bundle | Bundle | Both | À la carte | Bundle | Bundle |
| Level of contact | Very low | Low | Very high | Low | Medium | Medium |
| Touchpoint devices | Inspiration-centric | Any | Any | Inspiration-centric | Information-centric | Information-centric |
| Types of experience | Convenience | Luxury and wellness | Luxury and productivity | Local | Ecological | Productivity |

**Source:** Amadeus (2015a:17).

The term *Millennials*[4] is one that appears frequently in the news media and academic writings (Barton, Haywood, Jhunjhunwala, & Bhartia, 2013; Buckley, Viechnicki, & Barua, 2015; BBC, 2017; Pyöriä, Ojala, Saari, & Järvinen, 2017; Fromm, 2017). This 'millennial generation' is at the heart of the emerging markets for the airlines. From a South African perspective, the millennial travellers have been described as a potential game changer due to the relative size of the youth population in the country (Blain, 2015). It was established in chapter 4 (section 4.3.2), that South Africa has a youth bulge in the 15–35 age group. This 'youth bulge', coupled with the emerging South African middle class, presents the airlines with a group that has significant spending power for travel products. Research by the *Unilever Institute of Strategic Marketing* at the University of Cape Town highlighted that the black middle-class population stands at 4.2 million people and in 2015 spent ZAR 400 billion, which exceeded the ZAR 323 billion spent by the white middle-class (Blain, 2015). In the context of the millennials and their future value, this spending power demands that the airlines gain a thorough understanding of this market and insights on how to reach the various sub-segments using segmentation variables other than age. Key characteristics of this millennial group include a focus on technology and social media, price consciousness, and a willingness to spend on quality at the right deal. They also want instant gratification and personalisation. In terms of travel, Fromm (2017) states that Millennials are seeking transformational and highly specialised travel in order to partake in culturally enriching experiences and the exploration of the unknown. Research by Wollan, Davis, De Angelis, and Quiring (2017:5) identified that millennials are not "enamoured" with the loyalty programmes that exist in the market today and have an overall negative reaction to them. They emphasise that airlines need to understand this generation's needs and then modify the product offering to match their values and behaviours. The Wollan et al. (2017:5) research shows that millennials value celebrity endorsements, personalisation, innovative experiences, and access to exclusive offers or partnerships. Worryingly for the airline marketer, the research also revealed that millennials are quick to switch providers and brands and, compared to older age groups, spend less on brands even to which they are supposed to be loyal (Wollan et al., 2017:5). Research by Barton et al. (2013) state that it is crucial for travel marketers to add new marketing capabilities like advocacy marketing, micro targeting, and social media marketing if they are to appeal to Millennials.

The next generation to be emerging as a consumer group for airlines is Generation Z. This grouping of (future) consumers were born roughly between 1995 and 2014, meaning that the oldest are starting to enter the workplace, and the youngest have yet to start nursery school (Howland, 2017). In terms of their values and expectations, they have a focus on technology and social media, as well as a need for instant gratification. Generation Z is the first consumer group where none of its members have lived in a world without the internet or a cellular phone. Work by Cheung, Glass, McCarty, and Wong (2017:1) shows that at this early stage they are displaying characteristics different to the millennials. They

[4] A millennial generally refers to people born between 1982 and 1995 (there is no definitive start and end date) falling into the 20–35 age group in 2017 and are associated with technology and social media (Buckley, Viechnicki, & Barua, 2015:1–4).

describe them as “self-reliant digital natives” who socialise and have fun in a changing digital world, but at the same time they are pragmatic and realistic. Unlike the Millennials, they are not swayed by celebrities, but instead are focussed on ‘role models’ on YouTube or other social media platforms. They are tied to their mobile phones and use a lot of their free time online, watching movies, or spending time with friends and family. Product quality, availability, and value are important to them. They are less price conscious than millennials and are less likely to compare prices (Howland, 2017). Generation Z is security savvy and reluctant to share personal information unless they are certain that the data is protected. This security consciousness applies to their social groups where they restrict their posts to a select group of known friends and family. This has important implications for airline marketers in terms of establishing trust and ensuring that they provide a seamless process that is personalised to their unique characteristics. Cheung et al. (2017:15) suggest that success with Generation Z requires a mobile-focussed strategy where the consumer shapes their own experience. Importantly, they require instant responses and solutions. In this case, the differential advantage of organisational velocity (addressed in section 6.2.3.3) will be of great importance. Finally, they state that when targeting Generation Z, businesses must build a safe online environment, in a transparent manner, ensuring that they comply with all the relevant data protection regulations.

In summary, customer behaviour has changed since the advent of the LCCs and airlines need to understand the nature of these changes and refocus their segmentation approaches. LCCs and FSCs that establish a competitive advantage in the industry will be those that look beyond a focus on cost management and become solution providers across the entire customer journey by adopting a customer-centric and personalised approach to provide a seamless customer service experience (The Economist Intelligence Unit, 2014a:27–28). This needs to be done utilising the appropriate technologies to engage with the customer and collect customer information to be used in further improving the product/service offering.

## 6.5 SUMMARY

This chapter put the business strategy of the LCC and FSC models into context with each other and highlighted the differences between them. By understanding the differences in the strategic direction of the two models, insights can be obtained into the markets that each model target. The chapter started with a background on the importance of customer value, competencies, and sustainable competitive advantage. It was identified that it is important for an airline to be market-focussed and use its core competencies to achieve an SCA in the targeted markets. Each of these concepts provide key insights into the nature of the various strategic options and airline models that were addressed later in the chapter. Attention was then given to the various strategic options available to use as the basis of an airline business model. The strategies based on competitive advantage were identified as the focus of this chapter in terms of the different airline business models. Key competitive strategies in this regard were the differentiation strategy, the cost leadership strategy, and the focus strategy. An important point arising from this discussion was that airlines need to select their strategy and scope and make sure that they follow that strategy consistently or face the prospect of losing focus and thereby losing their competitive advantage. The focus of discussion then moved from the outline of the generic strategies to the various airline business models. In this case, in-depth discussion was given on the full-service carrier model, the low-cost carrier model, and the hybrid carrier model. Specific attention was given to the nature of each model and numerous key issues affecting the growth and development of the models. As the newer model that has had a significant impact on the air transport industry, specific attention was given to the LCC model to highlight the impacts of the model on (i) the industry itself, (ii) airports, and (iii) the consumer. It was noted that it is important that airlines, no matter which competitive strategy is being followed, need to define their business from the perspective of the needs they are trying to satisfy and the type of competition they will face in the market. The final section of the chapter not only focussed on the impacts of the LCC model on the consumer, but also highlighted the changing nature of customer behaviour due to advancements in technology. The need to follow a customer-centric approach that focusses on personalisation, customer knowledge, and a seamless travel experience was emphasised.

Chapter 7 outlines the methodological approach followed for the collection and analysis of the primary data for the study.

# CHAPTER 7

# RESEARCH METHODOLOGY

> *It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.*
>
> *– Arthur Conan Doyle*

The previous chapters have focused on a review of the literature related to the topic of study and a review of the business environment in which the airline industry operates. From this review, it can be seen that the air transport industry is an extremely complex environment that is influenced by many factors. To further complicate the situation is the fact that changes in this industry are constantly occurring within a very short timeframe. This ever-changing nature of the industry therefore requires an understanding of the consumer and their behaviours, which is the focus of the primary research in this study.

In this chapter, the methodological approach followed for the primary research is described and provides the basis for the analysis of results addressed in chapter 8. The background identified in chapter 1 is described in detail. Sir Arthur Conan Doyle's quote highlights the need for research to be objective and to follow a systematic approach. The chapter begins by putting the nature of research into context with the objectives of the study. The discussion follows the steps of the research process to highlight the activities carried out at each step and thus establishes the scientific basis of the research used to arrive at the conclusions given in chapter 9. The final section of the chapter highlights the importance of ethics in conducting research and confirms the ethical manner in which the research was conducted.

## 7.1 INTRODUCTION

In section 1.5.1, the primary objective of this research was to conduct a business analysis of the domestic commercial air transport industry in South Africa in order to gain greater insights into the business environment and the passengers that fly on the South African low-cost and full-service carriers. This was further clarified where it was stated that the study will analyse behaviour patterns and perceptions regarding the low-cost and full-service models to establish the different behaviour patterns and thereby provide inputs that will assist in redefining the consumer segments that can be targeted by the full-service and low-cost service providers. The importance of this was described in chapter one under section 1.3 where the problem statement was formulated.

The research methodology for this study is based on a minor component of the 2007 study by O'Connell (2007), which focussed on the strategic response of full-service carriers to the low-cost carrier threat and the perception of passengers to each type of carrier. The O'Connell study focussed on the European and Asian markets. His study included an analysis of the responses of the different FSCs to the emergence of the low-cost carrier model, as well as a detailed review of the challenges posed by LCCs. A key element of O'Connell's study was a broad focus to identify how incumbent carriers could respond to the LCC competitive threat. After discussions with Dr. O'Connell on the research to gain greater insights into his study, permission was obtained from him to replicate parts of his study in the South African environment. This was integrated with additional elements identified as being relevant to the South African environment with the result being an integrated study into the behaviours and perceptions of passengers relating to low-cost and full-service carriers in the South African air travel market. (*see* section 1.6.3 for further clarification on the reasons for the selection of the O'Connell study).

### 7.2 MARKETING RESEARCH

Any organisation that wishes to remain in operation needs to be oriented towards being profitable and satisfying the needs of the consumer. In order to do this an organisation needs to obtain information on the consumer in order to ensure that their needs are understood and can be translated into the delivery of a need-satisfying product or service. The use of marketing intelligence is aimed at achieving this goal and allows the organisation to make better-informed decisions and to analyse its policies (Aaker, Kumar, Day, & Leone, 2011:3). The key to gathering this market intelligence is marketing research. The generally accepted definition of marketing research is that it is the systematic collection, analysis and interpretation of information about all marketing problems by means of recognised scientific methods to provide information that marketing management can use in the decision-making process (Pride & Ferrell, 2010:130). Key to this definition are the points that:

- Data are collected systematically,
- Data are interpreted systematically, and
- There is a clear purpose to the research (Saunders, Lewis, & Thornhill, 2012:4).

The above-mentioned points are carefully applied in this research project to ensure valid and reliable results. A crucial element in this whole process is the collection of the data and its conversion into information for use in decision-making. In this regard, Berndt and Petzer (2011:4) identify that for information to be of any value in decision-making it needs to display the following characteristics:

- Relevance
- Accurately describe the real situation
- Timeliness
- Completeness

Again, the research in this study has been conducted with these characteristics in mind. Data that are collected can be classified as either secondary data or primary data. In the context of this study, chapters 2–6 focus on the exposition of secondary data whilst chapters 7–9 focus on the collection, analysis, and interpretation of the primary data that ties in with the theoretical background provided. The philosophical approach to the research is identified in the introduction to section 1.6 of the study.

Market and marketing research is conducted by many different interest groups and for many different reasons. The traditional approach is to distinguish between basic research and applied research. Research conducted in the academic environment, either by academics or students, is classified as basic research. When conducting research, and indeed reviewing research, the purpose of the research needs to be kept in mind as each one has a different objective to achieve and thus affects the way in which the research is conducted and reported. In this regard, Saunders et al. (2012:10) distinguish between practitioner and management researcher orientations. The differences are highlighted in table 7.1.

**Table 7.1: The difference between practitioner and management researcher orientations**

| Management Researcher | | Practitioner |
|---|---|---|
| • Basic understanding<br>• General enlightenment<br>• Theoretical explanation<br>• 'Why' knowledge<br>• Substantive theory building | **Focus of interest** | • Usable knowledge<br>• Instrumental<br>• Practical problem solutions<br>• 'How to' knowledge<br>• Local theory-in-use |
| • Theoretical and methodological rigour | **Methodological imperative** | • Timeliness |
| • Academic publication | **Key outcome** | • Actionable results with practice impact |
| • Disdain of practitioner<br>• Desire to make a difference to practice | **Views of others** | • Deprecate or ignore<br>• Belief that research can provide relevant fresh insights to manager's problems |

**Source:** Saunders, Lewis, and Thornhill (2012:10).

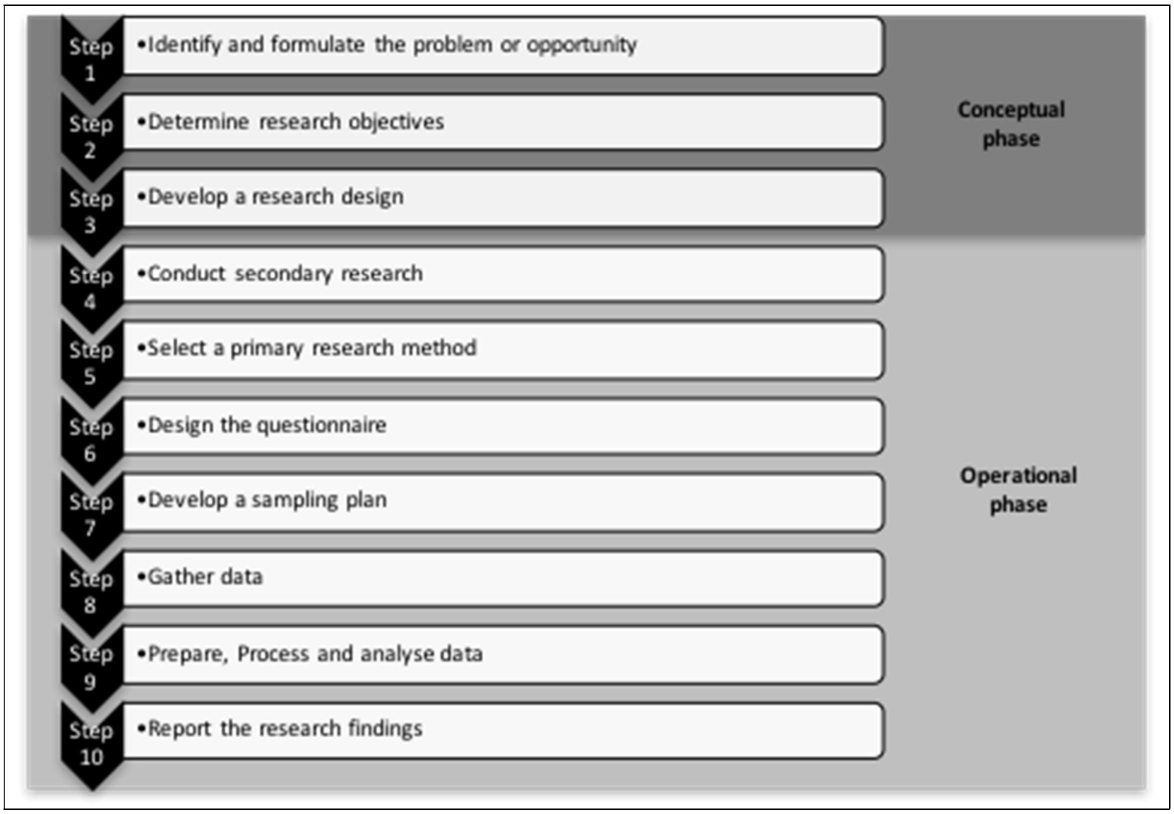
For proposes of clarity and context, the research conducted for this study is for an academic qualification and thus adopts the management researcher orientation.

To ensure that the research meets the criteria established in the discussions of this section, it is important that a systematic process be followed when planning, implementing, and reporting the research. This process is commonly referred to as the marketing research process.

### 7.3 THE MARKETING RESEARCH PROCESS

A logical and organised approach to research is essential to ensure that the research is conducted in a scientific manner and that all components are addressed to reduce the risk of inaccurate results. The research process, as described by Aaker et al. (2011:46), "provides a systematic, planned approach to the research project and ensures that all aspects of the research project are consistent with each other". In following this process, the important task of ensuring that the research design and implementation are consistent with the research purpose and objectives is more easily managed. The research process followed for this study is outlined in figure 7.1.

**Figure 7.1: The marketing research process followed for the study**




**Source:** Author compilation.

The research process itself is not cast in stone and a review of different texts shows that different authors, including Bradley (2010), Cooper and Schindler (2011), Berndt and Petzer (2011), Aaker et al. (2011), Saunders, Lewis, and Thornhill (2012), Feinburg, Kinnear, and Taylor (2013), McGivern (2013), and McDaniel and Gates (2013), have identified different steps in the process. A closer review shows that whilst these authors identify slightly different steps and a different number of steps, there are many overlaps between them with each of them showing a number of common themes. For the purposes of this study the process identified in figure 7.1 will be followed. The steps identified in figure 7.1 will form the basis of the methodological discussion for the rest of this chapter.

From figure 7.1 it can be seen that the process is divided into a conceptual phase (steps 1–3) and an operational phase (steps 4–10). The conceptual phase involves a thought process where the need for the research is established and attention is given to the nature of the problem to be addressed (Aaker et al., 2011:49). It is at this point where the research objectives and research design are developed. This conceptual stage is addressed in sections 1.3, 1.4, 1.5, and the introduction to section 1.6 of the study. The operational phase involves the implementation of the conceptualised research. This involves the collection and analysis of secondary data and then the collection and analysis of the primary data. Chapters 2–6 of this document address the secondary data review and analysis. The primary data collection and analysis is addressed in chapters 8–9. The sub-sections that follow describe each step in the research process, as applied to this research project, in detail.

### 7.3.1 Identification and formulation of the problem or opportunity

The first steps of the research process involve the identification of the problem/opportunity to be researched and the clear definition of the problem/opportunity to be researched. In the business context, the identification of problems or opportunities that arise from the business environment in which the business operates (Tustin, Ligthelm, Martins, & van Wyk, 2005:77). The accurate identification and description of the problem or opportunity to be researched is based upon the individual's knowledge of the environment in which the business operates and his/her ability to understand this environment. The task of accurately identifying and defining the research problem is not an easy task and requires the ability to combine data and judgement along with hard thought and effort (Aaker et al., 2011:49).

From an academic perspective (as is the purpose of this research), it is important to carefully consider the research problem to be addressed. A combination of rational and creative thinking is required to identify the problem/opportunity to be addressed in the research project (Saunders et al., 2013:30). A careful balance needs to be maintained between identifying a research problem and research questions that are too simple or too complex. The identification and development of the problem statement and research questions for this study has been done with this in mind.

The identification of the research problem for this study was addressed in detail in section 1.3 of the study. The summarised problem statement for this research is as follows:

The main problem to be explored in the context of this study is to establish the business environment in which the South African domestic air transport industry currently operates and to establish the behaviour patterns and perceptions of passengers relating to travel on low-cost carriers and full-service carriers. This includes identifying the consumer's levels of understanding and perceptions of the two airline business models and price sensitivities. Efforts are made to understand the drivers influencing passenger choice with the aim of identifying key factors for airline managers to utilise when developing their business strategies. These efforts will include identifying variables that are statistical significant predictors of the odds that a passenger will select a LCC (as opposed to a FSC), which airline managers could consider when analysing their markets and selecting target markets to grow their operations.

### 7.3.2 The determination of the research objectives

The research objectives are based on the problem definition and are stated in precise terms of the information that will be needed to answer the questions posed by the research problem (McDaniel & Gates, 2013:64). Research objectives, as stated by Saunders et al. (2012:44), operationalise the research question. The determination of the research objectives is crucial as they also set the boundaries for the research by establishing the extent of the population to be covered in the research and the issues to be addressed. In the case of this project, the boundaries have been set at passengers travelling on low-cost carriers and full-service carriers on domestic flights within the South African borders. The key issues to be explored have been established in the secondary objectives. Any errors in setting the boundaries of the research will result in the research not correctly addressing the established research problem.

When developing the research objectives, it is crucially important that they be stated as specifically as possible and in unambiguous terminology. Saunders et al. (2012:44) identify numerous criteria, which should be adhered to when developing research objectives. The objectives for this study have been set with these criteria in mind and include:

- Transparency
- Specificity
- Relevancy
- Interconnectivity
- Answerability
- Measurability

A distinction is made between primary and secondary objectives. The primary objective focuses on the main outcome to be achieved by the research (Berndt & Petzer, 2011:29). Secondary objectives are those that further break down the primary objective into specific elements of the main objective (Berndt & Petzer, 2011:29). For this study, one primary objective and seven secondary objectives have been developed. These objectives were outlined in section 1.5.1 of the study but the core aspects are restated here for context.

The primary research objective identified for this study is to conduct a business analysis of the domestic commercial air transport industry in South Africa in order to gain greater insights into the business environment and the passengers that fly on the South African low-cost and full-service carriers (refer to section 1.5.1 of the study for the detailed description of the primary objective).

Greater clarification on the primary objective was given through the various secondary objectives that are being pursued in the study. The secondary objectives are:

1. Review the business environment in which the South African domestic air transport industry operates and determine the influences on the operation of this industry in terms of the low-cost and full-service carriers.
2. Establish the travel profile of the passengers travelling on the low-cost carriers and full-service carriers in the South African air travel market.
3. Establish behaviours of the market associated with the purchase of the air tickets for short-haul domestic travel in South Africa.
4. Uncover the key criteria used by the South African air travel market when deciding on which airline to fly for domestic travel.
5. Determine the perceptions of passengers in the South African air travel market with regard to the services and features offered by low-cost carriers and full-service carriers.
6. Determine the extent of price sensitivity for passengers travelling on low-cost and full-service carriers in the South African domestic market in order to identify the extent of price switching behaviour across the two models.
7. Identify additional areas of research that need to be addressed to improve the operation of the industry and its components.

From the objectives, it can be seen that an attempt will be made to establish passenger behaviours from a number of different angles to ensure that all key behaviours and perceptions are identified. In this way, a clear picture can be obtained on the passenger's perceptions and behaviours, which can then be used by practitioners for inputs into segmentation and targeting models.

### 7.3.3 Develop a research design

The development of the research design forms part of the last step of the conceptual phase of the research process. It is at this point that the overall plan of how the data will be collected and analysed is established in order to achieve the stated objectives. Feinberg et al. (2013:54) state that the research design is a framework that attempts to specify the type of data to be collected, the potential data sources, and the method that will be used to collect the data. The research design is guided by the research objectives and the research question and is set according to a specific timeframe and budget.

The development of the research design entails a number of decisions and actions that need to be addressed before settling on the desired research design. Firstly, in line with the research objectives and research problem, the researcher needs to understand whether the required information will come from secondary sources, primary sources, or both (McGivern, 2013:46). Secondly, the researcher needs to consider whether a qualitative or qualitative research design will be required. In terms of this study, both primary and secondary data will be collected. For the collection of the primary data, a quantitative research design has been selected. A quantitative research design is used for research where the relationships between variables are examined and these relationships are measured numerically using a variety of statistical techniques (Saunders et al., 2012:162). The quantitative research design is typically linked to experimentation and survey research. The survey method is applied in this study.

Following the decision between a quantitative and qualitative research design the researcher needs to decide on the type of research. This selection of research type is based on the research objectives and research problem. Traditionally, three standard types of research can be identified; exploratory research, descriptive research, and causal research (Aaker et al., 2011:72). Whilst most authors adopt this standard three-type approach, some have identified slightly different classifications and descriptions. Feinberg et al. (2013:55) refer to exploratory research, conclusive research (split into descriptive research and causal research), and performance-monitoring research. Saunders et al. (2012:170) refer to exploratory research, descriptive research, and explanatory research. The Feinberg et al. classification is favoured for this particular project. Each of the types of research are outlined in table 7.2. The bullet point highlighted in green provides an accurate description of the nature of this research study.

On consideration of the characteristics of the types of research identified in table 7.2, it was decided that the nature and objectives of the proposed research for this study required the selection of descriptive research as the primary type of research (as identified in section 1.6.1). The initial part of the study entails a review of the literature to gain greater insight into the situation and the identified problem. This initial component of the study is exploratory in nature and is addressed in chapters 2–6. The primary focus of the study is however the gathering of primary data. It will be descriptive in nature and will seek to not only look at individual variables, but also identify bi-variate relationships between a number of variables and in some cases, seek to identify possible predictive relationships (*see* green highlighted text in table 7.2).

In summary, the key focus of the study is on the collection of primary data. The study is quantitative in nature and the collected data will be used to gain greater insights into consumer choice behaviours and perceptions of the various airline models. Based on the nature of the data that needs to be collected, according to the established objectives, the study will be designed as descriptive research.

**Table 7.2: Types of research**

| Type of research | General characteristics |
|---|---|
| **Exploratory** | • Facilitates problem recognition and definition<br>• Used to seek general insights into the nature of the problem being addressed<br>• Little prior knowledge of the topic<br>• Highly flexible research methods used – mainly qualitative in nature<br>• Helps in determining if further research is necessary |

| | |
|---|---|
| **Conclusive** | **Descriptive**<br><br>• Used to provide a snapshot of an aspect or event in the marketing environment<br>• Used to describe a feature or characteristic of something<br>• Addresses questions like who, what, why, when, how, and where for issues relating to a product/ service and market<br>• Appropriate when the research objectives (i) attempt to identify the characteristics of marketing phenomena and determine the frequency of occurrence, (ii) establish to what extent marketing variables are linked, and (iii) make predictions regarding the occurrence of marketing phenomena<br>• Can provide insights into relationships between two variables which can be used for inputs into causal research<br>• Structured quantitative primary research (surveys, interviewing etc.) methods used for data collection<br><br>**Causal**<br><br>• Used to show the distinct relationship between two or more variables<br>• The crux revolves around showing that the change in the independent variable results in a change in the dependant variable<br>• Experiments are used for data collection to determine the cause and effect relationship between the variables. Surveys can be used but are not as effective as experiments<br>• Appropriate when the research objectives (1) attempting to understand which combination of variables cause a specific effect, and (2) attempting to understand the causal relationship between causal factors and their effect<br>• The research design must be highly planned and structured to determine the nature and cause of relationships |
| **Performance monitoring** | • Used after a specific action has been implemented to determine what deviations are occurring from the set plan<br>• Involves the monitoring of marketing implementation and environmental situations to determine whether current plans are on the correct track<br>• Data can be collected through secondary data, interviews of relevant persons, observation, and ad hoc research activities |

**Source:** Based on Aaker et al. (2011:72), Cooper and Schindler (2011:140), Berndt and Petzer (2011:32), Saunders et al. (2012:170), Feinberg et al. (2013:55), and McDaniel and Gates (2013:67).

In addition to selecting the type of research to be conducted, the development of the research design (step three in the research process being followed) includes the planning for the selection of the data collection method, the sampling process, questionnaire design, the data collection, and the approach to analysis. This planning forms part of the conceptual phase of the research process. Once the research design has been finalised and the decision taken to move forward with the research, the process moves to the operational phase. The methodological approach followed for each of these steps for this study is discussed in the sections that follow.

### 7.3.4 Conduct secondary research

At this stage of the research process a review is conducted of secondary data and subject-related literature. Secondary data sources in this context refers to data that has previously been collected by other organisations or individuals for other research projects or collected by other organisations and presented in reports or as a database (Feinberg, 2013:69).

The importance of secondary data research for any study lies in the fact that if there is sufficient secondary data available it can potentially serve to answer the research question and thus achieve the research objectives. Secondary data provides a deeper understanding of the situation and therefore assists in refining the research problem to be addressed in the study (McDaniel & Gates, 2013:90). This deeper insight into the research problem that is gained from conducting secondary research assists in the planning of the primary research in terms of population and sample identification. In section 1.6.2 of this study it was stated that research needs to be based on a theoretical framework to firstly establish the direction of the research, and secondly to determine whether the research has been previously conducted. Webb (2002:30) states that one of the main uses of secondary data is to provide a backdrop to primary research, and in this regard, he states that secondary data serves the important function of providing a context in which the primary research will take place. This is important because once there is context you are in a position to evaluate the primary data that is collected.

An important point to keep in mind during the secondary data review is the quality and nature of the secondary data and sources being used. The researcher needs to firstly ensure that the secondary data being used is relevant and accurate (Parasuraman, Grewal, & Krishnan, 2004:94; Brown & Suter, 2014:44–45). This involves considering a number of issues and includes; looking for missing data, looking for mistakes, looking at the manner in which the work has been expressed, looking for the possibility of deliberate bias, and reviewing the way in which scales and questions have been used in the data collection instrument (Bradley, 2010:98).

In the context of this study, secondary data sources and subject-related literature will provide insights into the air transport market, the low-cost strategy, low-cost carriers, the full-service strategy, and full-service carriers. Insights from research in these areas will form the basis of the research to be conducted. The review of the secondary data sources and subject-related literature linked to the topics of this study are covered in chapters 2–6. Full references to the sources used are given in the bibliography at the end of the document.

To ensure that a thorough context is established for this study, numerous secondary sources were reviewed to cover the broad range of topics that are addressed. The sources of secondary data and subject-related literature used can be divided into three broad categories. Firstly, those sources that are concerned with research methods, business strategy, and the relevant marketing theory. Secondly, sources that relate to the economic environment and the current state of the tourism industry. Thirdly, those sources that are concerned with the air transport industry (including information on the airline business models, airline passenger behaviours, and airline marketing). Besides highlighting the current situation, the secondary resource review will also serve to reinforce the problem statement.

The list below, which is a detailed version of the summary provided in section 1.6.2 of the study, serves to highlight the main types of secondary sources and subject-related literature consulted and should not be considered to be an exhaustive list of all the specific sources utilised. The complete list is captured in the bibliography. Secondary data and subject-specific information was collected from the following types of secondary sources:

- Academic textbooks on the subjects of marketing, airline marketing, airline management and operations, research, economics, and consumer behaviour.
- Academic journals relating to topics on marketing, airline marketing, airline management and operations, research, economics, and consumer behaviour.
- Airline industry organisations including the International Air Transport Association (IATA), the International Civil Aviation Organisation (ICAO), the Civil Aviation Association (CAA), Airports Council International (ACI), the African Airlines Association (AFRAA), and the African Civil Aviation Commission (AFCAC).
- Tourism industry organisations including South African tourism, the World Travel Organisation (UNWTO), the World Travel and Tourism council (WTTC), the South African Department of Tourism, and the South African Department of Transport.
- Airline industry publications and websites including Flight Airline Business, Rati, Flight Global, Ascend (publication of Sabre Airline Solutions), Low Cost and Regional magazine, Airline Leader magazine, and CAPA (Centre for Aviation).
- Airline websites, airline annual reports, airline operators, airline suppliers, and airline manufacturers.
- Articles from specialist consultants that consult to the airline industry including the Boston Consulting group, McKinsey, L.E.K. consulting, Oxford Economics, Accenture, Amadeus, Leigh Fisher, and CTAIRA amongst others.
- Economic data sources including the International Monetary Fund (IMF), the World Bank, The Organisation for Economic Co-operation and Development (OECD), World Economic Forum (WEF), the UN department of Economic and Social affairs, Statistics South Africa, the South African Reserve Bank, the Financial Mail, and Business Day.

An important point to note in terms of the secondary sources utilised is that different types of information are released by different organisations at differing frequencies. In some cases, reports and data are updated monthly or quarterly. In other cases, reports are updated yearly (3–6 months after calendar year-end or financial year-end). Notably, specifically with regard to a number of key airline and tourism-related reports, a number of reports are only updated biennially, which results in a lag time of at least two years before some data is made available.

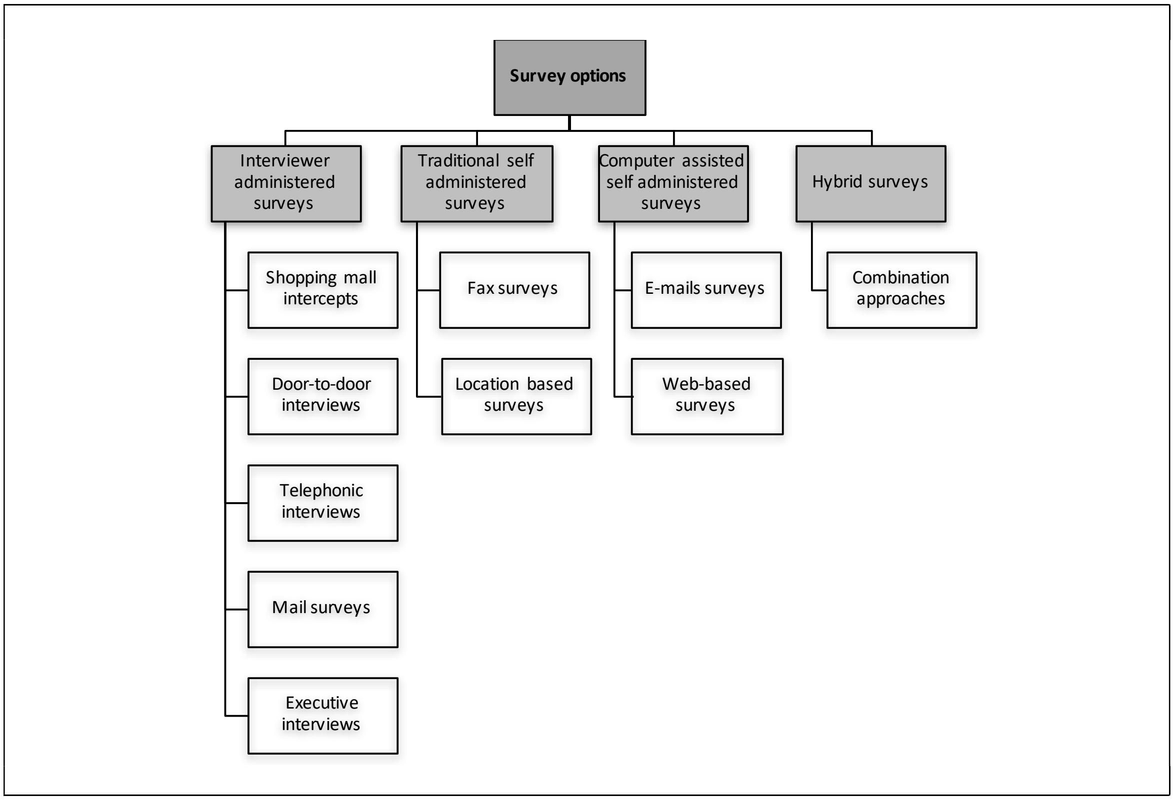
In terms of the overall research project, sufficient secondary data and subject-related information was obtained to gain a clear picture of the current state of the commercial air transport market. Sufficient information regarding the nature of the different business models was also available. Similar research relating to passenger perceptions of the airline business models was found for the European and Asian markets. Research focussing on the South African context was more limited, but there was some research in this area that was consulted and provided valuable insights (*see* section 1.2.3.2). Whilst an extensive secondary data analysis was conducted, the data and information gathered did not answer the research questions and thus did not resolve the established objectives. In this light, it was therefore necessary that primary research be conducted.

### 7.3.5 Select a primary research method

Once the determination has been made that the secondary sources analysis is insufficient to resolve the research questions, the decision is made to continue with the primary data collection. Primary research is designed to collect original data to solve a particular problem for which no data existed prior to the data collection (McGivern, 2013:49). As was stated in section 7.3.3, the key focus of this study is the collection of primary data. In terms of the collection of primary data, a distinction is made between qualitative research and quantitative research methods. As per section 1.6.1 and section 7.3.3 this study is quantitative in nature. Quantitative research is linked to descriptive or causal research designs and focuses on the quantification of the research problem and objectives (Berndt & Petzer, 2011:47). When considering quantitative research as the means of collecting primary data the researcher has the option of choosing between experiments (cause and effect), observation, and surveys. Based on the nature of the data that needs to be collected (according to the established objectives) this study makes use of the survey method to collect the primary data (*see* section 1.6.3.3 of the study). The rationale behind the choice of survey methods lies in the fact that this study is descriptive in nature, which therefore excludes experimentation (cause and effect testing) as an option. Experimentation tests relationships between variables and, as per the research problem, research objectives, and research design, this is not required. Table 7.2 highlighted the characteristics of the types of research, particularly between descriptive and causal research. The nature of the research objectives also excludes observation as a means of primary data collection as the data that needs to be gathered requires direct communication with the respondent in order to identify their understanding and perceptions.

Surveys can take a number of forms but all involve the use of a questionnaire to gather facts, opinions, and attitudes from respondents (McDaniel & Gates, 2010:170). The typical information that can be gathered from respondents using surveys includes information on past behaviour, attitudes, and respondent characteristics (Feinberg et al., 2013:234). Surveys entail some form of communication with the respondent. This communication can be verbal, written, or electronic based. The result is that there are many ways in which the surveys can be conducted, which leaves the researcher with the important task of selecting the most appropriate method to achieve the set objectives. The main categories and types of surveys from which the researcher needs to select are identified in figure 7.2.

**Figure 7.2: Categories and types of surveys**




**Source:** Adapted from Cooper and Schindler (2011:242), Berndt and Petzer (2011:135), and Aaker et al. (2011:215–232)

Figure 7.2 shows a distinction in the first instance between interviewer-administered surveys, traditional self-administered surveys, computer assisted self-administered surveys, and hybrid surveys. At the second level the different types of surveys are identified. Each has its own associated advantages and disadvantages. In the case of this research project the data is to be collected from respondents that are travelling on low-cost and full-service carriers within South Africa and requires data based on their current travel activity. Numerous discussions took place regarding the most appropriate method to collect the data from the respondents. The key issues addressed in these discussions revolved around the accessibility of the respondents and the timing of the interviews. The discussion on timing focussed on when it would be best to collect the data from the respondents. Options considered included whether data would be collected during the period before the day of the flight, at the time of flight (at the airport), or after the completion of the flight. The fact that the research objectives required that the data collected relate to past flights as well as the current flight being undertaken, it was decided that the best option would be to interview the respondents at the time of their flight (at the airport) to ensure freshness of data and accessibility of respondents. Due to privacy policies and data protection laws it is not possible to obtain lists of people (prospective respondents) travelling on the days of the interviews from the airlines. For the same reasons, access to the lists after the flight would be equally impossible. Additionally, the research design meant that some of the questions to be put to the respondent would require deeper insights and thus advanced the need for an interviewer to administer the survey.

After consideration of the characteristics of the required respondents and a review of the advantages associated with the various survey methods, it was decided that the best approach would be to follow the option of interviewer administered surveys using the 'shopping mall' intercept method. In this case, the 'shopping mall' would be the two airports. Standard mall-intercept surveys are generally viewed as not being good at obtaining representative samples as they generally attract only a certain type of person. The exception to this, as explained by McDaniel and Gates (2013:160), is in cases where "the population of interest is coincident with or is a subset of the population that shops at a particular mall". In the context of this study, the population of interest (air travel passengers) is distinctly coincident with the population that 'shops' (utilises) at the 'mall' (airport).

Once the selection of the survey method was finalised, the next step was to develop the questionnaire to be used in collecting the data from respondents.

### 7.3.6 Design the questionnaire

The questionnaire, as defined by McDaniel and Gates (2013:336), is "a set of questions designed to generate the data necessary to accomplish the objectives of the research project; it is a formalised schedule for collecting information from respondents". Questionnaires are developed with the research objectives in mind and must be developed with the goal of ensuring that all data requirements are met in terms of the questions asked. Whilst standardised questionnaires can be developed, most are custom-made for the specific research being conducted.

Berndt and Petzer (2011:182) outline a holistic approach to the development of the questionnaire and stress the need to consider the following factors before deciding on the content of the questionnaire:

- The study's purpose
- Sample size
- Data collection method
- Data capturing process
- The respondent's profile
- Required format of results
- Possible respondent response patterns

McGivern (2013:268) outlines a number of points that highlight the main purposes of the questionnaire. These include the collection of the required data, ensuring the comparability of data collected from all respondents, minimising any possible bias, and ensuring ease of respondent participation in the completion of the questionnaire. Consideration was given to these four points in the development of the questionnaire for this study as it is acknowledged that a poorly formulated question can cause the entire research project to fail in its objectives.

Before the actual development of the questionnaire for this study took place, cognisance was also taken of the fact that there are different types of questionnaires that can be designed depending on the nature of the study and the method being used to administer the survey. In section 7.3.5 it was identified that for the purposes of this study the data collection method to be used is the interviewer-administered survey using the mall intercept approach (see also figure 7.2). The type of questionnaire to be developed for this study, as per the questionnaire types identified by Saunders et al. (2012:419), is the structured interview questionnaire. The questionnaire was therefore designed in a manner that would facilitate the interviewer's task of administering the questions. This type of questionnaire is characterised by a clearly defined schedule of questions to be put to the respondent and it is essential that there should be no deviation from this schedule to ensure the comparability of collected data. Numerous benefits are associated with this type of questionnaire, including the fact that the involvement of the interviewer can encourage the respondents to answer more fully and thereby gather more insightful data. This type of questionnaire also allows the use of both open-ended and closed questions, which offers the opportunity to ask more complicated questions. This is particularly relevant to this study where interviewer guidance is required due to the nature of the topics being analysed and where deeper insights into consumer travel behaviours are being sought.

As was explained in sections 1.6.3 and 7.1, this study is based on a small component of the 2007 study by O'Connell (2007), which focussed on the strategic response of FSCs to the LCC threat and the perceptions of passengers relating to each type of carrier in the European and Asian markets. The questionnaire utilised in the European and Asian study was obtained from Dr. O'Connell and permission granted by him to utilise part of it for this study in the South African context. On receipt, the questionnaire was deconstructed and analysed in terms of its composition and linkages to the objectives of this study. Insights into the reasons behind some of the questions contained in the questionnaire were obtained from Dr. O'Connell via a phone call, numerous e-mail conversations, and one face-to-face meeting.

The questionnaire for this study was then developed based on the questionnaire used by O'Connell with adjustments being made to accommodate the research specifics and the South African market. As explained in sections 1.6.3 and 7.1 of the study, a particular deviation from the research conducted by O'Connell (2007) was the addition of a section for respondents to rate their perceptions of service delivered by the airline model being travelled on (low-cost or full-service) as well as the respondent perceptions of the opposing airline model (questions 19–28). An open-ended question relating to identifying the respondent's understanding of the concept of LCCs and FSCs was also added in order to address secondary objective number 5. In a similar vein, an open-ended question was added to identify the respondent's reasons for switching or not switching model when faced with differing levels of price increases (*see* section 1.6.3 of the study). This was done to provide greater insights into the respondents' response to the closed-ended question regarding the level at which they would switch model. The nature of the selected data collection method and type of questionnaire selected made this type of question feasible (as discussed earlier in this section). Minor refinements were also made to the questionnaire in terms of the screening questions and general demographic data questions.

Overall, the integrity of the O'Connell (2007) questionnaire was maintained to provide the opportunity for comparisons to his research results with the additional elements added for this study offering much greater insights into the South African market and passenger behaviours. The adaptation of the questionnaire and the added questions for this study in terms of the set objectives was done with careful attention being given to the factors identified in the paragraphs above to ensure that a questionnaire was developed that met the required standards of reliability and validity to ensure that accurate and relevant data was collected. Construct validity tests for the O'Connell methodology and approach were conducted to ensure that the application of the previous research would apply in the South African environment.

The refinement of the questionnaire was done in conjunction with Dr. Neil Lilford, owner and principal of the Greenfields Institute of Business who would be managing the data collection process at the identified airports. An extended process of personal meetings, phone calls, and e-mails saw numerous refinements being made to the questionnaire to ensure that (i) all the relevant aspects were addressed, (ii) that the questionnaire would achieve the set objectives, and (iii) be easily administered by the fieldworkers when collecting the data. Overall, consideration was given to the guidelines for questionnaire design as identified in Feinberg et al. (2013:268). These include guidelines relating to question content, response format, question wording, question sequence, and physical characteristics.

The questionnaire itself consisted of 40 questions. Respondents were not required to answer all 40 questions, but only those that related to the model that they were flying on the day of interview. This translated into about 32 questions for a respondent to answer. This was also dependant on whether the respondent had flown for business reasons previously. The interviewer would administer the questionnaire and thus only ask the respondent the questions that applied. Screening questions at the beginning of the questionnaire determined whether a person was eligible to be interviewed and then, if they were eligible, they were divided according to whether they were passengers on a LCC or a FSC.

The questions contained within the questionnaire represented a mixture of open-ended and closed-ended questions. Open-ended questions are questions where the respondent is given the freedom to answer in their own words and the interviewer captures the answer, whereas closed-ended questions are questions where a number of predetermined answers are identified and the respondent selects the option that applies (Bradley, 2010:194–196). Closed-ended questions are divided into three main categories; dichotomous, multiple-choice, and scaled-response questions. The questionnaire designed for this study made use of all three types. In terms of the scaled-response questions, the questionnaire utilised a comparative scale (a rank order scale) and a non-comparative scale (a 7–point graphic rating scale). The dispersion of the different types of questions is summarised in table 7.3.

**Table 7.3: Dispersion of question formats**

| Question type | Question number in questionnaire |
|---|---|
| **Open-ended questions** | 2, 4, 7, 18, 30, 32, 35, 36,<br><br>Questions 5, 9, 16, 33, 38 had the option of 'other' where the respondent could specify their own particular answer |
| **Closed-ended questions:**<br><br>• Dichotomous questions<br>• Multiple-choice questions<br>• Scaled-response questions | <br><br>3, 34, 37, 39<br>1, 5, 6, 9–16, 29, 31, 33, 38, 40<br>17, 19–28 |

The overall layout of the questionnaire was designed to have a logical flow to assist in easing the respondent through the interview. Questions at the beginning of the questionnaire screened the potential respondents and then established the type of trip they were undertaking so that the interviewer was then able to determine which questions to apply to them. The middle section of the questionnaire contained the more involved questions where the respondent was required to give more insight. The final section of questionnaire contained questions that were simple closed-ended questions, which were quick and easy to answer and ensured respondent attention to the end. The questionnaire was sub-divided into a number of core sections in terms of the topics addressed, which made the capturing and analysis of the data more efficient. Table 7.4 highlights the purpose behind the inclusion of the questions in the questionnaire.

**Table 7.4: Core sections of questionnaire**

| Questions | Question purpose |
|---|---|
| Questions 1–4 | Serves two purposes. Firstly, for screening purposes to ensure that the respondent was flying on one of the airlines within the parameters established for the study. Secondly, to classify respondents according to the model they are flying (LCC or FSC) and the nature of their air journey |
| Questions 5–7 | Gathers data relating to the respondent's pre-flight activities. |
| Question 8–9 | Identification of the respondent's purpose trip. |
| Questions 10–11 | Establishes the respondents' travel frequency and on which model type |
| Question 17 | Identifies the respondent's reason for selecting the particular airline on which they were flying on the day of interview |
| Questions 18–28 | Gathers data pertaining to the respondent's understanding of the difference between LCCs and FSCs and their perceptions of the two models. |
| Questions 29–32 | Identifies the respondent's level of price sensitivity towards fare increases or decreases and thus their propensity to switch or not. |
| Questions 33–38 | Establishes the respondent's booking process in purchasing their ticket for the flight being undertaken on the date of interview. |
| Questions 39–40 | Final classification questions in terms of age and gender. |

Flowing from this, table 7.5 considers the objectives of the research project and links them to specific questions that contribute to the achievement of that objective. The making of a direct link to an objective and a question does not fully represent the picture, as in many cases the cross-tabulation of a number of questions serves to address a particular objective and not just a single question in isolation.

**Table 7.5: Linkage of research objectives to questionnaire**

| Objectives | Related question number |
|---|---|
| **Primary objective:**<br><br>The **primary research objective** identified for this study is to conduct a business analysis of the domestic commercial air transport industry in South Africa in order to gain greater insights into the business environment and the passengers that fly on the South African low-cost and full-service carriers. | Combination of secondary data analysis and individual secondary objectives. |
| **Secondary objectives:**<br><br>• Review the business environment in which the South African domestic air transport industry operates and determine the influences on the operation of this industry in terms of the low-cost and full-service carriers | Not linked to questionnaire. Secondary data analysis (Ch. 2–6). |
| • Establish the travel profile of the passengers travelling on the low-cost carriers and full-service carriers in the South African air travel market | 2–9, 10–11, 17, 33–40. |
| • Establish behaviours of the market associated with the purchase of the air tickets for short-haul domestic travel in South Africa. | 9, 17, 33–38. |
| • Uncover the key criteria used by the South African air travel market when deciding on which airline to fly for domestic travel. | 17, 18. |
| • Determine the perceptions of passengers in the South African air travel market with regard to the services and features offered by low-cost carriers and full-service carriers. | 17, 18, 19–28. |
| • Determine the extent of price sensitivity for passengers travelling on low-cost and full-service carriers in the South African domestic market in order to identify the extent of price switching behaviour across the two models. | 29–32, 34, 35, 36, 37, 38. |
| • Identify additional areas of research that need to be addressed to improve the operation of the industry and its components | Arising from analysis and interpretation. |

As stated in section 1.6.3.3 of the study, an initial 30 questionnaires were administered at Cape Town International Airport as part of a pilot study to ensure the questionnaire was correctly formulated and understandable by the respondents. A number of minor refinements were introduced as a result of this process. Notice was also taken of the time taken for the interviews to be completed. It was found that it ranged between 9 to 17 minutes and that respondents were accepting of this length of interview. A copy of the questionnaire is given in appendix F.

### 7.3.7 Develop a sampling plan

The topic of sampling forms an important part of any research project. In every project the researcher is faced with determining the size of the population of interest and then determining whether it is possible, or necessary, to conduct interviews with all population elements (conduct a census) or whether only a sample of the population of interest will be interviewed. A review of the objectives of this project, and the nature and size of the commercial air travel consumer market, showed that conducting a census was not an option and therefore a sampling plan would be necessary. The discussions in this section outline the sampling approach taken for this research project and highlight the issues considered when selecting the sample.

#### 7.3.7.1 Population of interest

Aaker et al. (2011:336) emphasises the fact that the main purpose of sampling is to gain information about a specific population. For the correct information to be gathered, and the research objectives achieved, it is essential that the population be defined as accurately and completely as possible to ensure that the most appropriate sample can be drawn. The first task in developing the sample plan was therefore to identify the population of interest (otherwise referred to as the target population). For purposes of clarity, a population is defined as "the entire group of people about whom information is needed" (McDaniel & Gates, 2013:380). This definition is expanded upon by Feinberg et al. (2013:301), where they state that the population is the "aggregate of all the elements defined before the selection of the sample".

As per section 1.6.3.1 of the study, the population of interest identified for this study included all air passengers, over the age of 16, flying on domestic flights within the South African borders on the full-service and/or low-cost domestic carriers operating in the South African market at the time of the study and utilising the two identified airports on the days of interview. Excluded from the population of interest are passengers travelling on SA Airlink and SA Express, as these airlines are small regional operators operating routes to smaller towns not served by any of the full-service carriers or low-cost carriers. They are not considered to form part of the LCC or FSC models and therefore fall beyond the scope of this study. The sample units, in the case of this study, include passengers travelling for the purposes of leisure or business and only includes adult passengers from the age of 16 years and older. Sample units are restricted to passengers flying on the identified airline models (LCC and FSC) as they operate on the same routes, at the two identified airports, and thus serve to provide a direct opportunity for comparison of passengers flying on those routes and airlines.

#### 7.3.7.2 Sample frame

Once the population of interest has been identified the sampling frame then needs to be identified. A sampling frame, as described in Berndt and Petzer (2011:171) and Cooper and Schindler (2011:372), is simply a list of all the sample units in a population that are available for selection when the sample needs to be drawn. Bradley (2010:154) states that this sampling frame can be in many forms but at its heart is the fact that it contains a complete list of the population of interest in terms of how the sample units can be accessed. This list can identify the sample units according to their characteristics, contact details, geographic region, or voting districts. A key to identifying an appropriate sample frame is ensuring that the list is complete, up to date, and does not contain duplication or other foreign elements (Tustin et al., 2005:343).

For this study, a sample frame would be a complete list of passengers that have purchased tickets on LCCs and FSCs within the South African domestic market at the time of the data collection period for the study, as well as their airport of departure/arrival. This ideal sample frame or 'list' would identify the passenger, their date of departure, their time of departure, and their airport of departure. However, whilst the various airlines would have a list of their passengers and the required details, this information is not available for use due to a number of important reasons. These reasons include privacy, security, and competitive reasons. In effect, there is no sample frame that exists for use in the selection of the sample units for this study. This situation has significant implications for the selection of the sample size and the selection of a sampling technique.

#### 7.3.7.3 Selection of the appropriate sampling technique

The selection of an appropriate sampling technique is a decision that is made taking the research objectives, available sampling frame, and nature of the research being undertaken. In this regard, the researcher has two main alternatives to select from in terms of the technique to be utilised; probability methods and non-probability methods. The key distinction between the two approaches is that in probability sampling methods each population element has a known and equal chance of being included in the selected sample whilst in non-probability sampling methods the respondent is selected at the discretion of the researcher normally according to some pre-determined criteria (Feinberg et al., 2013:304). In terms of the pure scientific approach, probability sampling is the ideal option as it is deemed to result in a more representative sample with the ability to calculate a sample error (Aaker et al., 2011:342). It is however also recognised that in cases where it is not possible to obtain a sampling frame that if a considered and planned approach to non-probability sampling is taken then the sample can be 'reasonably representative' of the target population (McDaniel & Gates, 2010:424). This statement is supported by McGivern (2013:235) who states that; "random sampling does not always produce more accurate estimates of population characteristics than non-probability techniques". She expands on this by stating that in certain circumstances quota sampling (a non-probability technique) provides a more representative sample than a random sample. In distinguishing between probability and non-probability sampling methods, Grover and Vriens (2006:160) state that numerous factors make a pure probability sample impractical and that in most projects the samples drawn are the result of a 'mix' of both probability and non-probability methods.

In the context of selecting the sampling method for this study, the decision between probability and non-probability methods needs to be made keeping in mind that when using probability sampling to draw a sample it is considered extremely important to have a sample frame (Tustin et al., 2005:343). The lack of an available sample frame for this study (as explained in section 7.3.7.2), coupled with the nature of the research, suggested that a non-probability method should be the sampling approach followed.

Non-probability sampling methods involve the subjective selection of respondents by the researcher and/or the interviewers. A number of non-probability sampling methods can be identified from which the researcher can select. The main non-probability methods that can be identified are convenience sampling, judgement sampling, quota sampling, and snowball sampling. Each of these methods has their own characteristics, advantages, and disadvantages that must be considered prior to their selection as the sampling method for a project. After consideration of the objectives of the research and the relevant characteristics of the various methods, the decision was made to primarily adopt the quota method for sampling in this project (as noted in section 1.6.3.2 of the study). Quota sampling is the most used sampling method in business studies where there is no existing sample frame and can deliver results closest to those that would be delivered by a probability sample (Bradley, 2010:163; McGivern, 2013:234).

McDaniel and Gates (2013:397) define quota sampling as "non-probability sampling in which quotas, based on demographic or classification factors selected by the researcher, are established for population sub-groups". Examples of these classification factors include age, gender, location, purchase history, or even colour of eyes if the research problem requires it. Quotas are based along lines of existing population distributions or desired distributions in order to ensure an increased level of population of interest representativeness – that is, proportional or disproportional sampling (Boyd, Westfall, & Stasch, 1989:408). Interviewers are then instructed to conduct interviews with respondents in line with the set parameters within the population of interest. Screening of respondents to meet the quota set is done through visual determination where feasible (judgement) or through screening questions built into the questionnaire.

In essence, quota sampling is a sort of stratified sampling (a probability sampling method) where strata are identified and non-random samples drawn from each stratum. The key difference between the two methods is that in quota sampling the respondents are selected in a non-random manner instead of the required random selection process for probability sampling (Bradley, 2010:166; Saunders et al., 2012:284; Daniel, 2012:102; McGivern, 2013:258). The discussion that follows in the rest of this paragraph is a reflection of the statements made by Bradley (2010:163–167) and Saunders et al. (2012:284–287) regarding the use and advantages of quota sampling. These statements formed part of the thought process when establishing the quotas and quota classifications. Key to successful quota sampling is firstly the selection of the most appropriate classification factors that most accurately reflect the population of interest, and secondly, the ability to access sample units within the quota groups for interview. Whilst quota sampling does not guarantee a fully representative sample as a probability sampling method would, in comparison to the other non-probability sampling methods quota sampling has a higher likelihood of being representative of the population of interest. Quota sampling is also identified by Saunders et al. (2012:285) as the preferred method to use when there is a large population of interest - as is the case for this study.

Many authors, (Cooper & Emory, 1995:223; Tustin et al., 2005:347; Bradley, 2010:166; McGivern, 2013:257) further divide quota sampling into interlocking and non-interlocking quotas. In non-interlocking quotas, the sample elements only have to meet one characteristic (age, gender, or airline flown for example) to form part of a quota. Interlocking quotas require that the sample element meet two or more characteristics to form part of the quota (age and airline flown, or gender and airline flown, for example). Interlocking quotas are considered to establish a more representative sample than non-interlocking quotas due to the presence of more control over respondent selection (Bradley, 2010:166). For the purposes of this study, the interlocking quota control approach was selected with the key control characteristics being age grouping and airline model flown (LCC vs. FSC) sub-divided according to the two airports where the interviews would take place. The requirements for control characteristics are that they must have a distribution in the population that can be estimated and be relevant to the research being conducted (Cooper & Schindler, 2011:385). The breakdown of the quotas for each characteristic is given in table 7.6 in section 7.3.7.4, with the explanation of characteristics given in the paragraphs that follow.

**Selecting control characteristics for interlocking quota**

In section 1.6.3.2 of the study it was stated that the selection of the sample is based on an analysis of the routes flown by the airline models and the age groupings of the passengers. Regarding the routes flown, analysis showed that the largest routes flown are Johannesburg to Cape Town, Johannesburg to Durban, and Cape Town to Durban. An analysis of statistics from ACSA (2012b) at the conceptual phase of this research showed that Johannesburg and Cape Town airports connect to all major destinations in the country and are serviced by both airline models that form part of the study. In other words, passengers arriving and departing from these two airports give a strong representation of a large section of the entire country (including Bloemfontein, Port Elizabeth, East London, Kimberley, Upington, Pietermaritzburg, Polokwane and Nelspruit). With this in mind it was determined that quota-based samples will be selected at OR Tambo International Airport (Johannesburg) and Cape Town International Airport and that this will provide a broader representation of the South African flying population.

It was previously stated that the quotas for each stratum can be based on proportional representation of the population of interest or disproportional representation depending on the desired distribution. In line with the principles of stratified sampling, proportionate sampling refers to the situation where the number of sample units selected from each stratum is proportional to the size of the stratum in terms of the population of interest. Disproportionate sampling relates to the situation where the number of sample units selected from within a specific stratum is disproportionate to stratum's size in the population of interest (McGivern, 2013:250). Disproportionate sampling is utilised in cases where a specific stratum is smaller than the other strata and a proportional sample will not result in a sample size big enough to enable meaningful comparisons with other strata (Aaker et al., 2011:346). This is particularly relevant where the smaller stratum is an important stratum in the context of the broader project (Grover & Vriens, 2006:165). It is also used in cases where a specific stratum is relatively small and a proportionate sample will not deliver sufficient respondents to enable a detailed analysis within the stratum (Daniel, 2012:106). Similar to stratified sampling, proportionate or disproportionate sampling within strata can be applied to quota sampling, which is essentially the non-probability version of stratified sampling. This is particularly relevant to this study.

- ***Model***

A focal point of this study is the distinction between the low-cost carriers and the full-service carriers. The quotas set for the study as a whole are primarily determined according to the model flown to ensure representation of passengers across the two models. At the end of 2012, the market share of the FSCs in South Africa was substantially larger than that of the LCCs (approximately 65% vs. 35%). This picture had dramatically changed to approximately 53% FSC versus 46% LCC by mid-2015 (Centre for Aviation, 2015a). By end 2016 this had changed again after the demise of Skywise and further intense industry rivalry. Given the importance of this characteristic (model), a decision was made to follow a non-proportional approach towards establishing quotas per model to ensure sufficient sample units to be able to compare the two strata (LCC vs. FSC). This decision was made after discussions with relevant experts, including Dr. Lilford at Greenfields Institute of Business. In this case, it was decided that the quota be set at approximately 50/50 per model. Respondents are restricted to those passengers flying on the LCC or FSC models as they operate on the same routes and thus serve to provide a direct opportunity for comparison of passengers flying on those routes and airlines. In order to achieve the 50/50 quota, respondents are separated into the models using a screening question on the questionnaire. By splitting the respondents according to model flown in the ratio of 50/50, an attempt is made to ensure that the LCCs are not under-represented in the data collection process. An under-representation of the LCC respondents would have resulted in the objectives of the research not being fully addressed in terms of establishing the behaviours, perceptions, and preferences of travellers across the two airline models. Identifying the passengers of the different models is relatively easy as each airline has their own check-in desk where they check-in their own passengers.

- ***Age***

The second characteristic that was set for determination of the sample quota was age. As described in section 7.3.2 of this chapter, one of the objectives of the research is to establish the air travel behaviour and perceptions of the South African air travel passengers. This logically includes passengers across all age groups. In order to ensure that the opinions, perceptions, and behaviours of all age groups are surveyed, quotas were established across four broad age groups. As explained in section 1.6.3.2, one of the main reasons for selecting age as a control characteristic is because many of the segmentation approaches are based on age-related groupings (Millennials, Generation X, Baby-boomers, and Silver economy, for example). By using age as a control characteristic, it is possible to ensure that data is collected from each of these age groupings. The lower limit for participation was set at 16 years of age with no maximum age limit. The final quota established per age group is identified in the quota grid given in table 7.6. The 65+ age group was discussed at length due to the fact that it is acknowledged that in the South African context the number of air travellers from this age category is relatively low. Respondents in this category consist of many retirees who don't travel for business purposes. Additionally, in the context of South Africa's political past, a large proportion of this age group simply cannot afford to travel by air as they are on a limited state pension. The quotas for each identified age group are approximately in line with the general population estimates of South Africa reported in the mid–year population estimates for 2014 and 2015 issued by Statistics South Africa (2014:9; 2015:9).

The identification of these characteristics for quota determination was based on the approach followed by O'Connell (2007) in his study and through discussions with various experts in the field of research and the airline business.

- ***Judgement sampling***

In addition to the quota controls of airline model and age grouping per airport, it was decided to incorporate an element of judgement sampling to supplement the interlocking quota sampling. In its simplest form, judgement sampling involves researchers selecting respondents that conform to specific criteria (Cooper & Schindler, 2011:385). Interviewers were instructed to conduct the interviews with the following criteria in mind:

⇒ Conduct interviews across both genders in order to identify differences in air travel behaviour and opinions between the sexes. An effort must be made to ensure that both genders are represented across both models and all age groups to ensure sufficient representation. Personal discussions with an airline executive prior to data collection revealed that in general there are more male passengers than female passengers - particularly during the week.

⇒ Select respondents from all the airlines in question so that representation is obtained across all airlines within the two models. This is relevant as passengers on the different airlines have their own reasons for choosing a particular airline and display differing levels of loyalty to the airline. It is acknowledged that SAA is the largest domestic airline (Centre for Aviation, 2015a) and will result in greater number of prospective respondents being available. (*see* figure 5.19 which shows the South African domestic airline market share for 2015).

⇒ Conduct interviews in sessions across all hours of the day to ensure a cross-section of the different travellers at the different times of day. This includes a morning, afternoon and evening sessions.

⇒ Conduct interviews across every day of the week (including weekends) to ensure a cross-section of the different travellers on the different days of the week.

Whilst these four elements were not part of the formal interlocking quota, they are important elements in terms of the study and were introduced in an attempt to obtain a representation of respondents across the quota sample.

#### 7.3.7.4 Sample size

Just as it is necessary for a sample frame to exist for the use of probability sampling, the use of statistical methods to determine sample size only applies to the use of probability sampling methods (Tustin et al., 2005:361). As was identified in the previous section, this study makes use of a non-probability sampling method, namely quota sampling, and therefore looked to other options in determining the size of the sample for the study. By the very nature of the non-probability approach, the selected sample cannot be proven or disproven to be representative of the population of interest. The approach taken in this study attempts to ensure that key elements of the population are covered in the interview process along lines of existing population proportions and other relevant distributions where deemed appropriate.

The determination of sample size in non-probability samples is based largely on 'accepted industry standards', expert opinions, and past survey experience with similar studies (Bradley, 2010:174). For studies of this size, the consensus seems to be that a sample size of 384 is sufficient to obtain useful data for analysis (Creative Research Systems, 2013). The determination of the sample size was also done in consultation with the Greenfields Institute of Business who reviewed the proposed study and considered the fact that the surveys would be administered at ORTIA and CTIA separately. A review was also conducted of previous research projects of this nature to determine the sample size used in those cases. The particular study reviewed was logically the O'Connell study (2007) upon which this study is partially based. Further factors that were kept in mind when determining the sample size, as identified by Tustin et al. (2005:360), Bradley (2010:170), Daniel (2012a:238), and Feinberg et al. (2013:327), were as follows:

- Study objectives
- Cost constraints
- Time constraints
- Audience or reader acceptance of small or large samples
- Nature of data analysis methods used
- Extent of cross-classifications used in analysis
- Respondent location
- Ease of intercepting respondents
- Ethical considerations

Berndt and Petzer (2010:176) emphasise that issues like population variance should be considered when selecting a sample size. In this regard, they state that the more variance within the population of interest, the larger the sample size required in order to obtain a higher level of precision. They further state that the larger the number of sub-groups within the population of interest, the larger the sample must be in order for each sub-group to have sufficient representation in the data collected (Berndt & Petzer, 2010:176). In the context of this study, 7 specific age sub-groups were identified on the questionnaire, which necessitated a larger sample to proportionately collect enough responses from the smaller age categories (16–18 and 65+). In line with the discussion in the previous section, Bradley (2010:174), Berndt and Petzer (2011:176), and Daniel (2012a:240) also stress that it is a misconception that a sample needs to be drawn relative to the population proportion. Bradley (2010:174) highlights the fact that the sample should be drawn taking into account the homogeneity or heterogeneity of the population of interest. The quota framework for this study outlines the minimum number of sample units per category to ensure that there are sufficient respondents in each group to enable comparisons of substance.

Given the potential for a large amount of variance in the population of interest for this study it became clear that a relatively large sample would be required to address the wide range of travel behaviours and opinions. The number of apparent sub-groups further leant support for the need of a relatively large sample. The overall sample size selected for this project was 700 to be collected at the two identified airports. This was sub-divided to 400 interviews at ORTIA and 300 interviews at CTIA. ACSA figures show that the ratio of domestic passengers handled between the two airports is approximately 4:3 (ACSA, 2017c; ACSA, 2017d). It was agreed that more than this number was unnecessary and that the law of diminishing returns or 'data saturation point' would result in no more new data being collected (Saunders et al., 2012:283). The quota table used as a guideline to ensure that all the relevant characteristics of the population of interest were addressed is given in table 7.6.

**Table 7.6: Interlocking quota sample guideline for the collection of data**

| Approximate allocations | | | | | | |
|---|---|---|---|---|---|---|
| | | Age groups | | | | |
| | Model | 16 –24 | 25–39 | 40–54 | 55+ | Totals |
| JHB | FSC | 57 | 74 | 49 | 20 | 200 |
| | LCC | 57 | 74 | 49 | 20 | 200 |
| | Sub-total | 114 | 148 | 98 | 40 | 400 |
| CPT | FSC | 43 | 56 | 36 | 15 | 150 |
| | LCC | 43 | 56 | 36 | 15 | 150 |
| | Sub-total | 86 | 112 | 72 | 30 | 300 |
| | **Total** | **200** | **260** | **170** | **70** | **700** |

#### 7.3.7.5 Implementing the sampling plan

The sample plan was discussed with Greenfields Institute of Business who would be responsible for collecting and capturing the data. All data collectors were fully briefed and trained on the required sample quotas with the field supervisor being present at all times to control that the required respondent mix was being achieved. The questionnaire included screening questions to identify the type of airline model being flown and made provision for the classification of the respondents according to their model flown and age group.

Given the large number of interviews that had to be conducted at each airport, sufficient time was allocated to ensure that the quotas were achieved. This was also provided for in the budget of the project.

### 7.3.8 Gather data

The next step in the operational phase of the research process is data collection. This step is often referred to as fieldwork and entails taking the questionnaire into the field to collect the data from the identified sample (Tustin et al., 2005:99). The way in which this step is handled depends on the type of research being undertaken as well as the data collection method selected. Additionally, the researcher has the option of collecting the data personally, making use of fieldworkers that report directly to the researcher, or by making use of the services of a specialised research house (Berndt & Petzer, 2011:202). Regardless of the approach taken, a crucial component of this step is to ensure that control is maintained over all aspects to ensure that the data is collected in accordance with the processes, plans, and objectives established during the planning process. Specific emphasis was to be placed on the role of the interviewer who has a significant influence over the quality of the data collected and respondent participation in the research. Berndt and Petzer (2011:203) highlight this role by highlighting the challenges faced by the fieldworker in collecting the data. These challenges include encouraging the potential respondent to participate in the interview, ensuring that high quality responses are elicited from the respondents, and ensuring that sufficient respondents are acquired to meet the identified sample size.

#### 7.3.8.1 Data collection agent

The data collection in this case was handled by an external research house that specialises in marketing research and specifically in the area of customer satisfaction, customer behaviour, customer relationships, and marketing strategy. Greenfields Institute of Business was approached to conduct the fieldwork for the project as well as capture and perform preliminary data analysis. Dr. Lilford, founder and managing director of Greenfields Institute of Business, took a personal interest in the project and played a leading role in the data collection process. He currently holds an MBA from the University of Cape Town and a PhD in Economics and Business Management from the Royal Institute of Technology in Sweden. As discussed in previous sections, the finalising of the questionnaire and development of the sampling plan was done with the involvement of Dr. Lilford. This included hands-on involvement in the pilot study to pre-test the questionnaire at the Cape Town International Airport. They also performed construct validity tests based on the same methodology as the O'Connell study (2007) to ensure that the application of the previous O'Connell research would apply in the South African environment.

Greenfields provided all the fieldworkers for the data collection process as well as the necessary training relating to the project and its objectives. The fieldworkers were all experienced fieldworkers having been involved in numerous projects prior to this assignment. Fieldworker training for the project was a detailed process with information being given on the nature of the research at hand (LCC vs. FSC), how to approach passengers in the domestic departure halls, and specifically on the required sample quotas. The need to maintain adherence to the minimum quota levels identified was emphasised. Fieldworkers were supervised at the airports where the interviews were conducted to ensure that all targets were being met and that the interviews were completed and correct. For the CTIA interviews the managing director, Dr. Lilford, played a large role in the supervision of the interviews conducted. Continuous feedback was provided to the researcher before, during, and after the data collection process. Constant contact was also maintained with the support staff, particularly the statistician who controlled the capturing of the data, developed of the web-based tools and systems, and performed the preliminary analysis. The Greenfields statistician who would be handling the data capture and preliminary analysis has a qualification in marketing and statistics at honours level.

#### 7.3.8.2 Data collection

Prior to the collection of data, permission was obtained from the Airports Company South Africa (ACSA) to conduct the interviews in the general domestic arrival and departure halls around the passenger check-in areas at ORTIA and CTIA.

Surveys were undertaken to determine why respondents are selecting one particular model over another, specifically relating to their choice behaviours between a low-cost carrier and a full-service carrier and their perceptions of each model. As per the sampling plan, the interviews were conducted at the domestic departure terminals of both ORTIA in Johannesburg and CTIA in Cape Town (as noted in section 1.6.3.3 of the study). Interviews were conducted with respondents that were flying domestically on the LCCs and FSCs. Respondents were restricted to passengers flying these identified models as they operate on the same routes and thus serve to provide a direct opportunity for comparison of passengers flying on those routes and airlines. Using screening questions, the interviewers conducted the required interviews according to the guidelines established in the sampling plan. The need for data to be collected consistently no matter where, when, and who collects it is emphasised by Berndt and

Petzer (2011:203). To ensure a consistency in results, the same processes and procedures were followed in the data collection at the two airports. This was carefully managed and controlled by Greenfields.

The interviews were conducted over a period of two weeks at the two airports. A team of four fieldworkers at each airport was involved in collecting the data. As identified in section 7.3.8.1, the fieldworkers were briefed on how to approach the survey in the domestic departure halls. Additionally, they were briefed regarding the number and spread of surveys required across the various models and age groups as per the interlocking quota grid. The fieldworkers conducted the surveys across the full day to ensure a spread of traveller types. This included the early morning business rush, the midday leisure traveller, and the early evening traveller. Data was collected throughout the week and once over the weekend to ensure that all relevant groups and types were included in the data collection process.

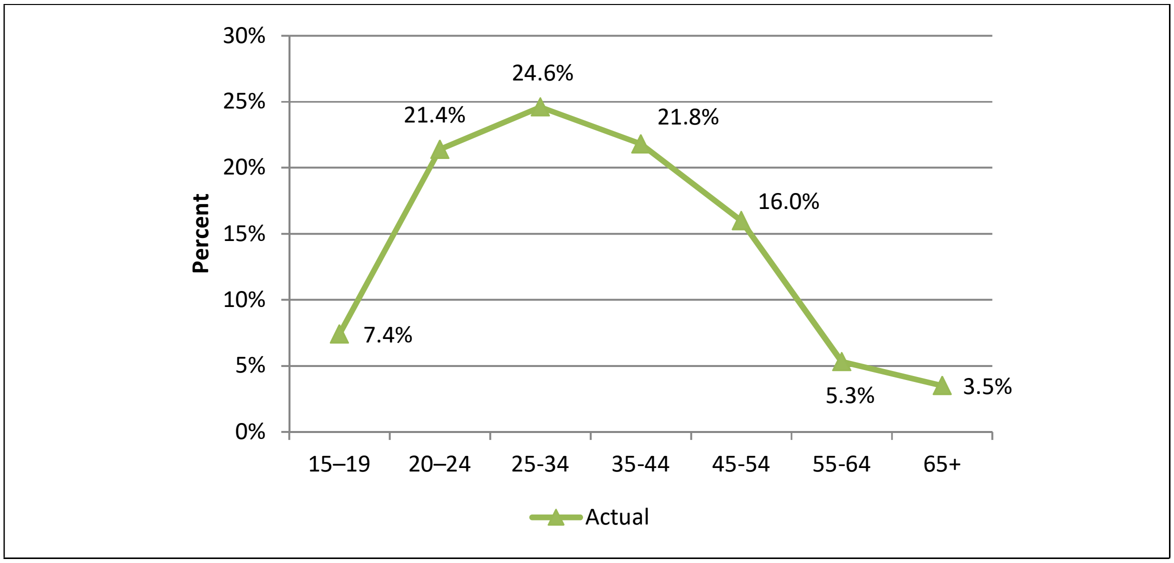
Interviewers found the process of identifying the relevant qualifying respondents quite easy. It was found that the queues where travellers were checking-in was a favourable point for getting respondents as each airline has their own check-in counters and thus makes the identification of respondents according to airline/model a simple case of approaching the relevant queue. In other cases, the areas demarcated for travellers to sit whilst waiting for their departure time (prior to security checks) was found to be an extremely successful area to obtain willing respondents. In this instance, the travellers were relaxed and happy to partake in the survey. Interviewers noted this willingness of respondents to partake in the survey and identified a number of reasons for this. Firstly, due to security requirements that require passengers to check-in well in advance of their flights, many people arrive early at the airport and once they have checked-in they therefore have a longer waiting period before their flight departs. Secondly, it seemed that people love talking and complaining about airlines and saw this as an opportunity to speak their minds.

During the data collection process, it was found that very early in the morning (5.00am – 7.00am), when the airport was very busy, travellers were not as willing to participate in the interview process. Comair British Airways queues in particular were found to be shorter than the other airlines making it more difficult to get travellers to participate due to the shorter waiting time to check-in. A query with the Comair British Airways check-in staff as to the reasons for this showed that this was due to the fact that the majority of their passengers checked-in online.

The responses to the interviews that were conducted were captured by the interviewer on a printed questionnaire. Whilst the length of the interviews varied slightly, the amount of time it took to complete an interview was between 9–17 minutes. Respondents were accepting of this length of time for the interview completion and were reported as being very curious on the nature of the topic. Overall, 732 questionnaires were collected at the two airports. This was made up of 305 interviews conducted at CTIA (compared to the planned sample quota of 300) and 427 conducted at ORTIA (compared to the planned sample quota of 400). Three surveys were rejected outright because crucial details were omitted. The final mix of interviews between models was 47.5% LCC respondents and 52.5% FSC respondents, with representation across all relevant airlines.

Figure 7.3 gives an indication of the spread of respondents across the age groups for the interviews that were conducted. This is in line with the quota established in sections 7.3.7.3 and 7.3.7.4. The age 65+ category was slightly underrepresented on purpose as explained in section 7.3.7.3 and is in line with the specified quota.

**Figure 7.3: Achieved spread of age groups for interviews conducted**




Greenfields closely supervised the entire data collection process, with the managing director playing a role at the CTIA interviews. More information on the role of the supervisor is provided throughout in the next section.

### 7.3.9 Process data

Collected data in questionnaires is meaningless without analysis and interpretation (Saunders et al., 2012:472). The key focus of the activities at this stage of the process is to prepare the data for capturing into the database and then perform the required analysis. The approach to analysis, and the methods used, are determined by the type of data collected and the nature of the research objectives.

#### 7.3.9.1 Editing

Editing is described in Tustin et al. (2005:452) as a process that involves a "thorough and critical examination of a completed questionnaire in terms of compliance with the criteria for collecting meaningful data and in order to deal with questionnaires that are not fully completed". This is an important task in the research process and is traditionally carried out in the field by the supervisor as the questionnaires are completed and then centrally in the process of preparing the questionnaires for capture into the database. Specific items that are checked include, amongst others, confirming that all questions were asked and recorded, the correct questions were asked, and whether open-ended question responses are being properly recorded (McDaniel & Gates, 2013:437).

Editing for this project took place at the time of interview by the supervisor who controlled the completed questionnaires for completion and compatibility with the sample and to ensure that the respondents answered in a manner that indicated that they understood the questions being asked. Further editing took place prior to capture by the statistician at Greenfields to ensure that the questionnaires were complete so that the captured data would be reliable.

#### 7.3.9.2 Coding

Coding is the process of assigning numbers or symbols to the answers collected from the respondents in order to facilitate easier data capturing and tabulation (Cooper & Schindler, 2011:405). The use of a specific code instead of a number of words to represent an answer to a question in a questionnaire is an essential requirement for data capturing as it is in a 'language' more easily understood by the computer and thus facilitates the analysis process. Close-ended questions have pre-determined answers and thus can be pre-coded into the questionnaire. Coding open-ended questions present more of a challenge as the exact answers are not known until the data has been collected. The coding of open-ended responses should be handled in a systematic manner to ensure that all the responses gathered are allocated to appropriate categories for capturing and analysis (Aaker et al., 2011:382).

The questionnaire was pre-coded for the closed-ended questions and post-coding done for the responses to the open-ended questions. This task was managed and controlled by Greenfields who collected, edited, controlled, and captured the data. Further post-coding was done by a statistician and the researcher to facilitate additional analysis where required (specifically for questions 18, 30, and 32).

#### 7.3.9.3 Capturing data

This part of the process entails the capturing of the answers from the questionnaires into a computer so that it can be viewed and analysed (McDaniel & Gates, 2013:444). It is a task that needs to be handled carefully with strict controls as it is a tedious job and insufficient attention to the task can result in errors being made (Bradley, 2010:315). Once the data has been captured it needs to be checked. Tustin et al. (2005:471) highlight three checks that should be completed; wild-code checks, consistency checks, and extreme-case checks. Saunders et al. (2012:486) also highlight the need to look for illogical relationships between the captured data and that all filter question flows have been adhered to. In the case of this study for example, this would mean that if a respondent was travelling on a LCC on the day of the interview, then there should be no responses to questions 29 or 30 attributed to that respondent as those questions were for FSC respondents only.

In terms of this study, responses were recorded on a printed questionnaire by the interviewer. The questionnaire was however loaded onto its own server by Greenfields who used this server to capture the individual questionnaires. After the editing process had taken place the individual questionnaires were captured onto the online questionnaire. The Greenfields system supports Auto-Host and the captured surveys were automatically uploaded to the web server. Strict control was maintained over the data capturing to ensure that the captured data mirrored the data on the individual questionnaires. The data was then stored in a database ready for analysis and information extraction. All data was made available on an excel spreadsheet which made it easy to view the data and to perform the various descriptive and inferential analyses required for the project.

In terms of the checks run on the captured data (extreme-case checks in this case), specific attention was given to the responses to questions 7 (distance travelled to the airport – *see* section 8.2.3.1) and 36 (the price paid by the respondent for the ticket – see section 8.2.5.4). A number of outliers were observed in response to questions 7 and 36. Outliers are, "observations so different in magnitude from the rest of the observations that the analysist chooses to treat them as a special case" (Brown & Suter, 2014:149). In the case of question 36, for some respondents the price of the ticket was part of a connecting ticket to an international destination, which thus inflated the overall fare paid for the ticket. Hair, Black, Babin, Anderson, and Tatham (2006:73) classify this type of outlier as an outlier arising as the result of an extraordinary event. They state that if the outlier does not fit the objectives of the study then it should be deleted. In this case, it was impossible to distinguish between the domestic and international component of the fare. As this study only focusses on domestic travel within South Africa these outliers were removed from the relevant results to avoid skewing the data and presenting an inaccurate picture.

#### 7.3.9.4 Tabulation and analysis

Data that has been edited and captured into a database can then be tabulated and analysed. The tabulations that could be utilised include basic frequency tables and cross tabulations with some data being graphically represented in the form of line charts, pie charts and bar charts where appropriate (McGivern, 2013:457–462; McDaniel & Gates, 2013:446–452).

After capturing the data from the questionnaires, it was processed by the Greenfields statistician and a basic analysis performed to generate a number of tabulations on the characteristics of the sample and their responses. Further in-depth analysis was done with the assistance of a statistician who assisted with the inferential analysis in terms of the feasibility of proposed tests and insights into additional tests that could be explored.  A detailed discussion of the data analysis is addressed in chapter 8.

As identified in section 1.6.3.4 of the study, the packages used to analyse the data include Microsoft Excel and SPSS (versions 23 and 24).  These packages were used to conduct statistical analyses and significance testing on the data required to address the research objectives established for the study.

Analysis of the data is a task that requires that the researcher understands what the objectives of the project are and then is able to select the appropriate analysis techniques.  In determining the most appropriate techniques to utilise Feinberg et al. (2013:392) suggest that the researcher needs to consider the following:

- The number of variables to be analysed together.  That is, univariate analysis, bivariate analysis, or multivariate analysis.
- Is the data going to be described or is it going to be used to make inferences?
- The level of measurement available in the variable or variables of interest.  That is, nominal, ordinal, interval, or ratio scale numbers.

In approaching analysis, Saunders et al. (2012:487) advocate the approach of firstly performing an exploratory data analysis to fully explore the data that has been collected in order to gain greater insight into the methods that should be used in the detailed analysis of the data.

In terms of this study, the discussion of the results will be based around descriptive analysis and inferential analysis.  The key distinction between the two is that descriptive statistics focus on describing the sample whilst inferential statistics seek to make inferences about the population of interest from which the sample was selected (Feinberg et al., 2013:393).

***Descriptive statistics***

As described previously, the objective of descriptive analysis is to summarise the characteristics of a large set of data that has been collected from the sample elements (Feinberg et al., 2013:396).  These descriptive statistics allow the researcher to describe the data and then compare different variables with each other in order to identify meaningful information.  A variety of descriptive statistical techniques can be identified for use by the researcher.  These can be sub-divided in a number of distinct categories: frequency distributions and percentages, measures of central tendency (mean, median, and mode), measures of shape (kurtosis and skewness), and measures of dispersion (standard deviation, variance, and range) (Tustin et al., 2005:523; Saunders et al., 2012:488–508; McGivern, 2013:462–464; McDaniel & Gates, 2013:457–460).

For the purposes of analysis, this study uses a number of these techniques in order to gain the required information to address the research objectives. The descriptive analysis utilises the following methods:

- **Frequency distributions.** These are used to present the data relating to individual variables as well as for comparing variables.
  - ⇒ For individual variables, this is done using tables (one-way frequency tables) showing (i) a summary of the frequency of occurrence of responses and highlighting the highest and lowest values, (ii) proportions, and (iii) the distribution of values. These are presented in terms of absolute values and percentages (relative frequencies) where appropriate.
  - ⇒ For comparing variables, use will be made of cross-tabulations. Cross-tabulations are used to examine the responses of one question to the responses of another (Aaker et al., 2011:389). In these tables a look is taken at how the dependant variable differs across the various identified sub-groups. The outputs of these cross-tabulations are used as inputs into the inferential analysis. Cross tabulations will be used to highlight the difference between the high and low values and provide a basis for the comparison of proportions. In addition to this, cross-tabulations will be used to compare totals and the distribution of values.

- **Measures of central tendency.** Statistics given regarding the measure of central tendency focus on identifying where the largest portion of the data are located, that is, an illustration of the typical or average values of the collected data (Feinberg et al., 2013:396). In terms of this study, all three measures of central tendency, namely mean, median, and mode, are utilised to a larger or lesser extent (dependant on the variable being considered).

- **Measures of dispersion.** Whereas measures of central tendency focus on the average values of the collected data, the measures of dispersion focus on establishing how spread out the data is around the mean (Saunders et al., 2012:506). In the analysis in this study, the measures of dispersion utilised are range, variance, and standard deviation, which are utilised to provide insights into the sample in pursuit of the set objectives.

***Inferential statistics***

Inferential statistics go beyond descriptive statistics in that they make use of sample information and probability theory to draw conclusions about the population from which a specific sample was selected (Berndt & Petzer, 2011:247). The focus of inferential statistics is on the statistical testing of observed relationships and differences to identify whether the results are statistically significant. Statistical significance refers to establishing whether the differences observed are big enough to have arisen for reasons other than sampling error or chance. For the purposes of this study, significance testing is done based on the identification of a number of hypotheses which are then tested to establish whether or not the information obtained from the sample is a likely match to the hypotheses about the population. The purpose of hypotheses testing, as described by Aaker et al. (2011:401), is to "make judgements about the difference between two sample statistics or the sample statistic and a hypothesised population parameter". For the purposes of this study, a significance level of 5% has been selected. The *p*-value (probability value) was used in deciding whether the sample data was sufficient for the null hypothesis to be rejected. Therefore *p*-values lower than .05 indicate that there is a statistically significant relationship and the null hypothesis will be rejected. For *p*-values higher than .05 it is accepted that there is not a statistically significant relationship and thus the null hypothesis will be accepted. In some cases, where deemed appropriate, a significance level of 10% was accepted and the analysis discussed as relevant.

As with the selection of the descriptive techniques, the selection of the most appropriate inferential statistical tests depends on the scale level of the data in question (Feinberg et al., 2013:404). This refers to data that is measured on a nominal, ordinal, interval, or ratio scale. These statistical significance tests can be divided into parametric statistics (numerical data on an interval scale and ratio scale) and non-parametric statistics (data not normally distributed and on a nominal or ordinal scale) (Churchill & Iacobacci, 2002:978; Cooper & Schindler, 2011:464). The following statistical significance tests were utilised in chapter 8, the data analysis chapter:

- **Chi square test**

This test is often referred to as a 'goodness of fit' test and tests whether the observed distribution of a variable matches the expected distribution of a variable (McDaniel & Gates, 2010:532). The test is associated with nominal data and is applied to univariate and bivariate analysis of cross-tabulated data. Whilst these tests are identified for nominal data they can also be used for interval or ordinal data if they are firstly grouped into categories (Feinberg et al., 2013:427).

In the context of this study, the Pearson chi-square test for independence is the test that is used to examine the existence of a statistically significant relationship between two nominal variables. In some instances, small cell sizes can result in invalid Pearson chi-square values if more than 20% of the cells have expected counts of less than 5 for the cross tabulations. In these cases, for 2 X 2 tables, the Fischer exact test values were used in determining statistical significance. Cramer V was used for tables larger than 2 x 2. Cramer V is a measure of strength of association between two nominal variables (McGivern, 2013:484).

- ***t*-test (two groups)**

*t*-tests and *z*-tests are used to test hypotheses about a single mean. They are applied in instances where interval data is being used. Generally, the *z*-test is applied where the sample size is large enough (>30). When dealing with a smaller sample size (<30) the *t*-test is recommended. However, it has been seen that $t$-tests are also appropriate for samples greater than 30 and as a result the majority of the statistical computer programmes perform the $t$-test as opposed to the $z$-test (McDaniel & Gates, 2010:541). A distinction is made between the independent $t$-test and the paired $t$-test. In this study, independent $t$-tests are conducted which focus on establishing whether there is a statistically significant difference between the means of two groups (Hair et al., 2006:388). The $t$-test assumes that the variability of each group is approximately equal. If that assumption isn't met, then a special form of the $t$-test should be used. Levene's Test for Equality of Variances was used to test the equality of variances. This test tells us whether an assumption of the $t$-test has been met. The result of the Levene's test informs the researcher on which $t$-test result to use (equal variances assumed or equal variances not assumed) (Grover & Vriens, 2006:213). Statistical significance is indicated by a large $t$-statistic and a low $p$-value (less than .05) which indicates that the difference between the two groups is likely not due to chance (Saunders et al., 2013:517).

- **ANOVA (for three or more groups)**

ANOVA is used when the differences between the means of two or more independent samples are being tested for statistical significance (Hair et al., 2006:384; Sarstedt & Mooi, 2014:166). Saunders et al. (2012:520) explain that ANOVA is an 'analysis of variance' technique that analyses the variances within and between groups of data through a comparison of their means. For this study use is made of the one-way analysis where an attempt is made to determine whether the differences between the means is due to chance or a factor other than chance. This method can be used to gain insights into the effects of an independent variable on the dependant variable. The outcome of the ANOVA is an $F$-ratio, which is used to establish whether there is a statistically significant difference between the identified groups (Boslaugh & Watters, 2008:232). In the case of this study, the $F$-ratio is tested for statistical significance to produce a $p$-value, with values less than .05 indicating statistical significance.

The ANOVA tests show that statistically significant differences exist between at least two groups. In order to determine which specific groups differ from each other with regard to the statistically significant findings of the ANOVA, post hoc tests are conducted where appropriate. The Scheffe multiple comparison test (generally used in conjunction with an ANOVA) was used as it compares all the various combinations instead of just two means at a time. The Scheffe multiple comparison test is only conducted if a statistically significant result is obtained from the ANOVA analysis (Boslaugh & Watters, 2008:238).

- **Independent samples Mann-Whitney U test**

Rank sum and mean rank are the main descriptive statistics used when analysing ordinal data (Boslaugh & Watters, 2008:209). The Mann-Whitney U test is defined as, "a statistical test that is used to determine the probability that the values of an ordinal data variable for two independent samples or groups are different" (Saunders et al., 2012:674). This test is the nonparametric equivalent of the *t*-test for independent groups without the *t*-test's limiting assumptions and uses the median as the measure of central tendency (Tustin et al., 2005:624; Saunders et al., 2012:520). For the analysis in this study, the independent samples Mann-Whitney U test was used to test if there is a statistically significant difference between the categories of ordinal variables with regard to their medians per choice criteria.

- **Kruskal-Wallis test**

The comparison of an ordinal variable across three or more independent groups entails the use of the Kruskal-Wallis test. The Kruskal-Wallis test is considered the nonparametric alternative to the one-way analysis of variance (ANOVA) and is used to compare the medians of three or more independent samples (Boslaugh & Watters, 2008:214; Cooper & Schindler, 2011:484). The Kruskal-Wallis test shows whether statistically significant differences exist between at least two of the groups tested but does not specify between which groups (Laerd Statistics, 2015a). For the analysis in this study, the testing focuses on establishing whether there are any statistically significant differences between the identified categories of ordinal variables in terms of their medians per individual choice criteria.

- **Binary logistic regression**

The main goal of regression analysis is to gain an understanding of the variability of variables so that models can be developed showing the appropriate combination of independent variables to explain or achieve a desired outcome (dependant variable). Independent variables can also be referred to as predictors, inputs or causes and are used to explain the dependant variables (Feinberg et al., 2013:8).

Binary logistic regression analysis, as defined in McDaniel and Gates (2013:543), is a variation of multiple regression "designed to create a probabilistic assessment of a binary choice, comparing predicted and observed events". Logistic regression (binary and multinomial) is used in cases where the independent variables are categorical or a mix of continuous and categorical, and the dependant variable is categorical. It establishes the effect of multiple independent variables used simultaneously to predict whether an item belongs to one group or the other. The method relies on the calculation of probabilities to estimate the probability *(p)* that a dependant variable lies in an identified category. In binary logistic regression, there are only two possible outcomes; the categorical variable belongs to one group or the other.

Logistic regression was used to predict the odds that a passenger will select a LCC, as opposed to a FSC. This was based on a combination of a number of independent variables identified as being potentially important predictors of selecting an airline. The dependent variable was recoded as 1 = 'fly on a LCC' and 0 = 'not flying on a LCC'. Overall significance was tested using chi-square tests to establish whether the new model (with independent variables added) was an improvement on the base model. The Hosmer

& Lemeshow test of the 'goodness of fit' was used to test whether the model is adequate. Where the test statistic was $p > .05$, the null hypothesis was not rejected and it was accepted that the proposed regression model is an adequate fit to the data. When considering the contribution of the individual predictors to the model, the Wald test was used to test for statistical significance; with 'significance' indicating that the variable in question adds to the model in terms of its prediction with regard to the dependent variable (Sarstedt & Mooi, 2014:212). From the analysis of the individual variables, consideration was given to the odds ratio of the predictors (Exp(B) column in the 'variables in equation' output table) and the effect that one additional unit of a specific independent variable has on the probability of an event occurring. An odds ratio greater than 1 shows an increase in the odds of the outcome occurring. Where the odds ratio is less than 1, then the odds of the outcome occurring are reduced (Tustin et al., 2005:661).

- **Factor analysis**

A factor analysis is a technique used to reduce a large number of variables down to a much smaller set of factors based on the identification of the underlying patterns in the data (McGivern, 2013:495; Sarstedt & Mooi, 2014:236). The factors identified in the factor analysis are more specifically defined as "a weighted summary score of a set of related variables" (McDaniel & Gates, 2010:561). Factor analysis is an extremely powerful technique in statistical analysis and has application in the context of data reduction, structure identification, scaling, and data transformation (Feinberg et al., 2013:480 & 484). In the context of this study, in order to facilitate the testing of the differences between respondent perceptions of the features and services offered by the two models, the service related questions (Q19–23 and Q24–28) were subjected to an exploratory factor analysis to determine if any clear constructs emerge. The explorative factor analysis was conducted for the relevant set of questions using principal component extraction and varimax rotation. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and the Bartlett's Test of Sphericity, both indicated that a factor analysis was appropriate. To ensure that the groups of questions formed a valid construct, the Cronbach Alpha coefficient was calculated. This is a measure of internal consistency. Values above 0.7 are generally considered as indicating that the set of items is internally consistent and thus reliable (Saunders et. al, 2012:668). From the factor analysis two service scores were created – fullserv and lowcostserv.

### 7.3.10 Report the research findings

The focus at this stage in the research process is the reporting of the findings of the analysis, the highlighting of key aspects, and the drawing of conclusions. Chapter 8 presents a discussion on the findings of the study with the conclusions being summarised in chapter 9.

## 7.4 ETHICAL APPROACH TO RESEARCH

"Ethics refer to the moral principles or values that generally govern the conduct of an individual or group" (Aaker et al., 2011:21). At the broadest level, the ESOMAR international code on market and social research (ESOMAR World Research, 2015:5) highlights that "market research should be legal, honest, truthful, and objective and carried out in accordance with appropriate scientific principles". On a more focussed level, Saunders et al. (2012:226) state that ethics refers to the standards of behaviour that should guide the researcher's conduct in relation to the rights of all parties that are involved with or affected by the research. Conducting research in an ethical manner is an essential component of any research project. The impact of the ethical approach to research is not only relevant to this particular project but can have an effect on research conducted by other researchers. An example in this regard is where respondents that are treated unfairly and unethically in one interview scenario might be more negatively disposed towards participating in future research interviews by other researchers. On an immediate level, an unethical approach to the research and respondents will lead to respondents being unwilling to participate in the research and thus ultimately affect the quality of the collected data and sample representativeness. Feinberg et al. (2013:26) state explicitly that the ethical dimension must be considered over and above the need to gather information and the desired research design.

Two principles in particular are of great importance in research; transparency and consent (Bradley, 2010:13). These principles have been applied throughout this project. McDaniel and Gates (2013:36) identify confidentiality and honesty as the most important aspects in the approach to conducting research. Engrained in all these principles are the respondent's right to privacy that needs to be respected throughout. It is also essential to ensure that the respondent is not harmed in any way during the interviews process. This includes physically, financially, or psychologically. The way in which respondents should be treated can be summed up in the form of five rights for respondents (Aaker et al., 2011:25):

- The right to privacy
- The right to safety
- The right to the research results
- The right to decide which questions to answer
- The right to know the true purpose of the research

Another aspect to be considered in regard to research ethics is the need to avoid subjectivity, particularly in the case where samples, statistics, and research designs are manipulated in order to achieve pre-determined or idealised outcomes for the research.

From the above paragraphs, it is clear that research ethics applies to all stages of the research process and not just in terms of the treatment of the respondents. The key ethical principles to be adhered to are summed up by Saunders et al. (2012:231) and are shown in table 7.7.

**Table 7.7: Ethical principles to be followed in research process**

| Ethical principles in research process |
| --- |
| • Maintain integrity and objectivity of the researcher<br>• Show respect for others<br>• Avoidance of harm to any parties<br>• Ensure privacy of participants<br>• Voluntary nature of participation and the right of the respondent to withdraw<br>• Informed consent from the participants<br>• Ensuring that data obtained is held in confidence and the anonymity of respondents is maintained<br>• Taking responsibility for the accurate analysis of data and the reporting thereof<br>• Ensure compliance in the management of data<br>• Taking measures to ensure the safety of the researcher/interviewer |

**Source:** Saunders et al. (2012:231).

Every effort was made to ensure that the entire project was conducted in an ethical manner. Measures taken in this regard include the following:

- Permission was obtained from ACSA to conduct the interviews at the two airports.
- Permission was obtained from Dr. F O'Connell pertaining to the use (in part) of his approach to the research – specifically relating to the questionnaire.
- Interviewers were trained on how to approach the potential respondents and the correct behaviours to show towards them in conducting the interview and then concluding the interview. Interviewers were also trained on how to react in situations where a person declines to participate.
- Respondents were informed of the nature of the research being conducted and informed on the approximate length of time that the interview would take to complete. They were also informed that they were free to terminate the interview should they not be willing to complete it and that if they were uncomfortable with any questions they were free not to answer.
- Respondent identity was kept anonymous and private. The answers given by the respondents are used for the purposes of this research project only and no details are shared with any other parties for any reason whatsoever. Whilst the data is maintained in a database, there is no link between the respondent and his/her responses. The database has not and will not be shared with any parties beyond the researcher and data analyst.
- At no point in the interview process were the respondents harmed (physically, financially, or psychologically).
- Whilst respondents were guided through the interview, there was no undue influence placed on them to answer in a specific manner or any attempt to change their opinions.

- Data analysis was conducted at the highest level of professionalism in accordance with accepted research principles.  Data was interpreted as recorded with no manipulations or favourable data added to achieve any pre-conceived ideals.
- The reporting of the findings was done as thoroughly as possible in a manner that accurately reflects the data captured from the respondents.

Overall it is believed that this project has been conducted in accordance with the highest ethical standards at all stages of the research process.

**7.5 SUMMARY**

This chapter described the research methodology followed for this research project.  An overview was given of the research process followed and then each step was addressed in detail.  The research problem and objectives were restated from chapter one to provide context for the chapter.  In the discussion of the research design it was stated that the nature of this project focussed on the collection of primary data and is quantitative in nature.  The type of research selected is descriptive research.  Attention was also given to describing the approach to secondary data analysis and the main sources consulted.

The chapter then focussed on the description of the chosen method to collect the primary data.  In this case, the chosen method was an interviewer-administered questionnaire with the data to be collected at ORTIA and CTIA.  A discussion was given on how the questionnaire was developed and the range of questions that are contained in the questionnaire.  Specific attention was given to clarifying the purpose of the specific questions and linking the questions in the questionnaire to specific research objectives. This was followed by a section on the sampling plan for the project.  It was identified that due to the nature of the research that there is no specifically defined sample frame available for use.  This necessitated that a non-probability sampling approach be followed with an inter-locking quota sampling plan being developed.  The selected sample size was set at 700 interviews with 400 at ORTIA and 300 at CTIA.  The discussion then moved to the procedures involved with training fieldworkers and the actual collection of the data.  The discussion of the final stages of the research process focussed on the processing of the collected data and its analysis.  Attention in this case was given to the methods used in the descriptive and inferential analysis of the collected data.

The final section of the chapter described the need for an ethical approach to the research and the ethical principles to be adhered to throughout the entire process.  A list was given of the actions taken in this project to ensure that the ethical principles and standards were met.

The next chapter, chapter 8, focuses on the analysis of the collected data with the key results of the descriptive and inferential analyses being discussed.

# CHAPTER 8

# ANALYSIS OF SURVEY FINDINGS

> *Most executives, many scientists, and almost all business school graduates believe that if you analyse data, this will give you new ideas. Unfortunately, this belief is totally wrong. The mind can only see what it is prepared to see.*
>
> *- Edward de Bono*

The previous chapter focussed on establishing the methodological approach followed in the conducting of this research project. Particular points that were highlighted include the fact that the focus of the research is the collection of primary data that is quantitative in nature. The type of research to be used is descriptive research with the main objective seeking to conduct a business analysis of the domestic commercial air transport industry to gain insights into the business environment and the passengers that fly on the South African LCCs and FSCs.

## 8.1 INTRODUCTION

This chapter flows from the research process discussed in the previous chapter by focussing on the analysis of the data collected from the respondents in the study. Using the identified analyses, insights are gained into the collected data, which address the objectives established for the study. De Bono's quote at the top of the page serves as a strong reminder of the need to remain objective and open-minded during the data analysis process. The first part of the chapter focuses on the presentation of the descriptive data obtained from the questionnaire. This will be presented roughly according to the flow of the questionnaire and the themes identified in table 7.4 of the methodology chapter. After this, the data is further analysed with the use of a number of cross-tabulations and statistical techniques to test for significant associations and significant differences between specific variables. Figures and tables will be used to represent key data from a number of perspectives.

## 8.2 DESCRIPTIVE FINDINGS OF THE SURVEY

Table 7.4 divided the questionnaire into ten sections according to the type of data that was being gathered by those specific questions. For the purposes of analysis, the last section identified in table 7.4 (questions 39 and 40 relating to respondent age and gender) are addressed at the beginning with the screening and classification questions. The reason for this relates to the segmentation potential that age and gender have to analyse the domestic market. Data related to age and gender provides many insights into passenger behaviours and passenger perceptions of the two business models. This forms the basis of many cross tabulations and inferential analysis in this chapter. Questions that dealt with the respondent's booking process (questions 34–38) are addressed after the classification questions in order to establish a clear picture of the respondents and their pre-travel behaviours. This includes the presentation of the findings relating to question 17, which identifies the respondents' main reasons for choosing the airline on which they are flying. After this, the focus of attention moves on to the respondents' perceptions and understanding of the low-cost carrier model (LCC) and the full-service carrier (FSC) model. Finally, the analysis considers respondent pricing sensitivities in response to proposed price increases or decreases by the two models.

An important issue to be noted at this point is the way in which parts of the discussion of the analysis is presented. When engaging in marketing and developing a business strategy, the airlines (either a LCC or a FSC) need to understand themselves and their competitors in terms of their specific product form, product category, and the general market environment. Thus, when conducting an analysis of themselves and their competitors, airlines need to consider the airline within the four levels of competition to gain a complete understanding of their position in the competitive environment. These levels are described in various ways by various authors (including West, Ford, & Ibrahim, 2010:78–79; Pride & Ferrell, 2010:66; Mooradian, Matzler, & Ring, 2012:64–66), but they all boil down to the same basic descriptions; product form competition, product category competition, generic competition, and budget competition. In the context of this study, LCCs and FSCs are two different product forms and can thus be analysed separately. At the product form level, LCCs compete with other LCCs, and FSCs compete with other FSCs. The product category level is where all airlines are analysed together, that is, FSCs and LCCs analysed together to understand the competition within the air transport industry. Competition at the other two levels (generic and budget) falls beyond the scope of this study. In terms of the analysis given in this chapter, where appropriate, analysis is given between the two models (product category analysis) where the two models are directly compared to each other, and then within the individual models (product form analysis) where the two models are analysed in isolation from each other with the focus only on the characteristics within the particular model.

To be noted is that in some cases the figures in the tables and graphs add up to 99.9% or 100.1%. This is due to automatic rounding done in the statistical analysis programmes when showing figures at a single decimal point instead of three decimal points.

### 8.2.1 General respondent classification

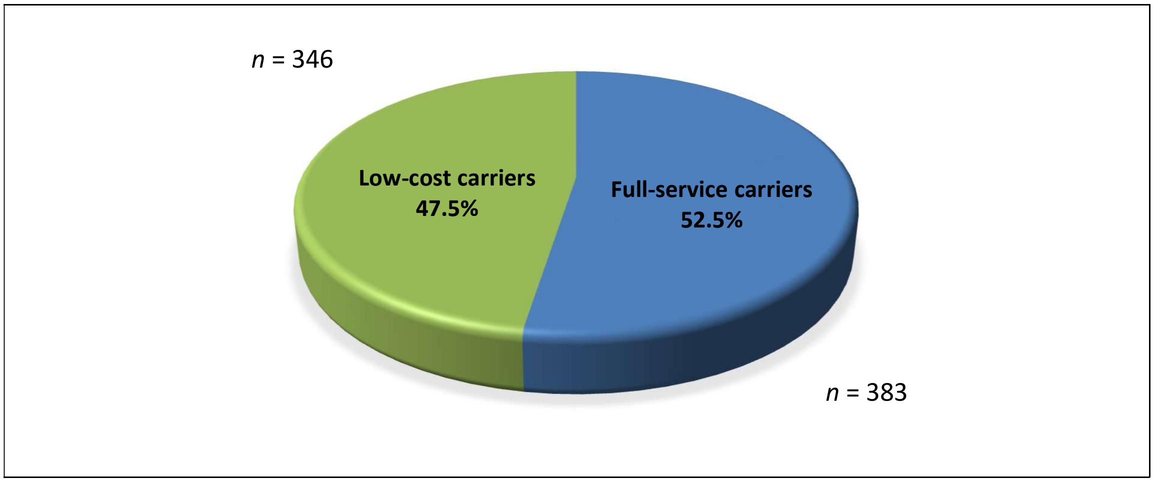
This section focuses on presenting the data gathered from questions 1, 39, and 40 in the questionnaire. Question 1 focussed on identifying the airline being flown by the respondent on the day of the interview and thus, by implication, the airline model being flown. This question served as a screening question to determine whether the potential respondent was flying on any of the airlines/airline models that formed part of the study. Interviews were immediately terminated if a potential respondent was travelling on an airline that fell outside the scope of the study. It must be noted that whilst question 1 asked respondents to identify the specific airline they were travelling on; the analysis is given per model (in line with the objectives of the study). The decision to follow this approach was based on the premise that the respondents know the name of the airline they are travelling on but might not fully understand the concepts of a LCC or a FSC and thus might incorrectly categorise themselves as flying on a FSC when they are in fact flying on a LCC, or vice versa. The collected data per airline was then grouped according to the two models. Questions 39 and 40 established the age and gender of the respondents that were interviewed during the data collection process.

#### 8.2.1.1 Respondents per model

It was stated in section 7.3.8.2 of chapter 7 that 732 interviews were conducted at the two airports – OR Tambo International Airport and Cape Town International Airport. Of these 732 interviews, 427 interviews were conducted at ORTIA and 305 at CTIA. In the process of capturing the data, three interviews showed inconsistencies and it was not possible to link them to a particular airline model flown. They were therefore excluded from all analyses throughout the chapter, leaving $N = 729$ as the basis for all analysis.

In line with the focus of the study, figure 8.1 shows that the interviews were evenly spread between the two airline models being researched; low-cost carriers and full-service carriers. Figure 8.1 specifically shows that 52.5% ($n = 383$) of the respondents were flying on full-service carriers and 47.5% ($n = 346$) were flying on low-cost carriers. This was deemed as being a sufficient representation of each model to obtain meaningful information in order to achieve the research objectives. The spread of interviews between the models in the data collection process was in line with the sampling guidelines that were established in sections 7.3.7.3, 7.3.7.4, and 7.3.8.2 of chapter 7, which outlined the methodological approach to the study.

**Figure 8.1: Respondents per model**




#### 8.2.1.2 Gender classification of the respondents

In terms of gender, the distribution of respondents that completed the interview process showed that 63.0% were male and 37.0% were female. The analysis is based on the actual responses to the question which showed that *N* = 708. Respondents that showed inconsistencies were eliminated from the analysis. In some cases, there were respondents that opted not to have any of their personal details recorded and are thus recorded as missing values. From a gender distribution perspective, more males completed interviews than females. Two key reasons for this were firstly, a willingness to be interviewed on the day, and secondly, there were simply more male travellers than female travellers. The gender distribution of respondents is reported from two perspectives; (i) according to the model flown divided per gender and (ii) according to the distribution of the respondents within the gender groupings divided per model. Each of these presentations offers differing perspectives on the split of respondents between and within the model groupings. The data is presented in figure 8.2 and figure 8.3.

**Figure 8.2: Respondent gender distribution within model type (product form level)**

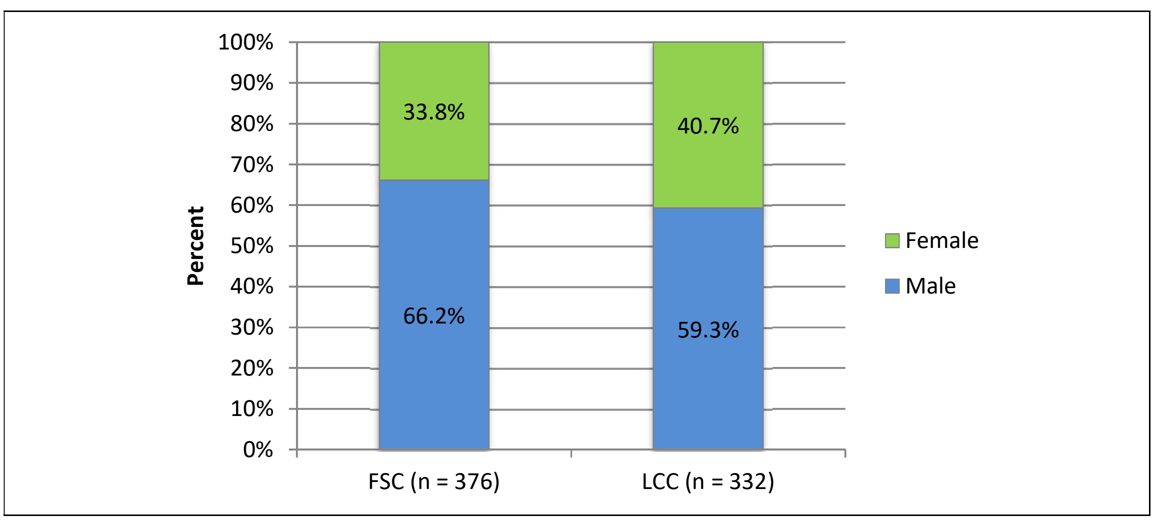


Figure 8.2 represents the distribution of the respondents from within the two models divided per gender. Of the respondents that were flying on FSCs, 66,2% were male and 33.8% were female. In terms of respondents flying on LCCs, 59.3% were male and 40.7% were female. This figure simply represents the distribution of the gender of the respondents according to those interviewed during the data collection process. First impressions from figure 8.2 seem to indicate that males tended to favour a FSC, whilst females gravitated towards the LCCs. This is explored further in figure 8.3, which highlights this point more specifically, but from a different perspective.

**Figure 8.3: Respondent distribution within each gender grouping divided according to model flown**

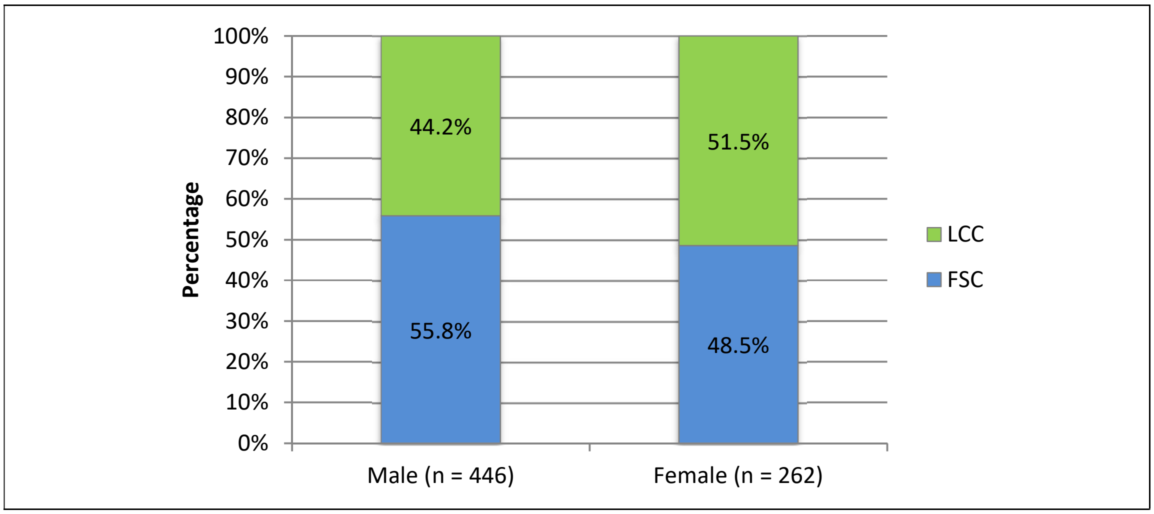



Figure 8.3 provides more insight into the behaviours and preferences of the respondents. This figure shows the distribution of respondents within their gender grouping divided according to model flown. In this case, it can be seen that 55.8% of the male respondents were flying on FSCs and the remaining 44.2% were flying on LCCs. In contrast to this, the collected data showed that 48.5% of the female respondents were flying on FSCs whilst 51.5% were flying on LCCs. From the sample drawn for this study this would seem to indicate that males tended to prefer the FSCs and females tended to prefer the LCCs. This is seen in figure 8.3, which also shows that males have a slightly stronger preference towards the FSCs than females have towards the LCCs. This statement is tested statistically in section 8.3.1.

#### 8.2.1.3 Age classification of the respondents

The questionnaire made provision for seven categories into which respondents were classified according to age. Respondents were obtained across the broad spectrum of ages with the minimum qualifying age being 16 years of age. As per the sampling plan, the age groups of 16–18, 55–64, and 65+ received lower representation in the data collection process, as they are the smaller groups with fewer potential respondents available for selection. This proved to be the case with the interviewers battling to find sufficient respondents in the 65+ category at both airports on all days when the interviews were conducted. The bulk of the respondents interviewed were in the age range of 19–54. Ten responses were marked as missing (some respondents chose not to have their age recorded) and three were eliminated for inconsistencies (as per section 8.2.1.2), resulting in $n = 719$ for the analysis in this section. The spread of respondents according to their age is given in table 8.1.

**Table 8.1: Age representation of respondents for the study (*N*= 719)**

| | 16 - 18 | 19 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65+ | TOTAL |
|---|---|---|---|---|---|---|---|---|
| **Count** | 53 | 154 | 177 | 157 | 115 | 38 | 25 | 719 |
| **Percentage** | 7.4% | 21.4% | 24.6% | 21.8% | 16.0% | 5.3% | 3.5% | 100.0% |

From table 8.1 it is seen that the majority (83.8%) of the respondents are between 19 and 54 years of age, with the 25–34 age grouping the age group with the most respondents (24.6%). The 19–24 and 35–44 categories were the second and third most represented at 21.4% and 21.8% of the valid respondents. This is in line with the bulk of the economically active and leisure travelling population.

Going beyond the basic age classification, the respondents can be broken down according to their age categories and the airline model they were flying on the day of the interview. This breakdown is represented in figure 8.4 and provides some interesting insights.

**Figure 8.4: Age classification of respondents according to airline model flown**

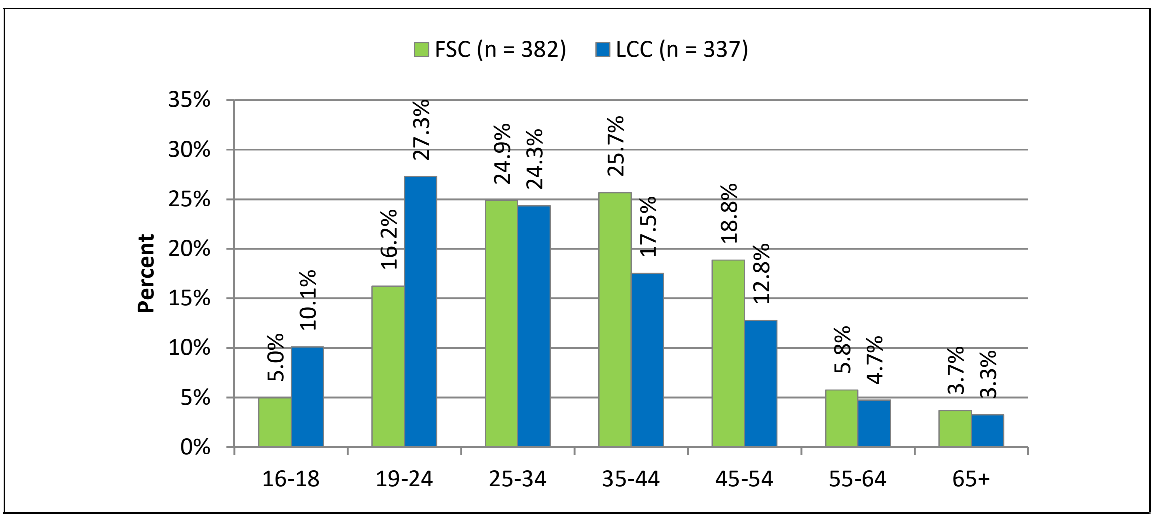



Figure 8.4 shows a distinct pattern between the choice of airline model and age group. Respondents under the age of 25 show a distinct tendency towards flying on LCCs. The mid-point is the ages 25–34 category, where the selection between each model is roughly the same. From this point onwards the preference switches, with respondents over the age of 34 showing a distinct tendency towards the FSCs. The gap between the models narrows at the ages above 55.

A closer look at this distribution of the age groups between the models shows the extent of this tendency towards a particular model. The extent of this tendency identified in the previous paragraph is highlighted by combining the figures for the 16–18 and 19–24 categories and then the 35–44 and 45–54 categories. The calculations are shown in table 8.2. From the combination of the 16–18 and 19–24 categories it is calculated that 60.9% selected LCCs and 39.1% selected FSCs. Similarly, the combination of the 35–44 and 45–55 categories showed that 62.5% of respondents in this grouping selected a FSC whilst only 37.5% selected a LCC. These figures indicate a distinct preference for LCCs by the younger respondents and a preference for FSCs by the older respondents. The statistical significance of the association between age group and model flown is tested in section 8.3.1.

**Table 8.2: Combined age groups showing respondent model preference**

| | Original data - separate | | Combined categories (n) | | Combined categories (%) | |
|---|---|---|---|---|---|---|
| | **FSC** | **LCC** | **FSC** | **LCC** | **FSC** | **LCC** |
| 16-18 | 19 | 34 | 81 | 126 | 39,1% | 60,9% |
| 19-24 | 62 | 92 | | | | |
| 25-34 | 95 | 82 | | | | |
| 35-44 | 98 | 59 | 170 | 102 | 62,5% | 37,5% |
| 45-54 | 72 | 43 | | | | |
| 55-64 | 22 | 16 | | | | |
| 65+ | 14 | 11 | | | | |
| **Total** | **382** | **337** | | | | |

Further analysis of this issue is given in section 8.2.4, where it is highlighted that 86.2% of the under 25 age group were travelling for non-business purposes.

#### 8.2.1.4 Cross-tabulation of gender and age groupings per model

A cross-tabulation of age categories and gender seeks to explore whether there are any specific patterns that emerge that indicate a possible relationship between each of these variables and the model of airline that respondents flew. The cross-tabulation is represented in table 8.3. The table clearly shows the same general tendencies identified in sections 8.2.1.2 and 8.2.1.3, which addressed gender and age respectively. These sections specifically highlighted that male respondents gravitated towards the FSCs, whilst female respondents marginally gravitated towards the LCCs. It was also highlighted that the younger age groups tended towards the LCCs and the older groups towards the FSCs.

Interestingly, from table 8.3 an idea can be obtained of the differences in the strength of the tendencies of each gender and age category between the two models. From the male perspective, whilst the younger age categories (16–18 & 19–24) show that more respondents selected a LCC over a FSC, percentagewise it was not an overwhelmingly dominant preference, at 60.0% and 55.3% respectively for each group. For the rest of the age categories, males showed a strong preference (mostly over 60%) towards the FSC model, with the exception of the 55–64 category where the split was 50/50. In terms of females, both of the younger categories showed a dominant and distinct preference towards the LCCs at 75.0% and 69.0% of the female respondents in those age categories.

**Table 8.3: Cross tabulation of age categories and gender per model**

| | | | | Type carrier | | |
|---|---|---|---|---|---|---|
| | | | | FSC | LCC | Total |
| Male | Age group | 16 - 18 | Count | 12 | 18 | 30 |
| | | | % within age group | 40.0% | 60.0% | 100.0% |
| | | | % within type carrier | 4.8% | 9.3% | 6.8% |
| | | 19 - 24 | Count | 42 | 52 | 94 |
| | | | % within age group | 44.7% | 55.3% | 100.0% |
| | | | % within type carrier | 16.9% | 26.9% | 21.3% |
| | | 25 - 34 | Count | 62 | 46 | 108 |
| | | | % within age group | 57.4% | 42.6% | 100.0% |
| | | | % within type carrier | 25.0% | 23.8% | 24.5% |
| | | 35 - 44 | Count | 62 | 40 | 102 |
| | | | % within age group | 60.8% | 39.2% | 100.0% |
| | | | % within type carrier | 25.0% | 20.7% | 23.1% |
| | | 45 - 54 | Count | 56 | 26 | 82 |
| | | | % within age group | 68.3% | 31.7% | 100.0% |
| | | | % within type carrier | 22.6% | 13.5% | 18.6% |
| | | 55 - 64 | Count | 8 | 8 | 16 |
| | | | % within age group | 50.0% | 50.0% | 100.0% |
| | | | % within type carrier | 3.2% | 4.1% | 3.6% |
| | | 65+ | Count | 6 | 3 | 9 |
| | | | % within age group | 66.7% | 33.3% | 100.0% |
| | | | % within type carrier | 2.4% | 1.6% | 2.0% |
| | | Total | Count | **248** | **193** | **441** |
| | | | % within age group | **56.2%** | **43.8%** | **100.0%** |
| | | | % within type carrier | **100.0%** | **100.0%** | **100.0%** |
| Female | Age group | 16 - 18 | Count | 4 | 12 | 16 |
| | | | % within age group | 25.0% | 75.0% | 100.0% |
| | | | % within type carrier | 3.1% | 9.0% | 6.1% |
| | | 19 - 24 | Count | 18 | 40 | 58 |
| | | | % within age group | 31.0% | 69.0% | 100.0% |
| | | | % within type carrier | 14.2% | 29.9% | 22.2% |
| | | 25 - 34 | Count | 32 | 33 | 65 |
| | | | % within age group | 49.2% | 50.8% | 100.0% |
| | | | % within type carrier | 25.2% | 24.6% | 24.9% |
| | | 35 - 44 | Count | 36 | 17 | 53 |
| | | | % within age group | 67.9% | 32.1% | 100.0% |
| | | | % within type carrier | 28.3% | 12.7% | 20.3% |
| | | 45 - 54 | Count | 15 | 17 | 32 |
| | | | % within age group | 46.9% | 53.1% | 100.0% |
| | | | % within type carrier | 11.8% | 12.7% | 12.3% |
| | | 55 - 64 | Count | 14 | 7 | 21 |
| | | | % within age group | 66.7% | 33.3% | 100.0% |
| | | | % within type carrier | 11.0% | 5.2% | 8.0% |
| | | 65+ | Count | 8 | 8 | 16 |
| | | | % within age group | 50.0% | 50.0% | 100.0% |
| | | | % within type carrier | 6.3% | 6.0% | 6.1% |
| | | Total | Count | **127** | **134** | **261** |
| | | | % within age group | **48.7%** | **51.3%** | **100.0%** |
| | | | % within type carrier | **100.0%** | **100.0%** | **100.0%** |

The remainder of the age categories, in terms of females, showed mixed results, with the 25–34 and 45–54 categories showing a slight preference towards the LCCs (50.8% and 53.1%), and the 35–44 and 55–64 categories showing a strong preference towards the FSCs (67.9% and 66.7%). In the broader context, the 19–24 category for females travelling on the LCCs, was the largest age category, and if that category was excluded from the results then the overall preference of females would be towards the FSCs. Male respondents thus tended to show a pattern in terms of model preference and age categories, whilst the female respondents showed an irregular preference with no discernible pattern being apparent.

A final comment on this cross tabulation relates to the gender spread of respondents per age category within each model. Within the FSC model it is seen that the bulk of the female respondents are clustered around two categories, the 19–24, and 25–34 age categories (40 and 33 respondents respectively). For the male respondents, the majority are clustered around four categories, the 19–24, 24–34, 35–44, and 45–54 categories, with the 25–34 and 35–44 categories being the largest. In the context of this study, the male respondents tended to be older and spread across a broader age spectrum and preferred the FSCs, whilst the female respondents were predominantly younger overall, with the younger females preferring LCCs and the older having no specific preference.

### 8.2.2 Flight and destination information

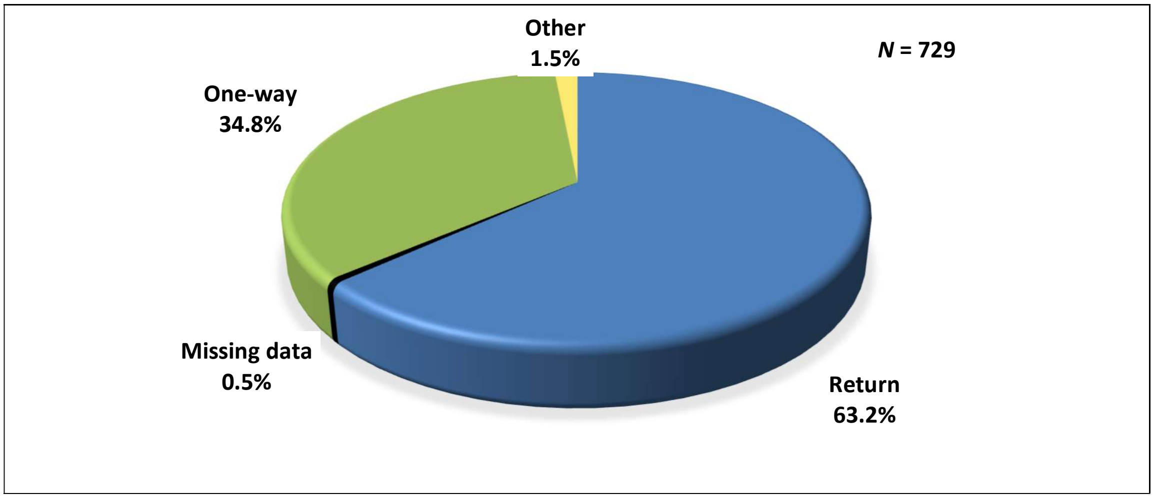
In this section, the responses to questions 2, 3, & 4 are addressed. These three questions focussed on identifying the final destination of the respondents, the sectors being travelled, and whether the flight was to a final destination or if the respondent was connecting to another airline to another destination. The findings serve to highlight the point that the research covered respondents travelling to all parts of South Africa.

#### 8.2.2.1 Nature of flight

An analysis of the overall data ($N = 729$) indicates that 63.1% of the flights undertaken on the days of the interviews were booked as return flights, whilst 34.8% were one-way tickets. Of the total interviews conducted, 11 cases of missing data (1.5%) were identified and four respondents were unable to classify themselves into either of the two categories (0.5%) due to the complex nature of their itineraries and were thus classified as ‘other’. The overall distribution of the responses is illustrated in figure 8.5.

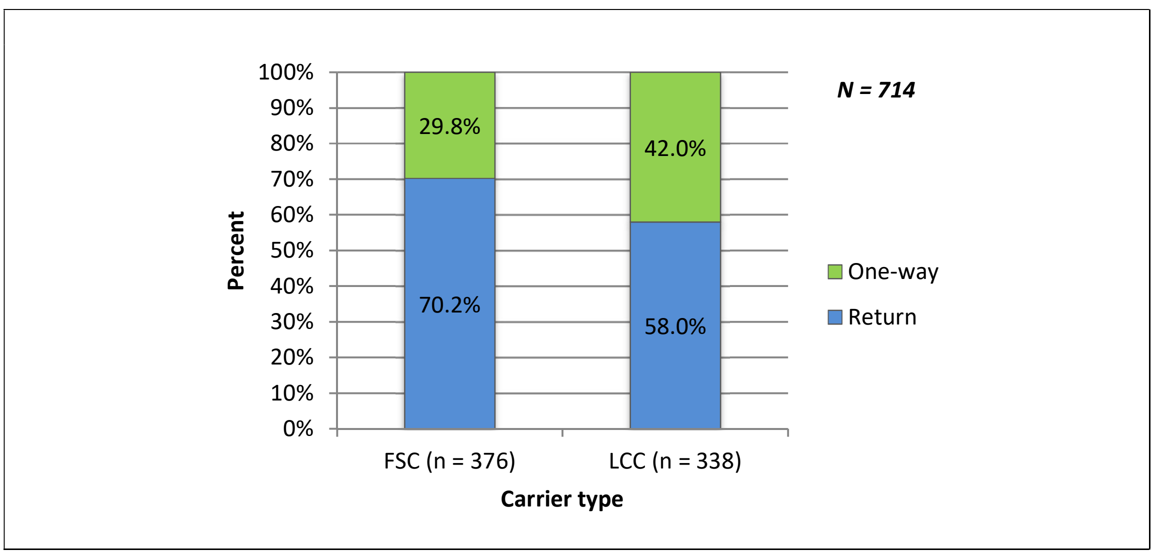
The high percentage of one-way tickets is partially explained in terms of the fact that, in the age of the internet, passengers can gather information from many sources when pricing tickets and can purchase the outward leg on airline A and the return leg on airline B. Additionally, some respondents were on the return leg of their journey and viewed this as ‘one-way’ in that they were not returning to the current departure point. The category identified as ‘other’ (0.5%) represents respondents who were on connecting flights or had complex international and domestic tickets with different airlines and were thus unsure of how to classify their journey.

**Figure 8.5: Type of ticket purchased by respondents - one-way or return**




These figures can be further divided per model to give an indication of the preference of respondents on the different models in terms of whether they purchase return tickets or one-way tickets (*N* = 714). Figure 8.6 graphically represents the findings in this regard. From this figure, there is an indication that the majority of respondents travelling on a FSC (70.2%) purchased a return ticket with their carrier, compared to the remaining 29.8% who purchased a one-way ticket. This is contrasted with respondents travelling on a LCC, which showed that 58.0% purchased return tickets, compared to 42.0% that were flying on a one-way ticket. A distinct difference can be seen between the two models in this regard. This relationship is tested statistically in section 8.3.1.

**Figure 8.6: Type of ticket purchased by respondents per model**

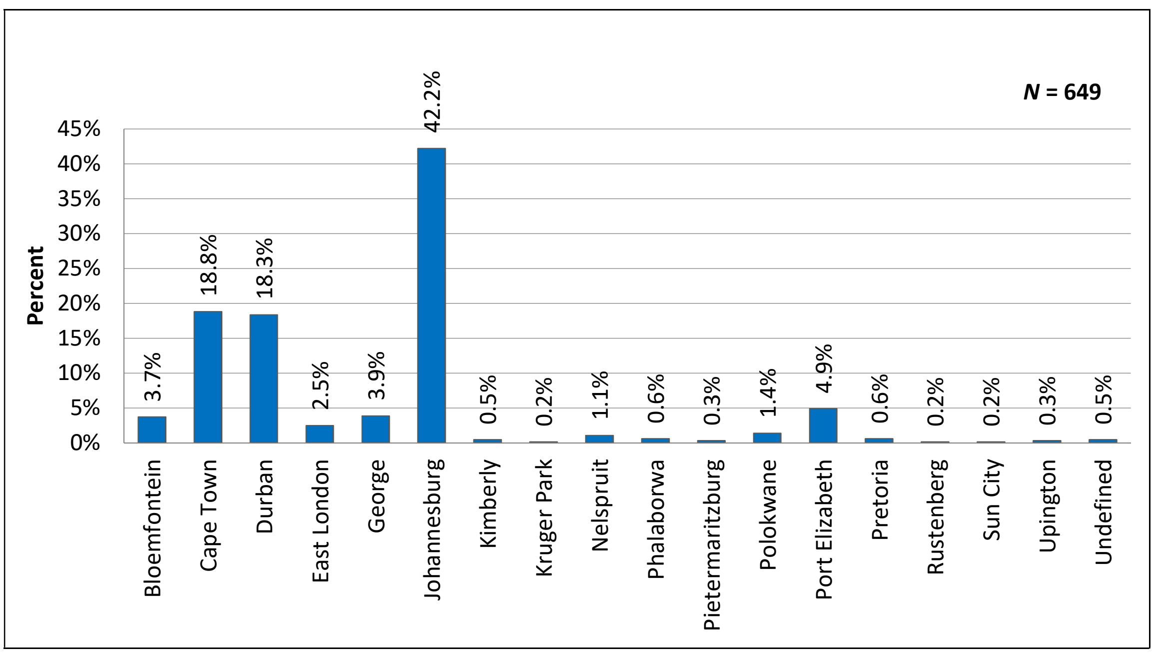


FSC respondents were predominantly travelling on return tickets, whilst LCC respondents were more evenly divided between respondents travelling on return tickets and those travelling on one-way tickets. This can potentially be attributed to LCC respondents being more price sensitive in their search for tickets and thus seeking out the cheapest ticket on each sector, even if it means travelling on two different airlines for the outbound and inbound legs of the trip. In a similar vein, respondents travelling only one sector (one-way only) might seek out the cheapest and easiest option when undertaking this type of trip. This is explored further in section 8.2.5.4, which considers the price paid for the ticket as well as the mean price paid contrasted against the model type flown.

#### 8.2.2.2 Respondent's final destination

The question regarding the 'final destination of the respondent' delivered a wide variety of domestic and international destinations. In total, the respondents identified 17 different domestic South African cities as a final destination (as shown in figure 8.7). In terms of international final destinations, 27 different countries were identified, which represented respondents that were connecting to an international flight through Cape Town, Johannesburg, or Durban. In total, 90,3% ($n$ = 649) of the respondents had a final destination within South Africa. England was the final destination of 2.2% of the respondents, with the USA (1.1%) and Germany (1.1%) being the next most frequent final international destinations.

**Figure 8.7: Final destinations within South Africa**



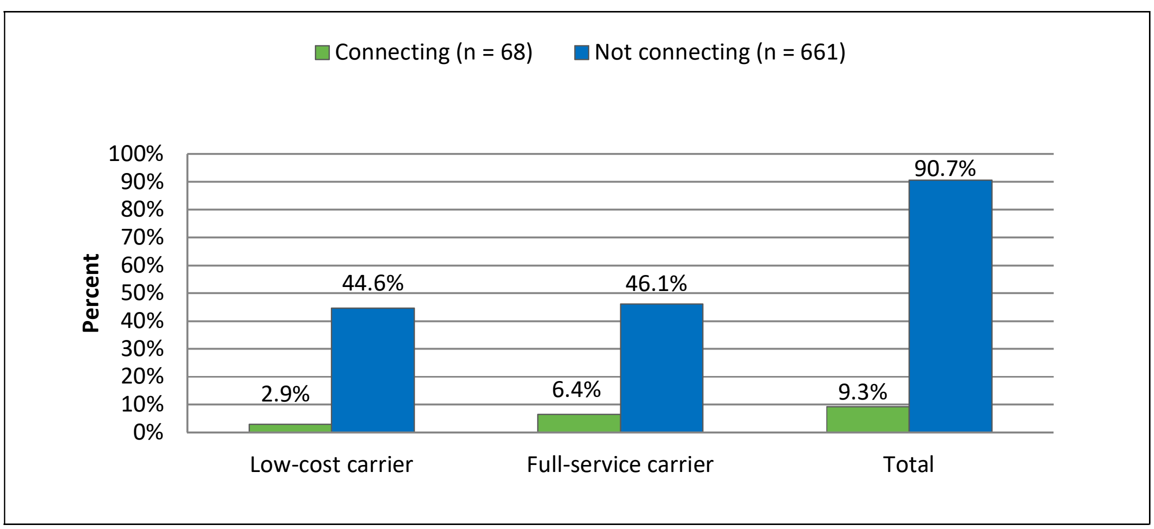

Within South Africa, the spread of final destinations for respondents covered 17 different destinations. These are highlighted in figure 8.7. The cities of the so-called 'golden triangle' (JHB, CPT, and DBN) were the most represented final destinations at 42.2%, 18.8%, and 18.3% of the respondents respectively. ORTIA in Johannesburg is the hub of air traffic into the country and handles the majority of the country's domestic and international traffic. The other key cities in South Africa, such as Bloemfontein, Port Elizabeth, and East London featured much lower as a final destination compared to the big three airports, but this is in line with the ACSA figures on passengers handled by ACSA controlled airports (see section 2.5.2 of chapter 2). Three respondents were classified as 'undefined' because of the non-specific nature of the answer they provided (e.g. South Africa or 'the winelands').

#### 8.2.2.3 Connecting traffic per model

A total of 9.3% (68) of the total respondents ($N$ = 729) were connecting to another flight after the flight at the time of interview. This figure was further broken down to distinguish between respondents travelling on LCCs and FSCs that were catching connecting flights. Figure 8.8 illustrates the percentages of respondents per model that were catching connecting flights and those that were not.

Figure 8.8 clearly highlights that of the 9.3% respondents that were catching connecting flights, 2.9% were flying on LCCs and 6.4% on FSCs. It is worth noting that the bulk of those catching a connecting flight were flying within the major alliances. In this case respondents were using domestic airlines within the alliance to catch an international airline within the alliance to the final destination. The Star Alliance was the main alliance, which is not surprising given that South African Airways is a member of this alliance, as is the German carrier, Lufthansa. The One World Alliance was also frequently identified by respondents, of which British Airways (both the SA domestic and UK international operator) is a main member.

**Figure 8.8: Connecting traffic per model**



A closer look at the make-up of those respondents catching connecting flights ($n$ = 68) shows that of the connecting traffic, 69.1% ($n$ = 47) were flying the domestic part of the trip on a FSC, whilst 30.9% ($n$ = 21) were flying on a LCC. Given the nature of the alliances, this bias towards FSCs is not surprising as the tickets are usually purchased for an entire trip (e.g. Cape Town to London), which includes the domestic and international legs of the trip on the alliance partners which all fall into the FSC category. The LCCs in South Africa are not directly part of any alliances. (Although in the case of Mango, which is the low-cost brand of SAA, there is an indirect link to the Star Alliance, as would be the case with kulula.com who are the low-cost brand of Comair, which is linked to the One World Alliance through the British Airways full-service brand). Codeshare agreements between the LCCs and larger long-haul airlines are also appearing, with the kulula.com and Air France agreement being an example.

### 8.2.3 Non-flight activities

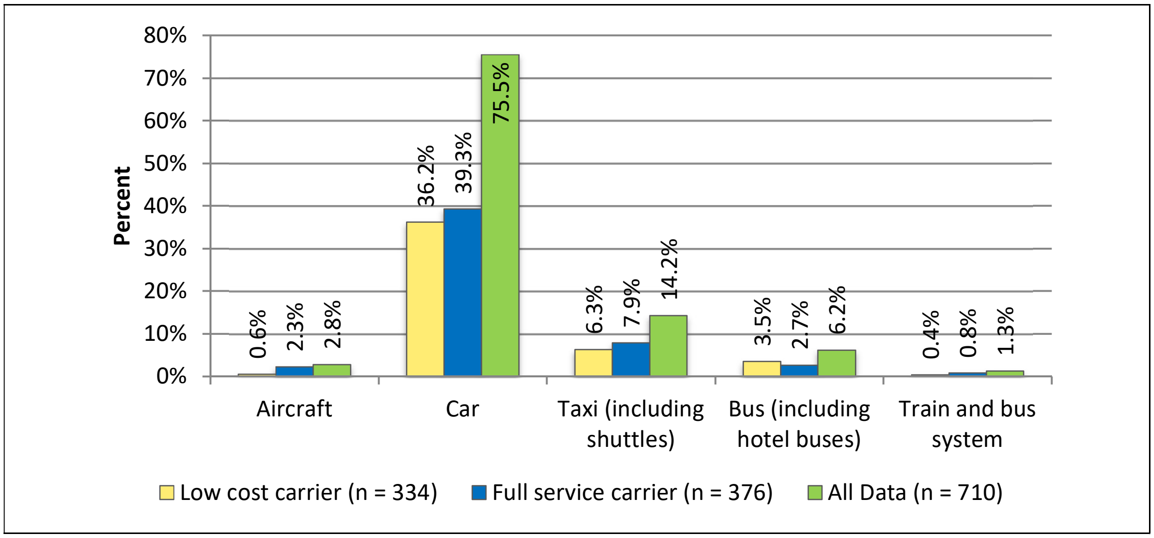
This section focusses on those activities that form part of the air travel process but are not part of the flight itself. In this regard, the focus is on questions 5–7 from the questionnaire. These questions dealt specifically with the type of accommodation to be used, or that was used, during the respondent's trip and the mode of transport used to get to the airport for the flight.

#### 8.2.3.1 Mode of transport utilised to get to airport (per model)

In the study undertaken by O'Connell (2007), which focussed on Europe and Asia, an attempt was made to establish a link between the airline model flown and various non-flight activities. In particular, he looked at the distance travelled to reach the airport and the mode of transport used to reach the airport. This information is particularly relevant in the European context where there is large-scale use of primary and secondary airports by the airlines. In this case, passengers therefore have a wider choice of operators, airports, and options from which to choose. In the South African context, this level of choice is not available. There are a limited number of main airports, with only one option per main city (even region), resulting in the passenger having no option but to fly from the airport in their region. As was discussed in section 1.2.2.3 of the study, the only secondary airports being used in South Africa are Lanseria near Johannesburg and George in the Western Cape. George is being used by the LCCs to serve the Garden route and, indirectly, Cape Town.

The results obtained from respondents regarding the mode of transport used to get to the airports reflects the underdeveloped and underutilised nature of the public transport system in South Africa. Figure 8.9 illustrates the dispersion of the respondents across the different modes of transport used to get to the airport. The column titled 'all data' reflects the overall dispersion for all respondents. It is noted that 19 non-responses were identified resulting in $N$ = 710 being used as the basis for analysis. Taking all valid respondents into account, 75.5% of the respondents travelled to the airports by car. The second most utilised mode of transport was the taxi (which includes private shuttles) at 14.2%, with buses (including hotel transfer buses) coming a distant third at 6.2%. Train-and-bus systems only registered 1.3% of the respondents, with most of these being at Johannesburg using the Gautrain. The Gautrain operates using a connecting bus and train system, hence the naming of this grouping. It must be highlighted that 2.8% of the respondents stated that they arrived at the airport for the flight by aircraft. This relates to respondents that arrived via air from another destination and were waiting to catch a connecting flight.

**Figure 8.9: Mode of transport used to arrive at airport for flight**




By distinguishing between respondents flying on the two different models it is seen that the dispersion of respondents across the different modes of transport is approximately the same. The findings in this regard are illustrated in figure 8.9. Overall, the slightly higher percentages shown by the respondents on FSCs are largely accounted for by the fact that there were slightly more respondents travelling on FSCs than on LCCs (*see* figure 8.1). The data does however show that cars were the most popular method of transport used by the respondents travelling on either of the models. It is also seen that more FSC respondents arrived at the airport via taxi and aircraft (connecting) than LCC respondents, and that more LCC respondents arrived on a bus than did FSC respondents.

Question 7 of the questionnaire asked respondents to indicate how far they had travelled to reach the airport. As stated earlier, given the fact that there is not an extensive airport network in South Africa, consumers are faced with no airport alternative, which makes the distance travelled to the airport less relevant than it is in Europe or the USA where alternatives do exist. This is specifically the case for the Cape Town respondents. A problem encountered in collecting data for this question was that some respondents were unable to give an exact answer to the question because, whilst they could answer from where they travelled, they could not accurately quantify the distance they had travelled and therefore gave their best educated guess or were not able provide a response at all.

Table 8.4 considers (i) the combined responses to the question of distance travelled to the airport by respondents and (ii) the distance travelled to the airport by respondents divided per model. In the case of this research, there were a number of outliers in the data that represented respondents that travelled extremely long distances to the airport. This resulted in the original range of responses being extremely wide (3 598km in this case), meaning that these few respondents distorted the calculations. In order to provide a more accurate reflection of the data, the outliers were removed (*see* section 7.3.9.3). The tables and figures generated in this section are based on the results with the outliers removed.

**Table 8.4: Distance travelled to the airport by (i) all respondents and (ii) per model**

| | Statistic | (i) All respondents | (ii) Per model | |
|---|---|---|---|---|
| | | | FSC | LCC |
| How many kilometres have you travelled today to reach the airport? | Mean | 47.03 | 48.53 | 45.54 |
| | Median | 30.00 | 30.00 | 30.00 |
| | Variance | 4472.986 | 5342.175 | 3599.975 |
| | Std. Deviation | 66.880 | 73.090 | 60.000 |
| | Minimum | 2 | 2 | 5 |
| | Maximum | 1000 | 1000 | 600 |
| | Range | 998 | 998 | 595 |
| | Interquartile Range | 30 | 30 | 28 |
| | Skewness | 7.620 | 8.334 | 5.945 |
| | Kurtosis | 82.397 | 93.296 | 47.133 |

From table 8.4, the statistics relating to all respondents show that the mean distance travelled by respondents was 47.03 km, with a relatively high standard deviation of 66.88 km (outliers removed). This point can be rationalised in terms of the point that South African passengers generally only have one airport option available to them in their region when deciding to fly within the country. This means that those that live beyond the borders of the local metropolitan area have to travel further distances to an airport. The box plot of the combined data in table 8.4 is represented in figure 8.10.

Table 8.4 also divides the respondents according to the type of model flown. In this case, the data seems to indicate that, on average, FSC respondents travelled further to get to the airport than respondents travelling on LCCs. From table 8.4 it is shown that LCC respondents travelled an average of 45.54 km whilst FSC respondents travelled an average of 48.53 km (outlier removed). An interesting statistic is seen when comparing the standard deviation for each model, which shows that the standard deviation from the mean for FSCs was 73.09 km whilst for LCCs it was only 60.00 km. This seems to suggest that FSC passengers were more scattered further around the airports in terms of distance from the airports whereas LCC passengers, who are more price sensitive, tend to be clustered in a tighter radius around the airports. Further support to this statement is seen in the range of the distances travelled to the airport for each model. In the case of the FSCs, the range was 998 km and for the LCCs it was at 595 km. The data for respondents per model contained in table 8.4 is illustrated in the boxplot in figure 8.11, which provides an indication of the differences between the distances travelled and dispersion around the airport of respondents travelling on each model.

**Figure 8.10: Boxplot of overall distance (km) travelled to the airport by all valid respondents**

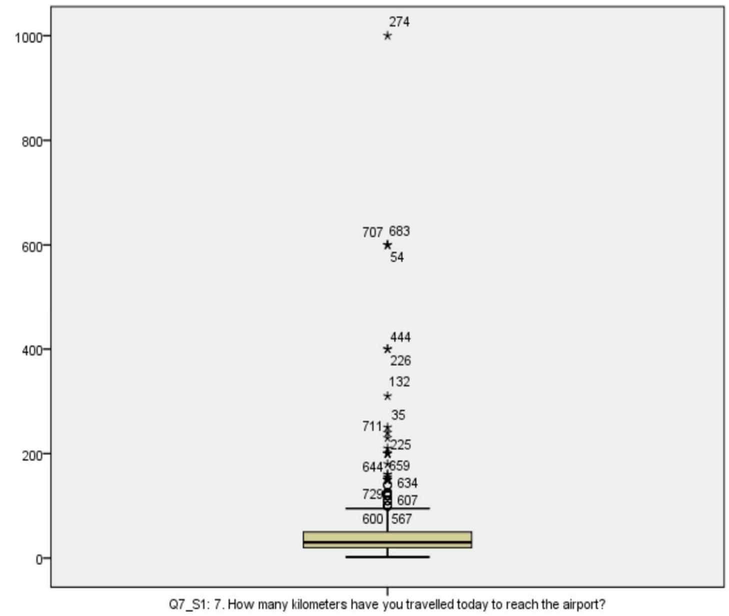
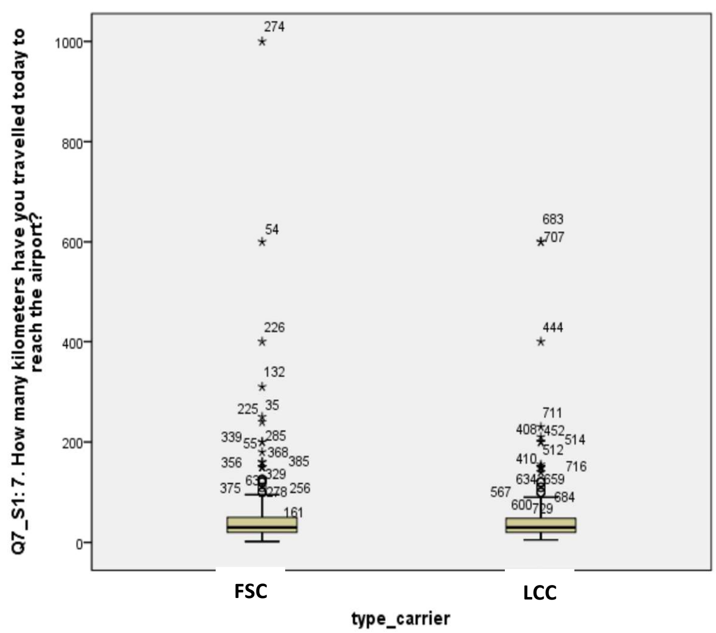



**Figure 8.11: Boxplot of distance travelled to the airport by respondents per model**




#### 8.2.3.2 Accommodation utilised by respondents (per model)

The O'Connell (2007) study attempted to link the type of accommodation utilised by the respondents at their destination and the airline model flown. His study showed noticeable differences between respondent accommodation choices between Europe and Asia, as well as between respondents travelling on FSCs and LCCs.

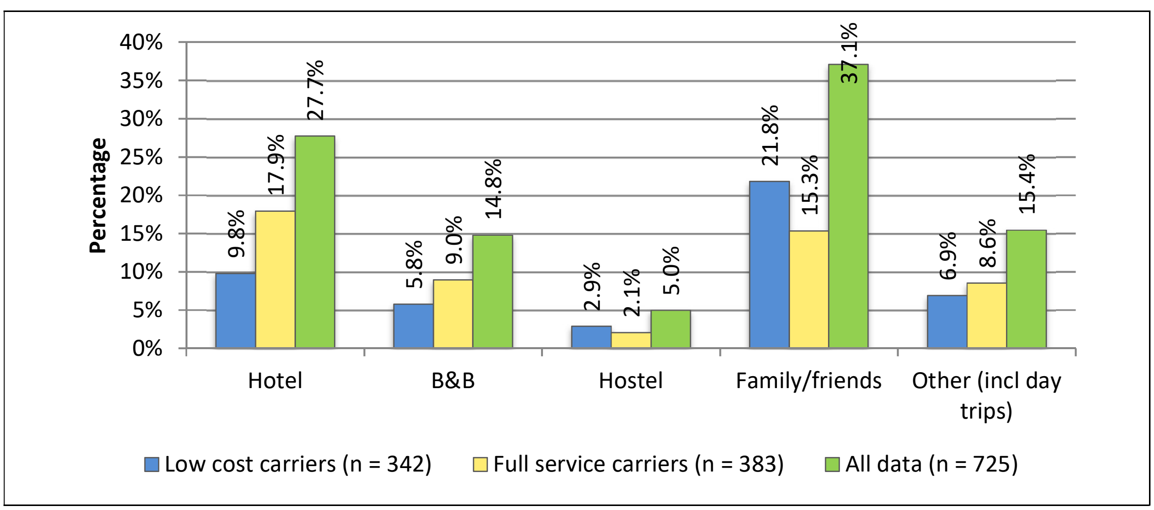
The overall distribution of choice of accommodation for all respondents is illustrated in table 8.5. Four responses were marked as missing, resulting in the analysis being based on *N* = 725. The analysis of the choice of accommodation utilised shows that 'staying with family/ friends' represented the choice of 37.1% of all respondents in this study. Hotels were the choice of 27.7% of the respondents, with the least selected option being hostels at only 5.0% of the total. The option 'other' represented 15.4% of the total respondents. In this case, the bulk of this category represented respondents that were on a day trip and therefore did not require any accommodation.

**Table 8.5: Accommodation choice of all valid respondents**

| | Count | Percent |
|---|---|---|
| Hotel | 201 | 27.7% |
| B&B | 107 | 14.8% |
| Hostels | 36 | 5.0% |
| Family/Friends | 269 | 37.1% |
| Other (including day trips) | 112 | 15.4% |
| **Total** | ***N* = 725** | **100.0%** |

It is in the distinction between the choices of accommodation by respondents travelling on the different airline models where clearer patterns of preference emerge. An analysis of figure 8.12 serves to highlight the key differences. This figure represents the overall spread of respondent accommodation choice as a percentage of the total respondents (*N* = 725) sub-divided according to model flown.

**Figure 8.12: Overall distribution of respondent choice of accommodation per model flown as a percentage of total respondents**




Noticeable from figure 8.12 is the distinction between accommodation selection preferences of respondents on LCCs and respondents on FSCs. Respondents travelling on LCCs stayed mostly with friends/family (21.8% of all respondents), followed by hotels at 9.8% of all respondents. Respondents making use of FSCs stayed primarily at hotels (17.9% of all respondents), followed by family/friends (15.3% of all respondents). Staying with friends/family is a much cheaper (if not free) form of accommodation than hotels and the data seems to suggest that the cost-conscious LCC traveller also seeks cheaper accommodation in conjunction with the cheaper flights. FSC passengers, who are assumed to be less price sensitive, were more accepting of more expensive forms of accommodation like hotels and Bed & Breakfasts (B&B). This being said, FSC respondents still showed a strong tendency to stay with the cheaper option of family/friends. In the case of business travel, respondents often do not have the option of staying with friends/relatives and therefore stay in a hotel or a Bed & Breakfast.

It is important for airlines to be aware of the preferences and characteristics of their markets so that they are better able to target them with their marketing efforts. In this regard, it is important for the carrier types to have insight into the type of accommodation utilised by their passengers. These insights will not only provide airlines with options on where to place marketing communications, but it will give them insights into the nature of the passengers being attracted and indicate markets that need to be consolidated and those that need to be grown. The importance of each particular form of accommodation to a model can be viewed in figure 8.13. This figure shows the dispersion of accommodation choice by respondents within the particular airline model selected (product form level).

**Figure 8.13: Dispersion of respondent accommodation choice within each model**

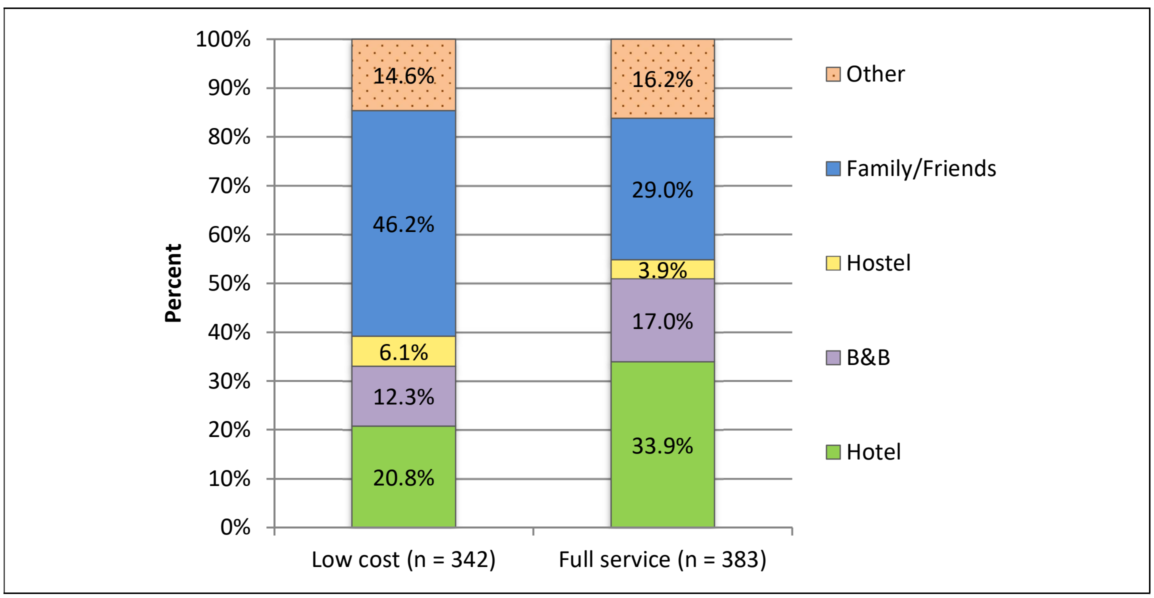



Figure 8.13 highlights that for respondents travelling on LCCs ($n$ = 342), 46.2% stayed with friends/family and 20.8% identified hotels as their accommodation option. The O'Connell (2007) study found that a relatively high number of LCC respondents utilised the more expensive option of hotels rather than family/friends or other cheaper forms of accommodation. This was due to consumers making

savings on the flights (which constitute only a few hours of the entire trip) so that they could splurge on the hotels and experience a bit more 'luxury' during their stay at the destination. This finding from the O'Connell (2007) study was not identified in this study because staying with family/friends was by far the most popular accommodation option for LCC respondents, with hotels following in second position. Contrasted to LCC respondents, respondents on FSCs (*n* = 383) preferred hotels (33.9%), with family/friends coming a close second at 29.0%, which represents only a small gap of 4.9%. It is recognised that not every traveller has the option of utilising friends/relatives for accommodation as they may not have friends/ relatives at the destination and therefore will require a hotel or B&B regardless of the model travelled.

Bed & Breakfasts were a relatively large segment for the FSCs at 17.0% of the respondents on a FSC (65 of the 383). This form of accommodation was a slightly smaller segment for the LCCs at only 12.3% of the respondents travelling on this model type (42 of the 342). The pattern was different for hostels where they were utilised by 6.1% of the LCC respondents (21 of the 342), with only 15 of the 383 (3.9%) FSC respondents making use of this accommodation type.

#### 8.2.4 Purpose of travel

The analysis in this section focuses on the respondent's purpose of travel and the size of the group in which they were travelling. Question 9 of the questionnaire asked respondents what the purpose of their current trip was. Provision was made to distinguish between respondents travelling for leisure purposes and those travelling for business purposes. Regarding the size of the group, the questionnaire simply recorded the number of persons travelling in the respondent's group. For purposes of analysis, the various group sizes identified by respondents have been clustered as follows: 1, 2, 3, 4, 5–9, and 10+.

##### 8.2.4.1 Size of travel group

Group travel is a particularly important to airlines in terms of revenue generation. With this in mind, question 8 was included in order to identify if there were any noticeable differences between group sizes and the choice between the different airline models. The overall group size distribution of respondents in this research is set out in table 8.6. With the exclusion of non-responses and missing data, the value of *n* for the analysis of the overall size of groups was 605. From this table, the data showed that respondents travelling on their own accounted for 41.2% of the valid responses for this question. Those travelling alone and those in a group of two accounted for 69.6% of all valid responses for this question. Of the valid responses to this question, only 12.7% were travelling as part of a group over 5 people in size. Table 8.6 clearly shows that a large number of respondents were travelling alone and that the bulk of them were travelling in groups of four or smaller.

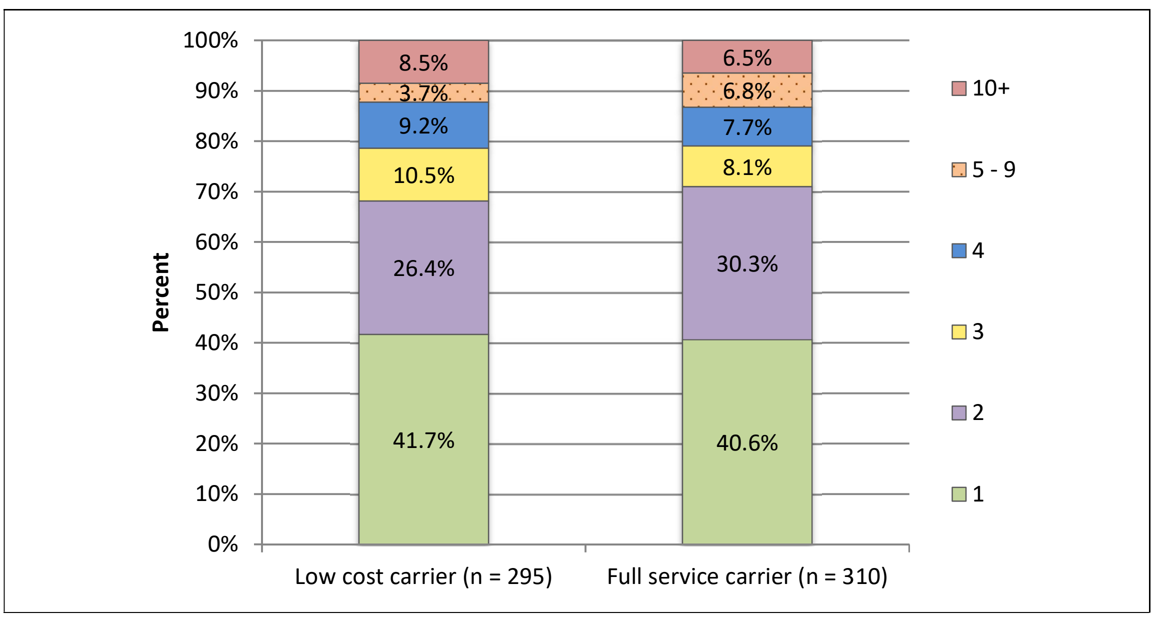
**Table 8.6: Overall distribution of group size**

| Group size | | | | | | *N* = 605 |
|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5 - 9** | **10+** | |
| 41.2% | 28.4% | 9.3% | 8.4% | 5.3% | 7.4% | **100.0%** |
| 69.6% | | 30.4% | | | | **100.0%** |
| 87.3% | | | | 12.7% | | **100.0%** |

In the case of the groups of 10 or more, a number of respondents were part of sports teams and cultural groups that were travelling at the time that the interviews were being conducted. Also included were a school group where some of the teachers/chaperones were interviewed. The importance in mentioning this issue is that in some cases the respondents formed part of a group that consisted of over 20 members and in one case, 150 people. In these cases, no more than two members of a particular group were interviewed.

An analysis of the collected data according to the group sizes per model flown (product form level) showed that the distribution of group sizes for each model was remarkably similar for both models, with no distinguishable differences being apparent. The analysis in this case was done according to the distribution of group sizes within each airline model. Figure 8.14 highlights the distribution of group sizes within each model and, bar some minor variations, the relative similarity between the two models.

**Figure 8.14: Dispersion of respondent group size within each model**




In terms of the number of respondents, the cross-tabulation showed that FSC respondents accounted for 51.2% (295/605) of the valid responses to this question and LCC respondents made up 48.8% (310/605) of the valid responses to the question. Considering the group sizes between the models, the biggest difference between the two models is seen at the group size 5–9, which shows 65.6% were travelling on a FSC with only 34.4% travelling on the LCCs. A comparison of the remaining group sizes between the two models shows no clear pattern or discernible trend regarding a particular model attracting larger or smaller groups. For example, the data showed that for respondents travelling in a group of two people, 54.7% were travelling on a FSC and 45.3% were travelling on a LCC. Similarly, the data showed that for respondents travelling in a group of three people, 55.4% were travelling on a LCC and 44.6% were travelling on a FSC.

Further analysis on group size is given in section 8.2.4.4 where the average group size is cross-tabulated with the respondent's purpose of travel (business or leisure).

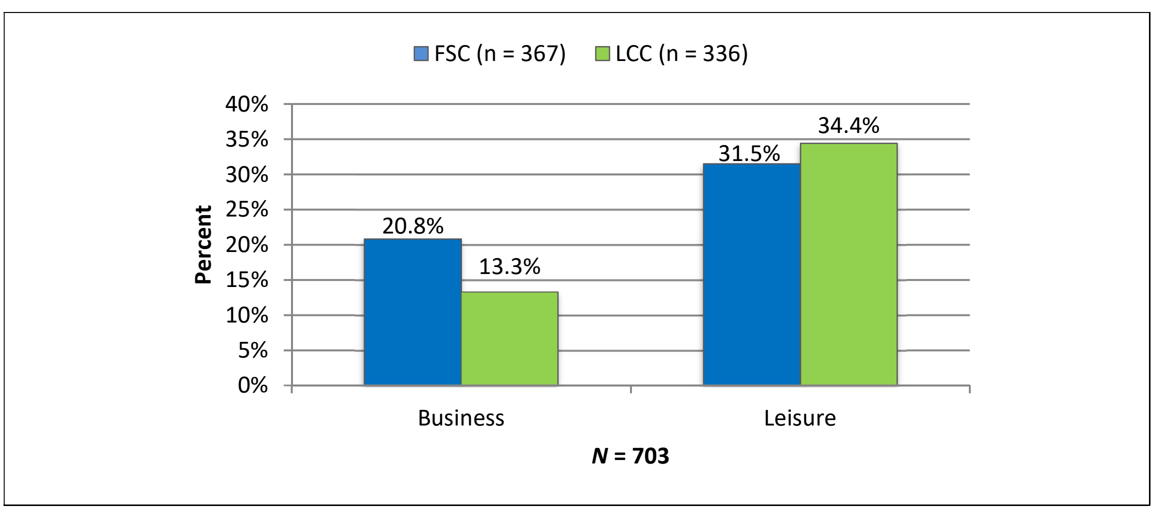
#### 8.2.4.2 Respondent's purpose of travel

The respondent's purpose of travel has an impact on their travel behaviour and choices. By establishing the respondent's purpose of travel, the opportunity arises to conduct further cross-analysis with variables addressed in other questions in the questionnaire. The discussion that follows will firstly focus on the overall classification of the purpose of travel, stated as a percentage of the total valid responses for this question ($N = 703$). Secondly, the data is broken down according to the various sub-purposes of travel (divided per model). Comments are given on the overall findings in terms of the most popular purposes of travel. Finally, the findings are discussed for each travel purpose within each model, with some comments given between the two models where appropriate.

***(a) Broad classification of respondent's purpose of travel***

The broad classification of findings for the purpose of travel are summarised in figure 8.15. From this figure, a basic analysis of the collected data for this question shows that 34.1% of the respondents were travelling for business purposes, whilst 65.9% were travelling for leisure purposes.

**Figure 8.15: Respondent purpose of journey per airline model as a percentage of total valid responses to question 9**



Viewing the overall data per model shows that 20.8% of the respondents were travelling on a FSC for business purposes, 31.5% were travelling on a FSC for leisure purposes, 13.3% were travelling on a LCC for business purposes, and 34.4% were travelling on a LCC for leisure purposes. This data reflects the mix of respondents travelling on the days that the interviews were conducted. This mix will naturally vary at different times of the year depending on numerous factors (including seasons, school holidays, sporting events, and business cycles for example).

***(b) Purposes of travel - overall spread of respondents per model and sub-purpose***

More detailed insight into the purposes of travel per model can be obtained from looking specifically within the categories of business and leisure travel. Table 8.7 summarises the dispersion of respondents according to the 'purpose of travel' per model, with the added sub-divisions of the specific business or leisure activity undertaken at the destination. In this case, the data shows that of those respondents travelling on a LCC ($n$ = 336), only 28.0% were travelling for business purposes, whilst 72.0% were travelling for leisure purposes. For respondents travelling on a FSC ($n$ = 367), 39.7% were travelling for business purposes, whilst 60.2% were travelling for leisure purposes.

**Table 8.7: Tabulation of responses per model according to purpose of travel**

| Travel purpose | FSC ($n$ = 367) | FSC (% model) | LCC ($n$ = 336) | LCC (% model) | Total ($n$ = 703) | Total (%) |
|---|---|---|---|---|---|---|
| Business: Meeting | 71 | 19.3% | 48 | 14.3% | **119** | **16.9%** |
| Business: Conference | 24 | 6.5% | 9 | 2.7% | **33** | **4.7%** |
| Business: Training | 16 | 4.4% | 13 | 3.9% | **29** | **4.1%** |
| Business: Trade fair | 2 | 0.5% | 0 | 0.0% | **2** | **0.3%** |
| Business: Employment | 25 | 6.8% | 18 | 5.3% | **43** | **6.1%** |
| Business: Other | 8 | 2.2% | 6 | 1.8% | **14** | **2.0%** |
| **Business: Total** | **146** | **39.8%** | **94** | **28.0%** | **240** | **34.1%** |
| | | | | | | |
| Leisure: Sports | 32 | 8.7% | 27 | 8.0% | **59** | **8.4%** |
| Leisure: Shopping | 1 | 0.3% | 2 | 0.6% | **3** | **0.4%** |
| Leisure: Visiting friends/family | 54 | 14.7% | 89 | 26.5% | **143** | **20.4%** |
| Leisure: Weekend break | 30 | 8.2% | 21 | 6.3% | **51** | **7.3%** |
| Leisure: Holiday | 80 | 21.8% | 67 | 19.9% | **147** | **20.9%** |
| Leisure: Studying | 9 | 2.5% | 16 | 4.8% | **25** | **3.6%** |
| Leisure: Cultural/ religious | 3 | 0.8% | 5 | 1.5% | **8** | **1.1%** |
| Leisure: Other | 12 | 3.3% | 15 | 4.4% | **27** | **3.8%** |
| **Leisure Total** | **221** | **60.2%** | **242** | **72.0%** | **463** | **65.9%** |
| **Total - overall** | **367** | **100.0%** | **336** | **100.0%** | **703** | **100.0%** |

Viewing the data between the two models it can be calculated that of the 240 respondents travelling for business purposes, 60.8% travelled on a FSC and 39.2% travelled on a LCC. In terms of the 463 respondents travelling for leisure purposes, it is calculated that 47.7% were travelling on a LCC versus 52.3% on a FSC.

### *(c) Overview of the most cited purposes of travel by respondents during the interviews (business and leisure combined)*

When analysing the responses of all valid respondents for this question, i.e. – for both models (product category level) (see the total % column of table 8.7), the majority of respondents were flying for leisure purposes, with the biggest overall category being the holiday segment (20.9%), closely followed by the visiting friends/family segment (20.4%) as the second most frequent travel purpose. These two segments both form part of leisure travel. Travel for the purpose of meetings was the overall third largest category at 16.9% of the respondents (and the highest ranked business travel sub-purpose). These three purposes of travel accounted for 58.2% of all respondents. Leisure travel for the purposes of sport (8.4%) and weekend breaks (7.3%) occupied the fourth and fifth positions overall but, as can be seen from the data, at a relatively lower rate. The next most frequently stated purposes of travel were business travel sub-purposes, namely, employment seeking (6.1%) and business travel for the purposes of attending a conference (4.7%).

A focus on the model types individually (product form) shows that visiting friends/relatives was the largest segment for LCCs (26.5% of the LCC respondents for this question), followed by the holiday segment (19.9%), and then the meetings segment (14.3%). The pattern for FSCs is slightly different, with the holiday segment being the biggest (21.8% of all FSC respondents for this question), followed by meetings (19.3%), and then visiting friends/relatives (14.7%).

With these overall figures in mind, the rest of the discussion in this section focuses on the two main purposes of travel, with each addressed separately and in terms of each business model.

### *(d) Purpose of journey - business*

This section narrows down the focus from the previous paragraphs to travel for the purposes of business only. It was highlighted in the previous sub-section that business travel for the purpose of attending a meeting accounted for 16.9% of the responses for this question ($N$ = 703). The importance of the business meeting segment to airlines can be highlighted by considering that the data shows that business meetings dominate journeys for the purposes of business between both models, accounting for 49.6% (119/240) of all business journeys.

With reference to table 8.7, viewing the purpose of travel in terms of business travel within the two models individually (product form level) shows that business travel for the purposes of meetings is the largest segment for both models - 14.3% of all LCC respondents for this question ($n$ = 336) and 19.3% of all FSC respondents for this question ($n$ = 367). The table additionally shows that business travel for the purpose of employment is the second largest segment for each model (5.3% LCC and 6.8% FSC).

Business travel for the purposes of training comes in third for the LCC model (3.9% of all LCC respondents), with travel for purposes of attending a conference ranking fourth (2.7% of all LCC respondents). Given the small number of LCC respondents travelling for business purposes (94/336), these percentages represent a small number of respondents in comparison with the number of respondents travelling for leisure purposes on a LCC. FSC respondents travelling for the purposes of business showed that travel for the purposes of conference attendance ranked third in terms of all FSC respondents for this question (6.5%), with travel for the purposes of training ranking fourth (4.4% of the respondents). Given the larger number of respondents travelling for business purposes on a FSC, the actual number of respondents per business sub-purpose is higher for FSCs than LCCs for all sub-categories (*see* table 8.7).

An analysis between the two models in terms of travel for the purpose of business shows that for those respondents travelling for the sub-purpose of business meetings, 59.7% (71/119) travelled on a FSC, whilst 40.3% (48/119) travelled on a LCC. Business travel for the sub-purpose of employment showed a similar ratio, with 58.1% (25/43) utilising a FSC and 41.9% (18/43) utilising a LCC. The largest difference between the two models was seen with the sub-purpose of travel for conference attendance. In this case, 72.7% travelled on a FSC, with only 27.3% selecting a LCC. Whilst these calculations are based on only 33 respondents (4.7% of all respondents for this question and 13.8% of business respondents), they do show a distinct preference towards the FSC model for this segment. Conference attendance is largely paid for by the conference attendee's company, which is less price sensitive than individuals who have to pay for the flight themselves. This is confirmed in table 8.8 below, which shows a basic cross-tabulation between business travellers travelling for the purpose of conference attendance and 'who paid for the flight' (question 38 in questionnaire). This table clearly shows that 72.7% of the respondents travelling for purposes of conference attendance had their tickets paid for by their employers. In this case, it shows that FSCs hold a strong position in this segment and that this is a potential market that the LCCs need to penetrate as it is currently being conceded to the FSCs.

**Table 8.8: Cross tabulation of purpose of journey (conference only) versus 'who paid for the ticket'**

| | | Who paid for the ticket? | | | | |
|---|---|---|---|---|---|---|
| | | **Self** | **Work** | **Gift** | **Parent** | **Total** |
| **Conference** | % within Q9_S1: 9. What is / was the main purpose of your visit? | 7 | 24 | 1 | 1 | 33 |
| | | 21.2% | 72.7% | 3.0% | 3.0% | 100.0% |

### *(e) Purpose of journey - leisure*

Earlier discussions noted that travel for the purposes of leisure activities was dominated by visiting friends/family and holidays. The extent of this domination was shown to be 41.3% of all respondents for this question ($n$ = 703). Referring back to table 8.7, the importance of these two segments to the airlines is highlighted by the data, which shows that 'visiting friends/relatives' and 'holidays' dominate journeys for the purpose of leisure across both models, and account for 62.6% (290/463) of all leisure journeys.

With reference to table 8.7, viewing the purpose of travel in terms of leisure travel within the two models individually (product form) shows that, in terms of FSCs, leisure travel for the purposes holidays is the largest segment (21.8% of all FSC respondents for this question). This was followed by leisure travel for the purposes of visiting friends/relatives (14.7% of the FSC respondents for this question). Sports travel occupied third position at 8.7% of all FSC respondents. This reflects the large differential between the top two purposes of leisure travel and the rest. With reference to LCCs, leisure travel for the purposes of holidays and visiting friends/relatives both fell into the top two positions, but in the opposite order to the FSCs. Specifically stated, visiting friends/relatives accounted for 26.5% of all LCC respondents, with holiday travel accounting for 19.9% of all LCC respondents. Sports travel occupied the third position, representing 8.0% of all LCC respondents. As with FSCs, the difference between the top two purposes of leisure travel and the third position emphasise the importance of the two segments to both models. In contrast to the discussion on business travel purposes, where the number of respondents travelling on a FSC far outnumbered those travelling on a LCC, the number of respondents travelling on a LCC for leisure purposes marginally outnumbered respondents travelling on a FSC for leisure purposes (*see* table 8.7 for the values of *n*). This would tend to suggest that a FSC is the preferred model of choice for business travel, with the LCCs relying heavily on the leisure travel segment as their primary source of passengers. This is tested inferentially in section 8.3.1.

An analysis between the two models in terms of travel for the purpose of leisure shows the distinction between the spread of respondents travelling to visit friends/relatives and travelling for holiday purposes. The calculations show that 62.2% (89/143) of the respondents travelling for the purpose of visiting friends/relatives flew on a LCC, whilst only 37.8% (54/143) flew on a FSC. This seems to suggest that the LCC is the preferred option for consumers when travelling for this purpose. In terms of travelling for the sub-purpose of holidays, the calculations show that 54.4% (80/147) travelled on a FSC and 45.6% (67/147) on a LCC. Also of note in this regard, is leisure travel for the sub-purpose of weekend breaks, which showed a tendency for respondents to select a FSC (30/51 = 58.8%) over a LCC (21/51 = 41.2%). This is based on a relatively small sample size of the total leisure respondents (51/463 = 11.0%). Regarding the remaining purposes of travel for leisure activities, respondents seem to show a preference for travelling on a LCC when travelling for studying purposes. This is quantified as 36.0% (9/25) on a FSC versus 64.0% (16/25) on a LCC, although this is based on only 25 respondents ($n$ = 25) and would require a larger sample to explore this finding further. The finding could possibly be explained in terms of the overall cost of studying and its associated costs. Parents and students seek to minimise expenses and thus consider utilising LCCs for air travel, which are perceived to have cheaper fares.

### 8.2.4.3 Cross tabulation of purpose of trip and age of respondents

A perspective to consider is the comparison of the purpose of trip with the various age groups that were addressed in section 8.2.1.3. Logic would lead one to suggest that journeys for the purpose of business would be dominated by those age groups that are within the prime working ages of roughly 25–55, with the younger groups (16–24 for example) partaking in more sporting and studying activities. Overall, in terms of the data collected, the research showed that the average age of those travelling for the purposes of business is higher than those travelling for purposes of leisure. From the data, it was also calculated that the average age of those travelling on a FSC is 37.1 years of age, compared to an average of 32.6 for respondents travelling on a LCC. An initial analysis of table 8.9 seems to illustrate this point, with the purposes of travel being in line with life-stages and the presumed activities that are undertaken at a specific life-stage.

Table 8.9 highlights the purposes of travel cross-tabulated with the various age groupings, divided per model. For the purposes of analysis, the table calculates percentages per purpose and sub-purpose of travel between the various age categories (rows). The percentages are calculated within the two main purposes of travel, that is, business travel and leisure travel are analysed separately. Column totals per age category are given separately for both business ($n$ = 233) and leisure ($n$ = 460) purposes of travel with $N$ = 693.

**Table 8.9: Cross tabulation of purpose of travel and age groups per model**

| | | | | Q40_S1: 40. Are you aged between: | | | | | | | Total (Row) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16–18 | 19–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65+ | |
| Business | FSC | Meeting | Count | 0 | 2 | 17 | 26 | 24 | 1 | 1 | **71** |
| | | | % | 0.0% | 2.8% | 23.9% | 36.6% | 33.8% | 1.4% | 1.4% | **100.0%** |
| | | Conference | Count | 0 | 1 | 6 | 13 | 4 | 0 | 0 | **24** |
| | | | % | 0.0% | 4.2% | 25.0% | 54.2% | 16.7% | 0.0% | 0.0% | **100.0%** |
| | | Training | Count | 0 | 2 | 8 | 3 | 2 | 1 | 0 | **16** |
| | | | % | 0.0% | 12.5% | 50.0% | 18.8% | 12.5% | 6.3% | 0.0% | **100.0%** |
| | | Trade fair | Count | 0 | 0 | 0 | 2 | 0 | 0 | 0 | **2** |
| | | | % | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Employment | Count | 1 | 4 | 8 | 5 | 5 | 1 | 0 | **24** |
| | | | % | 4.2% | 16.7% | 33.3% | 20.8% | 20.8% | 4.2% | 0.0% | **100.0%** |
| | | Other | Count | 0 | 0 | 3 | 2 | 2 | 1 | 0 | **8** |
| | | | % | 0.0% | 0.0% | 37.5% | 25.0% | 25.0% | 12.5% | 0.0% | **100.0%** |
| | | Total (column) | **Count** | **1** | **9** | **42** | **51** | **37** | **4** | **1** | **145** |
| | | | **%** | **0.7%** | **6.2%** | **29.0%** | **35.2%** | **25.5%** | **2.8%** | **0.7%** | **100.0%** |
| | LCC | Meeting | Count | 1 | 6 | 15 | 12 | 8 | 3 | 0 | **45** |
| | | | % | 2.2% | 13.3% | 33.3% | 26.7% | 17.8% | 6.7% | 0.0% | **100.0%** |
| | | Conference | Count | 0 | 0 | 1 | 6 | 1 | 0 | 0 | **8** |
| | | | % | 0.0% | 0.0% | 12.5% | 75.0% | 12.5% | 0.0% | 0.0% | **100.0%** |
| | | Training | Count | 0 | 5 | 6 | 2 | 0 | 0 | 0 | **13** |
| | | | % | 0.0% | 38.5% | 46.2% | 15.4% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Trade fair | Count | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | | | % | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | **0.0%** |
| | | Employment | Count | 0 | 5 | 6 | 4 | 2 | 0 | 0 | **17** |
| | | | % | 0.0% | 29.4% | 35.3% | 23.5% | 11.8% | 0.0% | 0.0% | **100.0%** |
| | | Other | Count | 0 | 1 | 2 | 0 | 2 | 0 | 0 | **5** |
| | | | % | 0.0% | 20.0% | 40.0% | 0.0% | 40.0% | 0.0% | 0.0% | **100.0%** |
| | | Total (column) | **Count** | **1** | **17** | **30** | **24** | **13** | **3** | **0** | **88** |
| | | | **%** | **1.1%** | **19.3%** | **34.1%** | **27.3%** | **14.8%** | **3.4%** | **0.0%** | **100.0%** |
| **Total (Business)** | | | **Count** | **2** | **26** | **72** | **75** | **50** | **7** | **1** | **233** |
| | | | **%** | **0.9%** | **11.2%** | **30.9%** | **32.2%** | **21.5%** | **3.0%** | **0.4%** | **100.0%** |

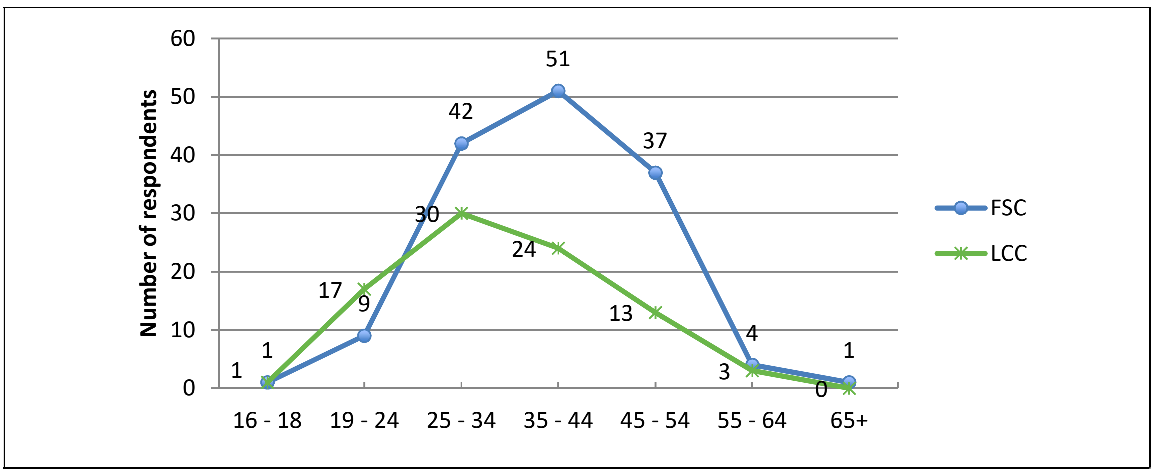
| | | | | Q40_S1: 40. Are you aged between: | | | | | | | Total (Row) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 - 18 | 19 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65+ | |
| Leisure | FSC | Sports | Count | 10 | 11 | 7 | 4 | 0 | 0 | 0 | **32** |
| | | | % | 31.3% | 34.4% | 21.9% | 12.5% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Shopping | Count | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **1** |
| | | | % | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Visiting friends/relatives | Count | 1 | 16 | 10 | 10 | 6 | 6 | 5 | **54** |
| | | | % | 1.9% | 29.6% | 18.5% | 18.5% | 11.1% | 11.1% | 9.3% | **100.0%** |
| | | Weekend break | Count | 0 | 4 | 8 | 9 | 6 | 0 | 3 | **30** |
| | | | % | 0.0% | 13.3% | 26.7% | 30.0% | 20.0% | 0.0% | 10.0% | **100.0%** |
| | | Holiday | Count | 2 | 14 | 18 | 15 | 17 | 10 | 4 | **80** |
| | | | % | 2.5% | 17.5% | 22.5% | 18.8% | 21.3% | 12.5% | 5.0% | **100.0%** |
| | | Studying | Count | 1 | 7 | 1 | 0 | 0 | 0 | 0 | **9** |
| | | | % | 11.1% | 77.8% | 11.1% | 0.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Cultural/ religious | Count | 2 | 0 | 0 | 0 | 0 | 1 | 0 | **3** |
| | | | % | 66.7% | 0.0% | 0.0% | 0.0% | 0.0% | 33.3% | 0.0% | **100.0%** |
| | | Other | Count | 1 | 0 | 4 | 3 | 3 | 1 | 0 | **12** |
| | | | % | 8.3% | 0.0% | 33.3% | 25.0% | 25.0% | 8.3% | 0.0% | **100.0%** |
| | | **Total (column)** | **Count** | **17** | **53** | **48** | **41** | **32** | **18** | **12** | **221** |
| | | | **%** | **7.7%** | **24.0%** | **21.7%** | **18.6%** | **14.5%** | **8.1%** | **5.4%** | **100.0%** |
| | LCC | Sports | Count | 11 | 9 | 4 | 1 | 1 | 0 | 0 | **26** |
| | | | % | 42.3% | 34.6% | 15.4% | 3.8% | 3.8% | 0.0% | 0.0% | **100.0%** |
| | | Shopping | Count | 0 | 1 | 0 | 1 | 0 | 0 | 0 | **2** |
| | | | % | 0.0% | 50.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Visiting friends/relatives | Count | 8 | 24 | 20 | 14 | 11 | 3 | 7 | **87** |
| | | | % | 9.2% | 27.6% | 23.0% | 16.1% | 12.6% | 3.4% | 8.0% | **100.0%** |
| | | Weekend break | Count | 1 | 2 | 7 | 3 | 5 | 2 | 1 | **21** |
| | | | % | 4.8% | 9.5% | 33.3% | 14.3% | 23.8% | 9.5% | 4.8% | **100.0%** |
| | | Holiday | Count | 10 | 18 | 14 | 12 | 6 | 5 | 2 | **67** |
| | | | % | 14.9% | 26.9% | 20.9% | 17.9% | 9.0% | 7.5% | 3.0% | **100.0%** |
| | | Studying | Count | 0 | 16 | 0 | 0 | 0 | 0 | 0 | **16** |
| | | | % | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | Cultural/ religious | Count | 0 | 0 | 0 | 0 | 3 | 2 | 0 | **5** |
| | | | % | 0.0% | 0.0% | 0.0% | 0.0% | 60.0% | 40.0% | 0.0% | **100.0%** |
| | | Other | Count | 1 | 4 | 3 | 4 | 2 | 1 | 0 | **15** |
| | | | % | 6.7% | 26.7% | 20.0% | 26.7% | 13.3% | 6.7% | 0.0% | **100.0%** |
| | | **Total (column)** | **Count** | **31** | **74** | **48** | **35** | **28** | **13** | **10** | **239** |
| | | | **%** | **13.0%** | **31.0%** | **20.1%** | **14.6%** | **11.7%** | **5.4%** | **4.2%** | **100.0%** |
| **Total (Leisure)** | | | **Count** | **48** | **127** | **96** | **76** | **60** | **31** | **22** | **460** |
| | | | **%** | **10.4%** | **27.6%** | **20.9%** | **16.5%** | **13.0%** | **6.7%** | **4.8%** | **100.0%** |

### *(a) Business journeys*

In terms of all valid responses for this cross-tabulation (LCC and FSC combined), the 35–44 age group is the most active in terms of travel for the purposes of business (32.2%). This category represents the age group where people have evolved into their chosen careers and have reached the point where they are more likely to travel frequently for business. The 25–34 and 45–54 age groups recorded the second (30.9%) and third (21.5%) positions in terms of the number of respondents partaking in business travel. This further supports the point that those that have developed into their careers and gathered experience undertake more business travel. The 19–24 age group only accounted for 11.2% of the total business travellers, with 61.5% (16/26) of them travelling to seek employment or undergo training, which makes sense for individuals at this life-stage. Business travel for respondents over 64 years of age was negligible because most had retired and therefore had no need to travel for business. Employment seekers were primarily in the 19–34 age group, as did those travelling for the purposes of training. Those travelling for conferences tended to cluster more towards the slightly older categories when compared to those partaking in training (mainly the 35–44 grouping). The logic of this can easily be understood in that training occurs at the beginning of a career, whereas opportunities to enhance knowledge arise later.

Focussing in on table 8.9 in terms of the individual models, the first point that is reconfirmed is that respondents travelling for the purposes of business showed a preference for the FSCs over the LCCs (62.2% vs 37.8%) ($n$ = 233). In terms of FSCs, the 35–44 age group was the most active for business travellers, with the 25–34 and 45–54 age groups following in positions two and three (representing 130 of the 145 respondents travelling for purposes of business). In terms of the LCCs, the 25–34 group is the most active group followed by the 35–45 and 19–24 groups. Viewed together it is apparent that, whilst fewer respondents travelled on LCCs for business purposes, the overall tendency is for business travellers on FSCs to be older than business travellers on LCCs. The data shows that the average age of respondents travelling on a FSC for business purposes was 35.4 years old, whilst the average age of respondents travelling for the purposes of business on a LCC was lower at 30.6 years old. This can be clearly seen in the simple representation in figure 8.16, which represents the age group frequency counts for each model and thereby summarises the differences in the age distribution pattern for each model.

**Figure 8.16: Distribution pattern of respondent age groups per model (business travel)**




Looking specifically at the 19–24 age group, it was earlier shown that this group accounted for only 11.2% of the overall business travellers. When viewing the data per model in table 8.9, it is calculated that 65.4% (17/26) of this age group travelled for business on a LCC, with the remaining 34.6% selecting a FSC. In contrast to this, the 45–54 age group shows that 74.0% (37/50) of the respondents were travelling for business on a FSC, whilst only 26.0% (13/50) selected a LCC. Similarly, this preference for business travel on a FSC by the older age groups is shown in the 35–44 age group, with 68.0% (51/75) flying on a FSC and 32.0% (24/75) on a LCC.

Respondents travelling for the purposes of employment and training were focussed around the 19–24 and 25–34 age groups and were evenly split between the two models. The main difference between the two models was that for the LCCs these two age groups dominated travel for these two purposes (73.3% or 22/30), whilst for FSCs the dominance was not as high, representing only 55.0% (22/40) of the respondents. The distinguishing factor here being that the FSCs attracted passengers from the 35–44 and 45–54 age groups, thus showing a more even spread between the age segments. Business travel for the purpose of conference attendance was concentrated on the FSCs at 75.0% (24/32) of all respondents travelling for this purpose. The bulk of the respondents clustered around the 35–44 age group for both models. Table 8.9 shows that 95.8% of the FSC respondents travelling for purposes of conference attendance were in the range of 25–44 years of age, whilst 75.0% of the LCC respondents were in the 35–44 age group. This reflects key opportunities for the LCCs when segmenting their markets.

The dominance of business travel for the purposes of attending meetings was established in section 8.2.4.2. In that section, it was shown that 49.6% of all journeys for business were for meeting attendance, with the FSC model being the preferred model when undertaking travel for this purpose. By bringing in the dimension of age, insights are gained into the spread of the age groups between the two models when travelling for purposes of attending a meeting. For respondents travelling on a FSC for the purposes of attending a meeting ($n$ = 71), 70.4% clustered in the 35–44 and 45–54 age groups, with a further 23.9% falling into the 25–34 age group. In terms of the LCCs, the spread of respondents travelling for purposes of meeting attendance ($n$ = 45) was more even, but primarily focussed (60.0%) around the 24–34 and 35–44 age groups. The comparison in this case shows that the average age of the respondents travelling on a LCC for the purpose of attending a meeting is lower than those travelling on a FSC for the same purpose (31.1 years old versus 36.8 years old). This finding, coupled with the differential in terms of numbers, represents a significant segment for the airlines and one that the LCCs need to carefully explore.

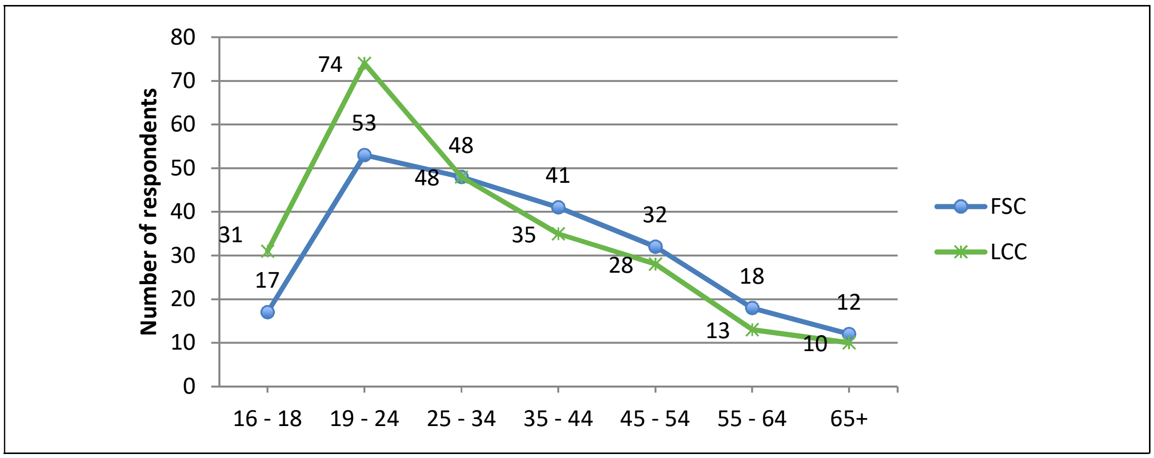
***(b) Leisure journeys***

The overall picture that emerges for the respondents travelling for the purpose of leisure is significantly different from that of business travel. As can be seen from table 8.9, the data for this question shows that the younger age groups account for a lot more of the leisure travel respondents. Travel for the purpose of sporting activities is dominated by the age groups of 16–18 years and 19–24 years at a total of 70.7% (41/58) of respondents partaking in sport. This figure rises to 89.7% if you widen the range to include respondents between the ages of 25–34. In this context, this means that respondents over the age of 34 accounted for only 10.3% of travel for the purposes of sporting activity.

Visiting friends/relatives was relatively well represented between most age groups, but the tendency was towards the younger categories, especially within the age range of 19–34. Those travelling for the purposes of a holiday were also fairly evenly spread between the age groups, with the bulk being between the 19–54 age range. This is in line with the average life-cycle stage and family life-cycle stage, and represents a generic segment to the airlines. Respondents travelling for study purposes were concentrated in the 19–24 age group, which is the usual university/college attending age and thus clearly the norm for that age group. Respondents travelling for purposes of religion and cultural activities were found to be in the 45–64 age range, suggesting that these activities tend to be undertaken by persons that are more mature and are looking for intellectual or mentally stimulating experiences.

Focussing in on table 8.9, in terms of the individual models, it can be seen that the number of respondents travelling for purposes of leisure on a LCC and a FSC are evenly spread (48.1% versus 51.9%). The three biggest age groups for both models, in order of first to third, are the 19–24 age group, the 25–34 age group, and the 34–44 age group. The similarity between the two models in terms of leisure travel can be clearly seen in figure 8.17, which is a simple representation of the age group frequency counts that highlights the distribution patterns of the age groups for each model. As can be seen, the distribution pattern between all age groups is very similar, with the bulk of the respondents being to the left of the figure and showing a drop-off towards the right.

**Figure 8.17: Distribution pattern of respondent age groups per model (leisure travel)**




Clearly to be seen from figure 8.17 is the point that the LCCs attracted more respondents from the younger age groups (16–18 and 19–24), but as the respondent's age increased, the FSCs showed a marginal advantage over the LCCs. This difference in the younger categories can be quantified by showing that 35.4% (17/48) of the leisure traveller respondents in the 16–18 age group were travelling on a FSC, whilst 64.6% (31/48) selected a LCC. Similarly, in the 19–24 age group, 41.7% (53/127) of the leisure traveller respondents selected a FSC, whilst 58.3% (74/127) selected a LCC. For the rest of the age groups, the spread between LCCs and FSCs was within a relatively narrow band.

The discussion in the earlier part of this leisure travel sub-section highlighted that respondents in the age range of 16–24 dominated leisure travel for the purposes of engaging in sporting activities. When analysing the age 16–24 data according to the model that they travelled on, the split between the two models was roughly a 50:50 split ($n$ = 21 versus $n$ = 20). The data in the case of leisure travel for the purposes of sport thus seems to indicate that there is no distinct difference between the models in this segment. Focussing in on the 16–18 age group it is evident that for FSCs, sports travel accounted for 58.8% (10/17) of the respondents in this age category. LCCs showed a greater spread of respondents in this age group across the purposes of leisure travel, with sports travel accounting for only 35.5% (11/31) of the LCC respondents. In this case, the LCCs seem to have the advantage because the sources of their passengers seem to be spread across a greater number of segments.

Leisure travel for the purposes of visiting friends/relatives showed a bias towards the LCC in terms of respondent numbers, with 54 flying on a FSC and 87 on a LCC (38.3% versus 61.7%). The distribution pattern of respondents between the various age groups was similar for both models, with the 19–24 age group representing the largest segment for both. From the perspective of the FSCs, respondents in the 19–24 age group represented 29.6% of the respondents travelling for the purposes of visiting friends/relatives. The second and third ranked age groups for FSCs were the 25–34 and 35–44 age groups, representing a further 18.5% and 18.5% respectively of the respondents travelling to visit friends/relatives. This results in a cumulative total of 66.6% (36/54) for the three biggest age groups, with the four remaining age groups being relatively small. The picture for the LCCs was very similar, with the 19–24 age group representing 27.6% of the respondents travelling for the purposes of visiting friends/relatives. As with the FSCs, the second and third ranked age groups for LCCs were the 25–34 and 35–44 age groups, representing a further 23.0% and 16.1% respectively of the respondents travelling to visit friends/relatives. These three biggest age groups for the LCCs account for a cumulative 66.7% (58/87) of the respondents in this leisure travel sub-purpose. The four remaining age groups were relatively small, with the 45–54 age group being the biggest of the smallest age groups, at 12.6% of the responses for this sub-purpose.

In a similar vein, reviewing leisure travel for the purpose of a holiday per model revealed some minor differences between the two models, largely in the 45–54 and 55–64 age groups, where there seemed to be a preference towards the FSCs. In quantitative terms, it was shown that a cumulative 33.8% of FSC respondents travelling for the purpose of a holiday fell into the 45–54 and 55–64 age groups, compared to only 16.5% for the LCCs. In terms of the 45–54 age group, the data shows that for respondents travelling for the purposes of a holiday, 73.9% (17/23) travelled on a FSC and 26.1% (6/23) travelled on a LCC. The data for the 55–64 age group similarly showed a preference towards the FSCs for holiday travel, with 66.7% (10/15) flying on a FSC and 33.3% (5/15) on a LCC. Reading table 8.9 carefully reveals that respondents in the younger age groups show a preference for LCCs when travelling for purposes of a holiday. The data in this case highlights the point that a cumulative 41.8% of LCC respondents travelling for the purpose of a holiday were in the 16–18 and 19–24 age groups compared to only 20.0% for the FSCs. Within the 16–18 age group, the data showed that 83.3% (10/12) of these respondents travelled on a LCC when travelling for a holiday, compared to 16.7% (2/12) on a FSC. Regarding the previous sentence, whilst this does support discussions in previous sections, it is however at a low total of 12 respondents and would thus require a larger sample to draw any meaningful conclusions.

Table 8.9 clearly shows that leisure travel for the purposes of studying is dominated by the 19–24 age group. In terms of LCCs, the 19–24 age group is the only age group that registers any respondents (16), whilst in terms of the FSCs, seven of the nine respondents (77.8%) fall into this age group, with the other two respondents falling in the 16–18 and 24–34 age groups. Focussing on the 19–24 age group, it is seen that the LCC model is the model of preference when it comes to travel for the purposes of studying, with 69.6% (16/23) of the respondents in this case selecting a LCC and 30.4% (7/23) selecting the FSC. Considering all the respondents travelling for the purpose of study across all the age groups, 64,0% (16/25) travelled on a LCC and 36.0% (9/25) on a FSC. Given the nature of studying and the associated expenses it does not come as a surprise that the LCC is the preferred alternative.

Whilst the sample size ($n$ = 8) is too small to make any meaningful conclusions based on the current data, it was observed that respondents travelling on a FSC for the purposes of culture/religion were from the 16–18 group, whilst respondents travelling for the same purpose on a LCC were from the 45–64 age range.

Overall, the findings in this sub-section seem to follow the general patterns associated with the stage of a person's life cycle. Further research is needed to determine if this is truly the case. The findings highlight various segments for the airlines that need to be pursued and, through the selection of appropriate segmentation variables, distinct actionable segments can be targeted.

#### 8.2.4.4 Cross tabulation of purpose of trip and average size of group per model

For purposes of completeness, the average group size for each sub-purpose of travel for the two models was identified. The cross tabulation is given in table 8.10 and focuses on (i) outlining the overall average group size per travel purpose and (ii) the average group size per model for each travel purpose.

**Table 8.10: Cross tabulation of purposes of travel and average group size**

| | Avg. people in group | FSC $\bar{x}$ = | LCC $\bar{x}$ = |
|---|---|---|---|
| Business: Meeting | 2.37 | 2.88 | 1.58 |
| Business: Conference | 4.03 | 5.09 | 1.44 |
| Business: Training | 3.17 | 2.46 | 4.00 |
| Business: Trade fair | 1.50 | 1.50 | 0.00 |
| Business: Employment | 2.39 | 1.83 | 3.38 |
| Business: Other | 1.92 | 1.57 | 2.75 |
| **Business: overall average** | **3.56** | **3.65** | **3.47** |
| Leisure: Sports | 14.41 | 13.18 | 15.64 |
| Leisure: Shopping | 1.00 | 1.00 | 0.00 |
| Leisure: Visiting friends/family | 2.23 | 1.97 | 2.33 |
| Leisure: Weekend break | 3.57 | 3.38 | 3.83 |
| Leisure: Holiday | 4.20 | 2.26 | 6.40 |
| Leisure: Studying | 1.54 | 1.38 | 1.63 |
| Leisure: Cultural/ religious | 17.75 | 40.00 | 10.33 |
| Leisure: Other | 1.65 | 1.45 | 1.83 |
| **Leisure: overall average** | **4.50** | **3.63** | **5.24** |
| **Overall average** | **4.17** | | |

Table 8.10 shows that the overall average group size, as indicated by the responses to this question, was 4.17. It is also shown that the average group size for respondents travelling for business was 3.56 compared to an average group size of 4.50 for those respondents travelling for the purposes of leisure. When comparing average group sizes for the different models it was noted that whilst the average group size for business travel on the FSCs and LCCs is roughly the same (3.65 vs. 3.47 respectively), there is a distinct difference when it comes to leisure travel and the average group size. In this case, the average group size when travelling for purposes of leisure on a FSC is 3.63, whilst on a LCC it is 5.24. Further insight into this difference can be obtained by looking at the various sub-purposes for each model.

The standout features of table 8.10 are the large average group sizes of respondents travelling for the purposes of sports (14.41) and religious/cultural purposes (17.75). This is not particularly surprising seeing as sports teams that travel with any support staff can easily number over 15 people (a soccer team has 11 players, a number of reserves, and managerial and support staff for example). The same general logic applies to travelling for purposes of culture/religion, where groups on pilgrimages can number well in excess of 20 people. Some of the other points that standout include the difference between travel for the purpose of conference attendance, which shows that those making use of a FSC travelled, on average, in a larger group than those travelling on a LCC (5.09 versus 1.44). This is in line with the findings in previous sections (8.2.4.2), particularly regarding the finding that FSCs are the preferred model of choice for business meetings and conference attendance.

Travel for the purposes of visiting friends/relatives shows that the average group size on a LCC was larger than for a FSC (2.33 vs. 1.97). This ties in with the findings discussed in section 8.2.4.2, which established that 62.2% of the respondents travelling for the purpose of visiting friends/relatives flew on a LCC, whilst only 37.8% flew on a FSC. It also ties in with age, which showed that the younger age groups selected a LCC when visiting friends/relatives, with the cost of travel influencing the decision-making (*see* also sections 8.2.5.2, 8.2.5.4 and 8.2.5.6). Travel for the purposes of a holiday showed a distinct difference in the average group size travelling on a FSC (2.26) versus a LCC (6.40). The analysis in section 8.2.4.2 showed that for respondents travelling for the purposes of a holiday, 54.4% travelled on a FSC and 45.6% on a LCC. The finding that larger groups travel on a LCC and smaller groups on a FSC suggests that the perceived lower price associated with the LCCs is one of the factors that possibly plays a role in model selection, particularly when the size of the groups exceeds two or three people.

#### 8.2.4.5 Cross tabulation of purpose of trip and the gender of the respondents

A further tabulation that can be considered is that of 'purpose of travel' and 'gender'. In this context, a few comments will be given on the distribution of the individual genders between the different purposes of travel per model. Table 8.11 represents the cross-tabulation generated for this discussion. Travel for the purposes of leisure and business are set out separately with business travellers representing 235 respondents and leisure travellers 448 respondents. The overall value of *N* for this analysis was 683.

Looking firstly at the respondents travelling for the purposes of business, table 8.11 shows that male respondents on a FSC travelled mainly for the purposes of meetings (49.4%) followed by employment (22.1%), with the remainder of business travel purposes accounting for the remainder of the respondents. Female respondents on a FSC were also predominantly travelling for purposes of attending a meeting (48.6%), with the remainder spread between the other sub-purposes. Male respondents travelling on a LCC showed a different pattern to male respondents on a FSC. Whilst meeting attendance was still the primary reason for travel (47.9%), the remainder of the respondents were more evenly spread out over the other sub-purposes of travel (conference, training, employment). LCC female respondents showed a similar pattern to female respondents on a FSC, with travel for the purpose of meetings being the main purpose (54.0%) and the other purposes accounting for much smaller numbers. Apart from the slight variation for male LCC respondents, there is no meaningful difference between the genders travelling on either of the models.

**Table 8.11: Cross tabulation of purpose of travel and gender per model**

| | | | | Gender | | |
|---|---|---|---|---|---|---|
| | | | | Male | Female | Total |
| Business | FSC | Meeting | Count | 38 | 18 | 56 |
| | | | Within gender | 49.4% | 48.6% | 49.1% |
| | | | % within row | 67.9% | 32.1% | 100.0% |
| | | Conference | Count | 8 | 6 | 14 |
| | | | Within gender | 10.4% | 16.2% | 12.3% |
| | | | % within row | 57.1% | 42.9% | 100.0% |
| | | Training | Count | 6 | 2 | 8 |
| | | | Within gender | 7.8% | 5.4% | 7.0% |
| | | | % within row | 75.0% | 25.0% | 100.0% |
| | | Trade fair | Count | 1 | 0 | 1 |
| | | | Within gender | 1.3% | 0.0% | 0.9% |
| | | | % within row | 100.0% | 0.0% | 100.0% |
| | | Employment | Count | 17 | 6 | 23 |
| | | | Within gender | 22.1% | 16.2% | 20.2% |
| | | | % within row | 73.9% | 26.1% | 100.0% |
| | | Other | Count | 7 | 5 | 12 |
| | | | Within gender | 9.1% | 13.5% | 10.5% |
| | | | % within row | 58.3% | 41.7% | 100.0% |
| | | Total | Count | 77 | 37 | 114 |
| | | | Within gender | 100.0% | 100.0% | 100.0% |
| | | | % within row | 67.5% | 32.5% | 100.0% |
| | LCC | Meeting | Count | 34 | 27 | 61 |
| | | | Within gender | 47.9% | 54.0% | 50.4% |
| | | | % within row | 55.7% | 44.3% | 100.0% |
| | | Conference | Count | 10 | 7 | 17 |
| | | | Within gender | 14.1% | 14.0% | 14.0% |
| | | | % within row | 58.8% | 41.2% | 100.0% |
| | | Training | Count | 14 | 6 | 20 |
| | | | Within gender | 19.7% | 12.0% | 16.5% |
| | | | % within row | 70.0% | 30.0% | 100.0% |
| | | Trade fair | Count | 1 | 0 | 1 |
| | | | Within gender | 1.4% | 0.0% | 0.8% |
| | | | % within row | 100.0% | 0.0% | 100.0% |
| | | Employment | Count | 11 | 9 | 20 |
| | | | Within gender | 15.5% | 18.0% | 16.5% |
| | | | % within row | 55.0% | 45.0% | 100.0% |
| | | Other | Count | 1 | 1 | 2 |
| | | | Within gender | 1.4% | 2.0% | 1.7% |
| | | | % within row | 50.0% | 50.0% | 100.0% |
| | | Total | Count | 71 | 50 | 121 |
| | | | Within gender | 100.0% | 100.0% | 100.0% |
| | | | % within row | 58.7% | 41.3% | 100.0% |

| | | | | Male | Female | Total |
|---|---|---|---|---|---|---|
| Leisure | FSC | Sports | Count | 12 | 11 | 23 |
| | | | Within gender | 7.3% | 12.6% | 9.1% |
| | | | % within row | 52.2% | 47.8% | 100.0% |
| | | Shopping | Count | 0 | 1 | 1 |
| | | | Within gender | 0.0% | 1.1% | 0.4% |
| | | | % within row | 0.0% | 100.0% | 100.0% |
| | | Visiting friends/relatives | Count | 50 | 21 | 71 |
| | | | Within gender | 30.3% | 24.1% | 28.2% |
| | | | % within row | 70.4% | 29.6% | 100.0% |
| | | Weekend break | Count | 9 | 5 | 14 |
| | | | Within gender | 5.5% | 5.7% | 5.6% |
| | | | % within row | 64.3% | 35.7% | 100.0% |
| | | Holiday | Count | 72 | 38 | 110 |
| | | | Within gender | 43.6% | 43.7% | 43.7% |
| | | | % within row | 65.5% | 34.5% | 100.0% |
| | | Studying | Count | 9 | 1 | 10 |
| | | | Within gender | 5.5% | 1.1% | 4.0% |
| | | | % within row | 90.0% | 10.0% | 100.0% |
| | | Cultural/ religious | Count | 1 | 1 | 2 |
| | | | Within gender | 0.6% | 1.1% | 0.8% |
| | | | % within row | 50.0% | 50.0% | 100.0% |
| | | Other | Count | 12 | 9 | 21 |
| | | | Within gender | 7.3% | 10.3% | 8.3% |
| | | | % within row | 57.1% | 42.9% | 100.0% |
| | | Total | Count | 165 | 87 | 252 |
| | | | Within gender | 100.0% | 100.0% | 100.0% |
| | | | % within row | 65.5% | 34.5% | 100.0% |
| | LCC | Sports | Count | 22 | 12 | 34 |
| | | | Within gender | 18.3% | 15.8% | 17.3% |
| | | | % within row | 64.7% | 35.3% | 100.0% |
| | | Shopping | Count | 1 | 1 | 2 |
| | | | Within gender | 0.8% | 1.3% | 1.0% |
| | | | % within row | 50.0% | 50.0% | 100.0% |
| | | Visiting friends/relatives | Count | 47 | 23 | 70 |
| | | | Within gender | 39.2% | 30.3% | 35.7% |
| | | | % within row | 67.1% | 32.9% | 100.0% |
| | | Weekend break | Count | 22 | 14 | 36 |
| | | | Within gender | 18.3% | 18.4% | 18.4% |
| | | | % within row | 61.1% | 38.9% | 100.0% |
| | | Holiday | Count | 16 | 13 | 29 |
| | | | Within gender | 13.3% | 17.1% | 14.8% |
| | | | % within row | 55.2% | 44.8% | 100.0% |
| | | Studying | Count | 6 | 7 | 13 |
| | | | Within gender | 5.0% | 9.2% | 6.6% |
| | | | % within row | 46.2% | 53.8% | 100.0% |
| | | Cultural/ religious | Count | 2 | 4 | 6 |
| | | | Within gender | 1.7% | 5.3% | 3.1% |
| | | | % within row | 33.3% | 66.7% | 100.0% |
| | | Other | Count | 4 | 2 | 6 |
| | | | Within gender | 3.3% | 2.6% | 3.1% |
| | | | % within row | 66.7% | 33.3% | 100.0% |
| | | Total | Count | 120 | 76 | 196 |
| | | | Within gender | 100.0% | 100.0% | 100.0% |
| | | | % within row | 61.2% | 38.8% | 100.0% |

Shifting attention to travel for the purposes of leisure, it is seen from table 8.11 that travel for the purpose of holiday is the main travel purpose for both male (43.6%) and female (43.7%) respondents travelling on a FSC. Visiting friends/relatives (VFR) accounts for the second most FSC passengers for both male (30.3%) and female (24.1%) respondents. The other leisure travel sub-purposes make up the remainder of the respondents in much the same proportions for each gender. In general, there are no meaningful differences between the genders for FSC respondents. Similarly, when analysing the LCC leisure travel respondents, the pattern for the male and female respondents is very similar, indicating no meaningful differences between the two genders. More specifically, VFR is the largest leisure travel purpose for male and female respondents (39.2% and 30.3% respectively), followed by weekend breaks (18.3% and

18.4%), sports (18.3% and 15.8%), and then holidays (13.3% and 17.1%). As can be seen, the proportions within each gender are very similar.

Considering all purposes of travel, it is clear that FSC respondents (both male and female) are focussed around two main purposes for both leisure and business travel, whilst LCC respondents tend to be dispersed across a wider range of travel purposes. This is in line with the discussions given in section 8.2.4.2.

### 8.2.5 Passenger booking issues

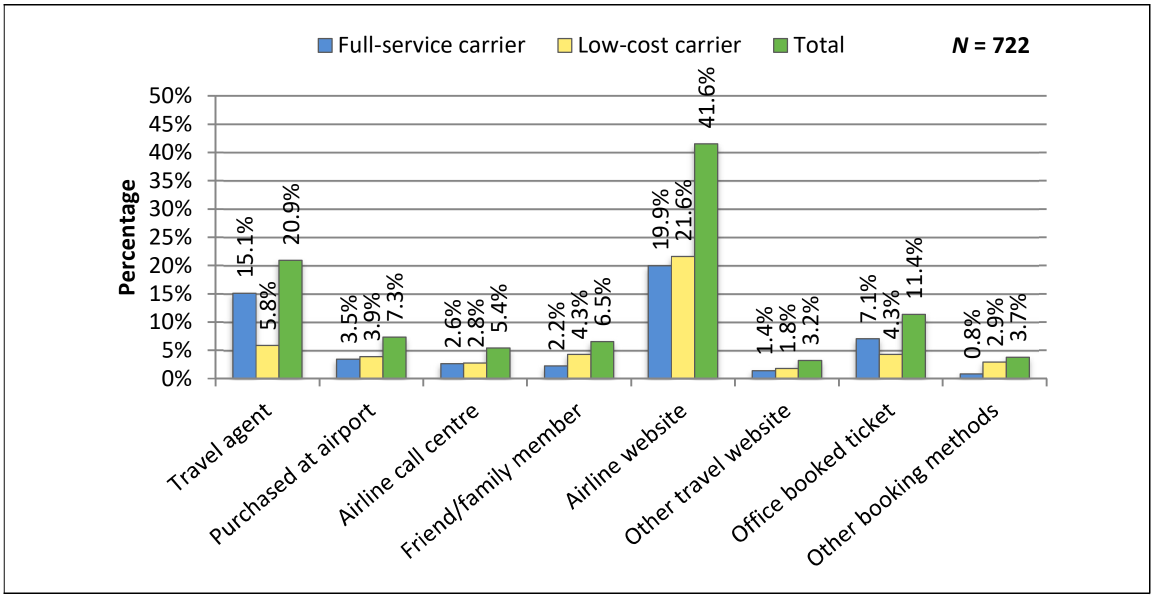
The findings highlighted in this section relate to questions 33–38 of the questionnaire. At issue in this section is the purchase of the ticket for the flight being undertaken on the day of interview. Specific topics that were addressed included how the ticket was booked, who paid for the ticket, fare comparisons, and the timing of the purchase. Each of these issues will be addressed based on the choice of airline model flown and thus provide insights into the considerations and behaviours of the respondents in terms of selecting a particular airline.

#### 8.2.5.1 Booking profiles

In the past, the use of a travel agent to book a ticket was the norm, with no other options being readily available. The rapid development of the Internet and other technological platforms changed this and had a significant influence on the development of the low-cost airline model. One of the key cost cutting areas within the LCC model is the use of the Internet as a self-booking platform, which effectively removes the need for travel agents and their associated commissions (although as the model is developing there is evidence of LCCs utilising travel agencies and other booking systems in addition to their own website).

Figure 8.18 provides a summary of the booking methods used by the valid respondents in the study (combined and per model, $N = 722$). Referring firstly to the combined figures (total), an overview of the booking methods used by the respondents shows that the most popular method used to book the ticket was the airline's website (41.6% of all responses to this question). If this figure is combined with tickets that were purchased via 'other' travel sites (for example, aggregator sites), then the use of the Internet as a booking method reflects as 44.8% of all bookings in this case. The use of a travel agent was the second most popular method, but was only used by 20.9% of the respondents. The airline call centres accounted for 5.4% of the bookings made by the respondents to this question.

**Figure 8.18: Methods used to obtain the airline ticket – combined and per model**




A few additional comments can be made regarding the content of figure 8.18. Firstly, the questionnaire recognised that some respondents might not have made the bookings themselves. In this case, the options made available to the respondent were 'office booked ticket', 'family/friend booked ticket', or 'other booking method'. Some respondents that had their ticket booked for them by their office, a family member, or a friend, were unable to say with any certainty which booking method was used. It is thus uncertain as to the exact percentage of these tickets that were booked via the Internet, a travel agent, or other means. Respondents that selected the 'other booking method' option mostly stated that they booked their ticket through a retail outlet (an option offered by Mango) or it was a frequent flyer redemption ticket. In some cases, the ticket was obtained via a benefits programme linked to a medical aid scheme or a financial institution (banking or insurance for example).

Figure 8.18, which focuses on the booking profile of the respondents expressed as a percentage of the total respondents that answered this question ($N = 722$), also shows the collected data divided according to the different airline models flown. From this splitting of the respondents according to model flown, a number of points begin to emerge. This analysis is at the product category level of competition.

As with the combined figures, the prominence of the Internet and travel agents is still clear when looking at the data from the individual model perspective. Referring firstly to the use of the airline's website to book the ticket, it can be seen that there is a fairly even split between respondents flying on a LCC (21.6% of all respondents to this question) and respondents on a FSC (19.9% of all respondents to this question). In the past, passengers traditionally relied on travel agents and other intermediaries to make their bookings because it was considered 'a complex purchase of a complex product'. The use of the Internet is shown to be the main method used by FSC respondents to make their bookings, thus indicating a shift in buying behaviour. This can be attributed to the development of the Internet, and an attempt by the FSCs to mimic the approach followed by the LCCs in order to simplify their air travel product and the consumer ticket purchasing process. Looking specifically at the use of a travel agent to book a ticket, it is clear that the use of a travel agent is utilised more by FSC respondents than LCC respondents (15.1% versus 5.8% of all respondents to this question). A closer look at the data in this regard (*see* figure 8.19) highlights the previous point by showing that for tickets booked via a travel agent, 72.2% were for travel on a FSC and 27.8% for travel on a LCC. The low level of use by LCC respondents to book a ticket via travel agent is not surprising because the use of the Internet by consumers to make their bookings is a key element of the LCC strategy (*see* section 6.3.5.3 of chapter 6). The use of a ticket purchasing channel beyond the airline's Internet site generally attracts a premium imposed by the airline and travel agent. The extent of the relatively low level of use of travel agents by FSC respondents is, as stated earlier, an interesting finding.

**Figure 8.19: Individual booking profiles divided per model (product category level)**

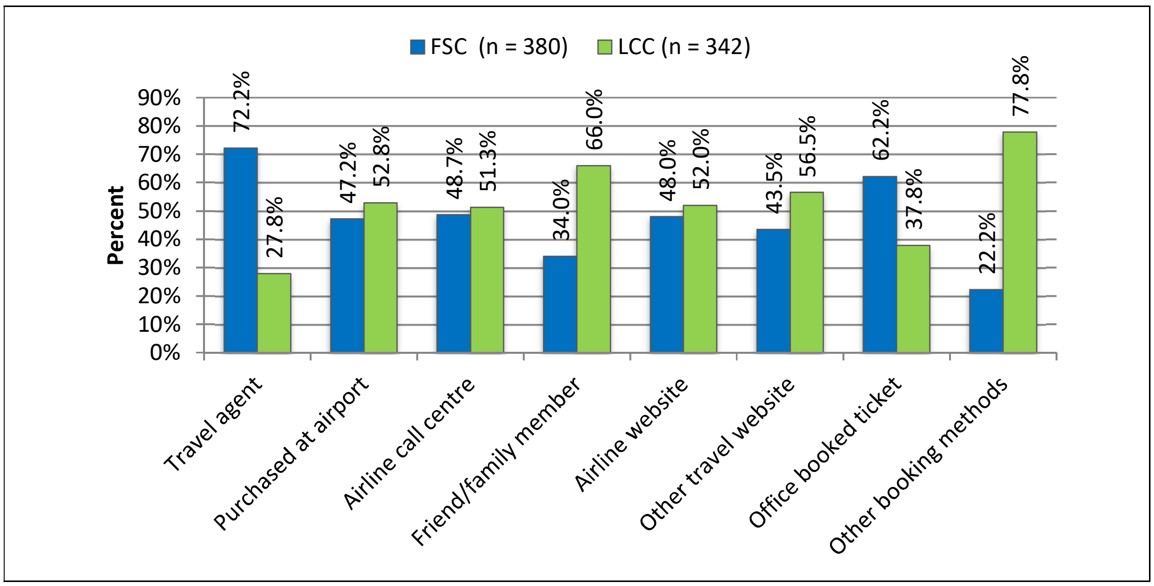


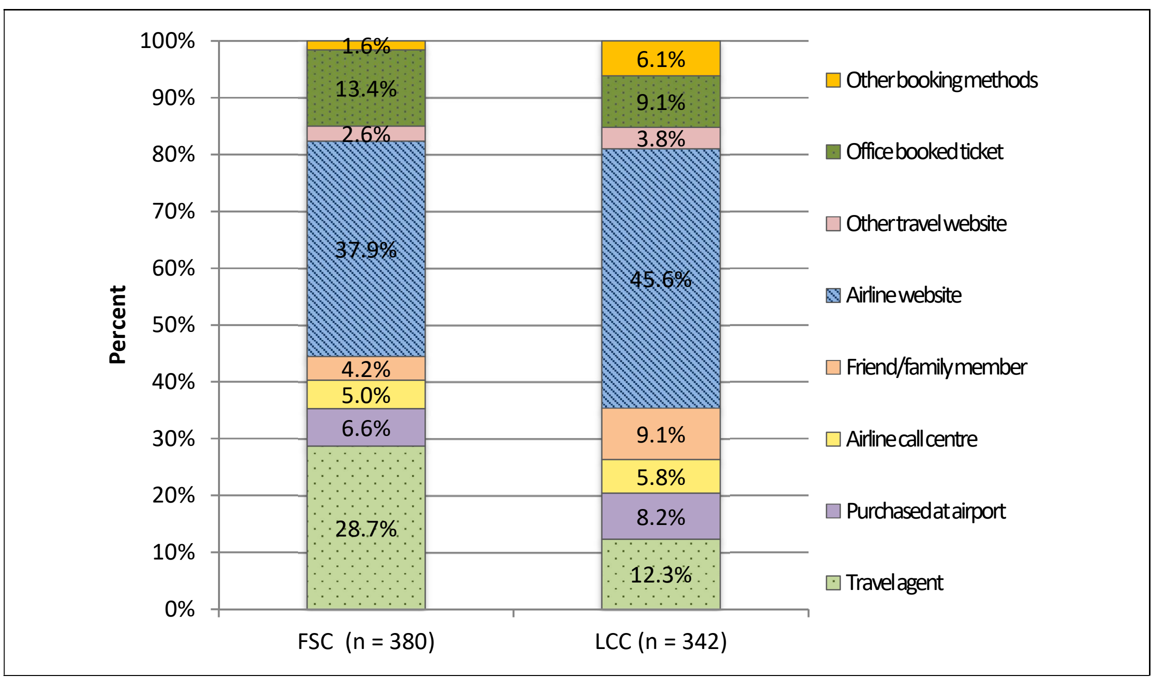

Figure 8.18 also shows an interesting contrast that can be seen between the cases when the ticket is purchased by family/friends for the respondent and when the company purchases respondent's ticket. Whilst the tickets purchased by family/friends ($n$ = 47; 6.5% of the total sample) and the respondent's office ($n$ = 82; 11.4% of the total sample) only represents 17.9% ($N$ = 722) of the total sample, they do still represent 129 respondents, which is sufficient to identify a clear trend. These statistics can be explored in more depth by considering figure 8.19. The feature that is noticeable from figure 8.19 is that when a respondent's ticket is purchased by friends/family, then the passenger is more than likely to be travelling on a LCC. The data in this case shows that for tickets purchased by friends/family, 66.0% (31/47) of the respondents were travelling on a LCC and 34.0% (16/47) were travelling on a FSC. When the ticket is purchased by the respondent's office, then the data shows that 62.2% (51/82) of the respondents were travelling on a FSC and only 37.8% (31/82) travelling on a LCC. This illustrates a distinct pattern of behaviour and it is assumed that it is based on issues such as pricing or business

policy. This would however need to be researched further to obtain a better understanding of the dynamics at work in this situation.

The only other booking option that stands out in figure 8.18 and figure 8.19 is the *'other booking method'* category. The figures show that of the respondents that selected 'other booking method' as their response, 21 of the 27 (77.8%) were flying on a LCC and 6 of the 27 (22.2%) on a FSC. As specified earlier, these respondents purchased their ticket via new and 'alternative' forms of distribution channels offered by the airline. In this case, it is mainly the LCCs that have developed innovative (disruptive) channels in order to make the process of booking tickets easier for the consumer. These new channels have been developed to cater to consumers that do not have access to the Internet to book online or a credit card to make the online purchase. Whilst still on a small scale, it can be seen that the LCCs are making an impact in this regard, particularly Mango, which is seeing success with its relationship with Shoprite Checkers where consumers can purchase tickets from any Shoprite, Checkers and Checkers Hyper Money Market Kiosks for example. Respondents on FSCs who specified 'other booking methods' made use of loyalty club or premium service benefits to redeem points for an air travel ticket.

Figures 8.18 and 8.19 explored the data from the perspective of the individual booking methods between the two models. The data can be explored further by considering the booking profiles within each model, that is, at product form level as opposed to the product category level explored in figure 8.19. The discussion in this regard is based on the details highlighted in figure 8.20 with *n* = 380 for FSCs and *n* = 342 for LCCs. The analysis in this case views each model in isolation from the other and focuses on the importance of a particular booking method to the individual model (product form).

**Figure 8.20: Booking profile of respondents within each model (product form level)**



The booking profile for LCCs shows that 45.6% (156/342) of the tickets booked by respondents travelling on a LCC were via the airline's website, which is by far the most preferred method used to book the ticket. Adding in the tickets purchased via other travel websites, the number of tickets booked online by respondents is just under 50%. It is speculated that this figure would be higher if it could be ascertained how many of the tickets purchased by family/friends and the office were made online. Irrespective of this, it is still a high proportion of the overall number of tickets purchased. However, when compared to the results of the O'Connell (2007) study, it is apparent that South Africa is still lagging behind its counterparts in Europe and Asia, where the online purchase of tickets was in excess of 77% in some cases. South Africa does indeed have some barriers to overcome with regard to Internet access. The South African carriers are attempting to overcome these barriers by introducing innovative (or disruptive) distribution channels that provide consumers with new alternatives to access the airlines products (as addressed earlier in this section) (*see* sections 6.2.3.3 and 6.3.5.1 for the discussions on disruption in the air transport industry). Whilst the overall trend for LCCs has been to move away from travel agents, the figures do show that 12.3% (42/342) of LCC respondents were still making use of this channel to purchase their tickets. This is a higher proportion than their counterparts in Europe and Asia as identified in the O'Connell (2007) study. This can partially be explained by the fact that not all consumers have access to the Internet and the low levels of credit card penetration in South Africa. Figures from Mastercard for 2015 show that 65% of all transactions in South Africa were cash and that credit card penetration sits at around 17% in South Africa (Alfreds, 2016). A further possible explanation for this relatively high proportion of ticket sales via travel agents, is that in the gradual move towards a more hybrid model, some LCCs are turning back to travel agents in a limited manner in order to tap into additional segments they would otherwise not have been able to access. Figure 8.20 also shows the contribution of third parties (office, family/friends) purchasing tickets for LCC respondents at a total of 18.1% (62/342), which is a proportionately large percentage of their overall ticket sales.

Viewing figure 8.20 from the perspective of the FSCs, it is seen that 37.9% (144/380) of the FSC respondents to this question purchased their ticket via the airline's website compared to the 28.7% (109/380) that made use of a travel agent. Compared to the previous discussion on LCCs, it is clear that travel agents still play a strong role for the FSCs in the selling of their tickets to the consumer. The importance of the business travel market to the FSCs is highlighted by with the number of 'office purchased' tickets, which make up 13.4% (51/380) of the booking profile for FSCs. Call centre ticket purchases made up a relatively small proportion of the ticket sales for both models (5.0% for tickets on a LCCs and 5.8% for tickets on a FSC). A final point relating to the booking profile of the FSCs and the LCC shows that the 'other booking methods' category accounts for a larger proportion of the LCC's ticket sales than the FSC's. As described earlier, the bulk of the 'other' category related to sales via new and unusual channels, particularly for the LCCs that used retail outlets to sell tickets. Figure 8.19 showed that LCCs obtained more ticket sales than FSCs via these unusual channels, whilst figure 8.20

highlights the point that these unusual channels form a much larger component of a LCC's booking profile (6.1% of LCC bookings or 21/342) than for the FSC's booking profile (1.6% of FSC bookings or 6/380). A study on these consumers using these new channels will provide useful insights for airlines and provide opportunities for more precise targeting.

From the data collected, and the discussions above, it would appear that there is evidence of a relationship between the airline model flown and how the travel booking was made. It is therefore essential that this relationship be tested for statistical significance. The inferential analysis for this topic is done in section 8.3.2.

#### 8.2.5.2 Importance attached to conducting price comparisons

Question 34 in the questionnaire sought to identify whether the respondents made price comparisons before making the final decision to purchase their ticket. With the increasing use of the Internet, there are many more opportunities for consumers to compare the prices of the various products and services (air travel included) before making a final purchase decision. This is made even easier with the various aggregator websites that collect information from numerous sites and present it to the searcher. The results from the analysis of the data collected from respondents answering this question will provide insights into the respondents' price sensitivity. This question had a screening component, where only those that booked the ticket themselves qualified to answer the question. Respondents that had the ticket purchased for them by friends/family or the office were not required to answer the question. When cross-tabulated with the model flown, the number of valid responses to this question was $N = 634$.

Viewing the overall results, it was seen that 56.2% of the total number of valid respondents to this question said that they did conduct price comparisons, whilst the remainder, 43.8%, stated that they did not. These statistics do not provide much insight on their own, but when viewing the results broken down per model, a clear difference between the two models can be seen (*see* table 8.12). When considering the results between the two models (product category level), the data showed that for those respondents that said that they did conduct price comparisons ($n = 356$), only 39.3% were travelling on a FSC ($n = 140$), whilst 60.7% were travelling on a LCC ($n = 216$). For those respondents that stated that they did not conduct price comparisons ($n = 278$), it was seen that 69.1% were travelling on a FSC ($n = 192$) and 30.9% were travelling on a LCC ($n = 86$). At this level of analysis, it is clear that respondents travelling on LCCs were more likely to conduct price comparisons than those travelling on a FSC. This relationship is tested for statistical significance in section 8.3.2.

The extent of price comparisons conducted by respondents within each model is also highlighted in table 8.12. This table views each model in isolation (product form level) and identifies the levels of importance placed on price comparisons (and therefore price) by respondents travelling on each model.

**Table 8.12: Cross tabulation of model flown and whether price comparisons were conducted prior to ticket purchase**

| | | | Price comparisons | | |
|---|---|---|---|---|---|
| | | | **Yes** | **No** | **Total** |
| **Type carrier** | **FSC** | *n* | 140 | 192 | 332 |
| | | % within carrier (row) | 42.2% | 57.8% | 100.0% |
| | | % within Q34 (column) | 39.3% | 69.1% | 52.4% |
| | **LCC** | *n* | 216 | 86 | 302 |
| | | % within carrier (row) | 71.5% | 28.5% | 100.0% |
| | | % within Q34 (column) | 60.7% | 30.9% | 47.6% |
| | **Total** | *N* | 356 | 278 | 634 |
| | | % within row | 56.2% | 43.8% | 100.0% |
| | | % within Q34 (column) | 100.0% | 100.0% | 100.0% |

From table 8.12 it can be seen that respondents travelling on a FSC conducted fewer price comparisons prior to purchasing a ticket than respondents travelling on a LCC. Looking specifically at respondents travelling on a LCC it can be seen that they were highly likely to conduct price comparisons prior to purchasing a ticket, with 71.5% stating that they conducted price comparisons and only 28.5% stating that they did not. In terms of managing and marketing a LCC, the point that price comparisons play such a large role in the decision-making process puts a large amount of pressure on these airlines to get their pricing strategies correct and highlights the importance of their yield management systems. In contrast to this, only 42.2% of the FSC respondents stated that they did conduct price comparisons prior ticket to purchase. Whilst 42.2% is still a relatively high percentage, this implies that 57.8% of the FSC respondents purchased a ticket based on the price offered to them by the first airline, agent, or site they searched. This suggests that the FSC respondent's purchase decision is based on considerations that are more important to them than price. This point is explored further when dealing with the findings from question 17 in section 8.2.7.

#### 8.2.5.3 Ticket purchase time frame

An attempt was made to establish the amount of time respondents purchased their tickets in advance of the date of their flight. In most cases, it was possible to obtain the exact period by referring to the ticket that the respondent had with them. With others, this was not possible and in these cases the interviewers relied on the respondent to give the best possible estimation of when they purchased the ticket. The findings are summarised in table 8.13. The means in the table have been rounded to whole numbers as the topic refers to number of days prior to purchase.

**Table 8.13: Mean number of days ticket purchased in advance of travel (per model)**

| Q35_S1: 35. How long ago did you book the ticket? | | | | | | |
|---|---|---|---|---|---|---|
| **Type carrier** | **Mean** | **Mean (rounded)** | **Median** | **Minimum** | **Maximum** | **Std. Deviation** |
| **FSC** | 41.65 | 42 | 30.00 | 0 | 365 | 51.978 |
| **LCC** | 34.20 | 35 | 21.00 | 0 | 365 | 46.216 |
| **Total (*N* = 636)** | 38.02 | 39 | 21.00 | 0 | 365 | 49.356 |

From the data that was collected it was calculated that, for the valid responses to this question ($N = 636$), the overall mean number of days that tickets were purchased in advance of the flight was 39 days. Respondents travelling on a FSC purchased their tickets a mean of 42 days in advance of their date of travel. This is in contrast to respondents travelling on a LCC, who purchased their tickets a mean of 35 days in advance of the date of travel. This equates to a difference of 7 days (in terms of the mean days) between the two models.

The range of overall responses varied between the tickets being purchased on the day of travel to a ticket purchased a full year in advance. The spread of the two extremes (early and late purchasing) was across both models with no particular dominating, which suggests that those decisions were based on price. The dispersion of the respondents in terms of the number of days they purchased their tickets in advance is summarised in table 8.14.

**Table 8.14: Dispersion of the number of days in advance that respondents purchased their tickets (per model)**

| FSC | | | | | | LCC | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Days** | **Count** | **Valid Percent** | **Cum percent** | **Cum count (number booked)** | **Cumulative descending (% booked)** | **Days** | **Count** | **Valid Percent** | **Cum Percent** | **Cum count (number booked)** | **Cumulative descending (% booked)** |
| 0* | 5 | 1.5 | 1.5 | 325 | 100.0% | 0* | 5 | 1.6 | 1.6 | 309 | 100.0% |
| 1 | 7 | 2.2 | 3.7 | 320 | 98.5% | 1 | 25 | 8.1 | 9.7 | 304 | 98.4% |
| 2 | 8 | 2.5 | 6.2 | 313 | 96.3% | 2 | 8 | 2.6 | 12.3 | 279 | 90.3% |
| 3 | 5 | 1.5 | 7.7 | 305 | 93.8% | 3 | 9 | 2.9 | 15.2 | 271 | 87.7% |
| 4 | 3 | .9 | 8.6 | 300 | 92.3% | 4 | 10 | 3.2 | 18.4 | 262 | 84.8% |
| 5 | 6 | 1.8 | 10.5 | 297 | 91.4% | 5 | 5 | 1.6 | 20.1 | 252 | 81.6% |
| 6 | 2 | .6 | 11.1 | 291 | 89.5% | 6 | 1 | .3 | 20.4 | 247 | 79.9% |
| 7 | 46 | 14.2 | 25.2 | 289 | 88.9% | 7 | 39 | 12.6 | 33.0 | 246 | 79.6% |
| 8 | 2 | .6 | 25.8 | 243 | 74.8% | 8 | 2 | .6 | 33.7 | 207 | 67.0% |
| 10 | 1 | .3 | 26.2 | 241 | 74.2% | 10 | 2 | .6 | 34.3 | 205 | 66.3% |
| 12 | 1 | .3 | 26.5 | 240 | 73.8% | 12 | 1 | .3 | 34.6 | 203 | 65.7% |
| 14 | 34 | 10.5 | 36.9 | 239 | 73.5% | 14 | 33 | 10.7 | 45.3 | 202 | 65.4% |
| 18 | 1 | .3 | 37.2 | 205 | 63.1% | 21 | 36 | 11.7 | 57.0 | 169 | 54.7% |
| 21 | 28 | 8.6 | 45.8 | 204 | 62.8% | 28 | 3 | 1.0 | 57.9 | 133 | 43.0% |
| 28 | 6 | 1.8 | 47.7 | 176 | 54.2% | 30 | 51 | 16.5 | 74.4 | 130 | 42.1% |
| 30 | 66 | 20.3 | 68.0 | 170 | 52.3% | 40 | 1 | .3 | 74.8 | 79 | 25.6% |
| 35 | 1 | .3 | 68.3 | 104 | 32.0% | 42 | 1 | .3 | 75.1 | 78 | 25.2% |
| 40 | 1 | .3 | 68.6 | 103 | 31.7% | 45 | 2 | .6 | 75.7 | 77 | 24.9% |
| 42 | 2 | .6 | 69.2 | 102 | 31.4% | 60 | 33 | 10.7 | 86.4 | 75 | 24.3% |
| 45 | 2 | .6 | 69.8 | 100 | 30.8% | 75 | 2 | .6 | 87.1 | 42 | 13.6% |
| 56 | 1 | .3 | 70.2 | 98 | 30.2% | 90 | 25 | 8.1 | 95.1 | 40 | 12.9% |
| 60 | 46 | 14.2 | 84.3 | 97 | 29.8% | 105 | 1 | .3 | 95.5 | 15 | 4.9% |
| 90 | 29 | 8.9 | 93.2 | 51 | 15.7% | 120 | 6 | 1.9 | 97.4 | 14 | 4.5% |
| 120 | 9 | 2.8 | 96.0 | 22 | 6.8% | 150 | 1 | .3 | 97.7 | 8 | 2.6% |
| 150 | 2 | .6 | 96.6 | 13 | 4.0% | 180 | 4 | 1.3 | 99.0 | 7 | 2.3% |
| 180 | 4 | 1.2 | 97.8 | 11 | 3.4% | 300 | 1 | .3 | 99.4 | 3 | 1.0% |
| 240 | 2 | .6 | 98.5 | 7 | 2.2% | 365 | 2 | .6 | 100.0 | 2 | 0.6% |
| 270 | 1 | .3 | 98.8 | 5 | 1.5% | | | | | | |
| 300 | 2 | .6 | 99.4 | 4 | 1.2% | | | | | | |
| 365 | 2 | .6 | 100.0 | 2 | 0.6% | | | | | | |
| **Total** | 325 | 100.0 | | | | **Total** | 309 | | 100.0 | | |
| **Missing** | 58 | | | | | **Missing** | 37 | | | | |
| **Total** | 383 | | | | | **Total** | 346 | | | | |

* 0 Refers to day of travel

The overall calculations show that 29.1% of the respondents purchased their ticket in the week prior to travel. This is broken down to 25.2% of FSC respondents and 33.0% of LCC respondents. Interesting to note, is that the analysis shows that a relatively high number of LCC respondents (25 or 8.1% of the valid LCC respondents) purchased their ticket on the day prior to travel. Only seven FSC respondents purchased their ticket on the day prior to travel. A further review of table 8.14 shows that a relatively large number of both FSC (14.2%) and LCC (12.6%) respondents purchased their tickets 7 days prior to travel. Differences between the two models can be seen at the weekly intervals, where at two weeks (14 days) before the date of travel, 73.5% of all valid FSC respondents had already purchased their tickets, whilst only 65.4% of all valid LCC respondents had purchased their tickets. Three weeks prior to travel (21 days), 62.8% of all valid FSC respondents had purchased their tickets, compared to 54.7% of all valid LCC respondents. At the one month in advance purchase stage (30 days), the gap between the two models was relatively wide, with 52.3% of the valid FSC respondents having purchased their tickets, compared to only 42.1% of the valid LCC respondents. A greater proportion of FSC respondents purchased their tickets at the 30 days in advance of travel point than did LCC respondents. Thirty days advance-purchase was the most frequently identified advance-purchase period for respondents on both models. For both models, it is clear that between two weeks and one month before travel is the main ticket purchasing period (41.5% of the FSC respondents vs. 39.8% of the LCC respondents). Both models also showed sales at the 2–3 months advance-purchase period (23.1% FSC respondents vs. 19.4% LCC respondents). At the 2-months advanced-purchase period, 29.8% of the valid FSC respondents had purchased their tickets, compared to 24.3% of the valid LCC respondents that had purchased their tickets. Overall, it is clear that the LCC respondents tend to purchase their tickets to travel closer to the date of travel than do FSC respondents.

#### 8.2.5.4 Price paid for tickets by respondents

The research attempted to establish if there was any difference between the average price paid for a ticket on a LCC and a FSC. Based on the nature of the two models, and the nature of the services that are offered (or not offered as the case may be), it is logical to suggest that the average fare paid on a LCC should be lower than that paid for a ticket on a FSC. As discussed in chapter 6, lower fares are one of the bases of competition for the LCC model.

In processing the data for this question, it was necessary to remove some outliers from the dataset in order to maintain the integrity of the data. In this case, the outliers were the amounts given by respondents that were flying as part of a connecting international journey and the amount that was paid for the ticket was an all-inclusive amount, which included the international and domestic sectors of the trip. It was impossible to separate out the parts that constituted the domestic and international sectors from the fare so they were therefore excluded from the calculations. With the outliers removed and responses marked as missing, the valid responses for this question was $N = 526$ (some respondents did not know the price of the ticket as they did not purchase it themselves and some did not want to share the figure).

A review of the data that was collected shows that, for all valid responses to this question, the mean fare paid was ZAR 1 255,82. By dividing the respondents according to the model flown it was calculated that respondents flying on a FSC paid an average of ZAR 1 538,96 for their ticket and respondents flying on a LCC paid an average of ZAR 1 005,15 for their ticket (*see* table 8.15). This represents a difference of ZAR 533,81 between the two models, which is a considerable amount of money, especially when price plays such an important role in the decision to fly. This topic is explored further in section 8.2.5.5 and in section 8.2.10, which deals with price sensitivity. Expressed as a percentage, this means that, on average, the FSC fare was 53.1% more expensive than the LCC fares. A review of the individual responses of respondents to this question shows that on many occasions the fare on the FSC was lower than that on a LCC. The key difference in this case is that the 'high fares' on a FSC were much higher than those on a LCC, thus increasing the mean fare of the FSCs. More insight in to the differences between the two models in terms of the price paid for a ticket can be obtained from table 8.15.

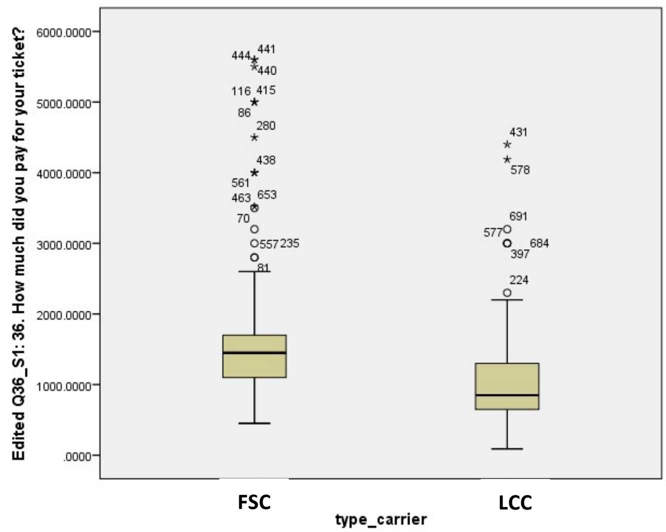
**Table 8.15: Average ticket price per model type**

| | | Type of carrier | Statistic |
|---|---|---|---|
| **Edited Q36_S1: 36. How much did you pay for your ticket?** | **FSC** | Mean | 1538.96 |
| | | Median | 1450.00 |
| | | Std. Deviation | 828.88 |
| | | Minimum | 450.00 |
| | | Maximum | 5600.00 |
| | | Range | 5150.00 |
| | | Interquartile Range | 600 |
| | | Skewness | 2.853 |
| | | Kurtosis | 9.998 |
| | **LCC** | Mean | 1005.15 |
| | | Median | 850.00 |
| | | Std. Deviation | 552.69 |
| | | Minimum | 90.00 |
| | | Maximum | 4400.44 |
| | | Range | 4310.44 |
| | | Interquartile Range | 650 |
| | | Skewness | 2.397 |
| | | Kurtosis | 9.802 |

Table 8.15 highlights the difference in the average price of tickets for the two model types. It also highlights that for both models the median ticket price is lower than the mean fare. This indicates that there were a number of tickets that were much more expensive than the majority of the tickets and have inflated the value of the mean ticket price. This does make sense in the context of the airline industry where airlines aggressively manage their ticket yields. In general, the trend is for fares to get more expensive closer to the date of departure. The distinction between the two models in terms of the fares paid by respondents can also be seen in the calculated standard deviations. In this case, it is seen that the standard deviation from the mean for FSCs was 828.9 compared to 552.7 for the LCCs. This gives

a clear indication that the fares paid by respondents on LCCs were more closely clustered around the mean than for FSCs, which showed a much larger dispersion around the mean. The box plot for the data represented in table 8.15 is represented in figure 8.21.

**Figure 8.21: Boxplot of the fare paid by respondents divided per model**




The data relating to the fare paid by the respondents can be further analysed by considering the mean and median fares paid for return and one-way tickets per model. This analysis is summarised in table 8.16. This table shows that the mean fares for both one-way and return tickets are substantially higher on the FSCs than on the LCCs. More specifically, the table shows that the mean <u>one-way</u> fare for the FSCs is a lot more expensive than the mean one-way fare for the LCCs (ZAR 1 514,32 vs ZAR 1 137,15). This difference between the two models is more noticeable in terms of the mean price paid for <u>return</u> tickets where the mean fare paid for a return ticket on a FSC was ZAR 1 618,29 compared to ZAR 819,75 on a LCC. It is also noticeable that, in terms of FSCs, the mean fare paid by respondents for a FSC return ticket (ZAR 1 618,29) is only marginally more expensive than the mean fare for a FSC one-way ticket (ZAR 1 514,32). In contrast to this, the mean fare for a return ticket on a LCC (ZAR 819,75) was substantially cheaper than the mean fare for a one-way ticket on a LCC (ZAR 1 137,15).

**Table 8.16: Mean and median fare paid per ticket type divided per model**

| How much did you pay for your ticket? | | | | |
|---|---|---|---|---|
| **Type carrier** | **Q3_S1: 3. Is your journey:** | **Mean** | **Median** | **Std. Deviation** |
| **FSC** | One way | 1514.32 | 1495.00 | 678.81 |
| | Return | 1618.29 | 1400.00 | 1110.37 |
| | Total | 1545.42 | 1450.00 | 830.63 |
| **LCC** | One way | 1137.15 | 1000.00 | 625.34 |
| | Return | 819.75 | 700.00 | 378.32 |
| | Total | 1001.79 | 833.50 | 556.00 |
| **Total** | One way | 1334.38 | 1300.00 | 679.57 |
| | Return | 1128.18 | 950.00 | 843.62 |
| | Total | 1258.86 | 1200.00 | 749.68 |

In the case of all ticket types and models, the mean value is higher than the median suggesting a number of outliers to the higher end of the fare spectrum. The points in the previous paragraph take on further importance when viewed in the context of the calculated standard deviations for each ticket type per model. Overall, when comparing the two models, it is seen that the standard deviation from the mean for FSCs is ZAR 830,63 compared to that of ZAR 556,00 for the LCCs. This implies that the fares on a LCC are, in general, more tightly clustered around the mean than for a FSC, and thus operate within a tighter price band in general. By viewing the standard deviations for the different ticket types a number of interesting observations can be made. Firstly, the standard deviation from the mean for one-way fares on a FSC is ZAR 678,81 compared to ZAR 625,34 on a LCC. Whilst there is a difference, it is not an extremely large difference. The main difference between the two models is in terms of return tickets, where the standard deviation from the mean for a FSC return ticket is ZAR 1 110,37 versus only ZAR 378,32 on a LCC. This difference is extremely large and indicates a wide band of return fares for FSCs compared to LCCs, where the fare for a return ticket is a lot more standardised.

Considering the data from a product form perspective, LCCs are focussed on selling one-way sectors with return tickets technically being sold as two one-way tickets. FSCs focus on selling return tickets, with one-way tickets being less preferred, and generally priced disproportionately higher compared to a return ticket. This is seen in the small difference between the mean one-way and mean return fares for FSCs (ZAR 1 514,32 vs ZAR 1 618,29). Whilst there is little difference in terms of the mean fare for each ticket type on a FSC, the standard deviations reflect that FSCs have a wide range of return ticket fares when compared to the one-way fares on offer (ZAR 1 110,37 vs ZAR 678,81). This is contrasted with LCCs, where the difference between the mean one-way fare and the mean return fare is quite large (ZAR 1 137,15 vs ZAR 819,75). Viewing the standard deviations for these two ticket types for the LCCs, it is seen that the difference between them is relatively small (ZAR 625,34 vs ZAR 378,32) compared to the FSCs. In the case of LCCs it is interesting to note that the return tickets have a smaller standard deviation from the mean than the one-way tickets, which is the opposite situation to the FSCs, where the return tickets had a higher standard deviation from the mean compared to the one-way tickets. The analysis from both perspectives shows that LCC fares are a lot more standardised and are set in a much smaller band (closer to the mean) than for FSCs. Again, it also needs to be kept in mind that airlines actively manage their yields, and therefore actively adjust their fares, and that these fares are priced according to the time of the flight and the demand at that time.

Figure 8.22 and figure 8.23 serve as a visual representation of the data per ticket type divided per model as outlined in table 8.16. Particularly clear from these figures is the lower fare paid for one-way tickets on LCCs and the narrower range within which these one-way fares on LCCs are clustered. Even with the extreme outliers for the data excluded, the difference between the highest fares paid for travel on the two models is apparent. Looking at the FSCs it can be seen that the extreme ticket prices are fairly evenly spread out for the return tickets but cluster at the highest point for the one-way tickets. This visual representation of the higher fares shows why the standard deviation for the FSC return tickets is so high. For the LCC return ticket, the extreme ticket prices are shown to be evenly spread out to the top fare paid, but for the one-way tickets the higher fares are clustered much closer together around the maximum value when compared to the FSCs. Again, this visually confirms that the standard deviations for LCCs are much smaller than for the FSCs. This seems to indicate that the FSCs have a lot more flexibility when it comes to the pricing of one-way fares compared to LCCs (a point supported by the means and medians given in table 8.16.

**Figure 8.22: Boxplot of the fare paid per ticket type (return vs one-way) for FSCs**

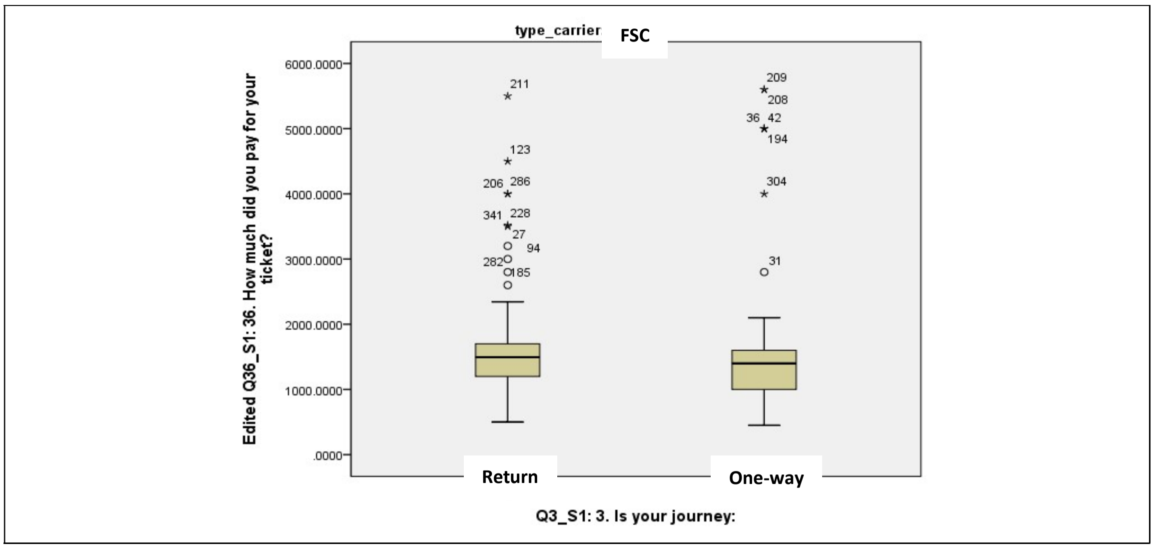
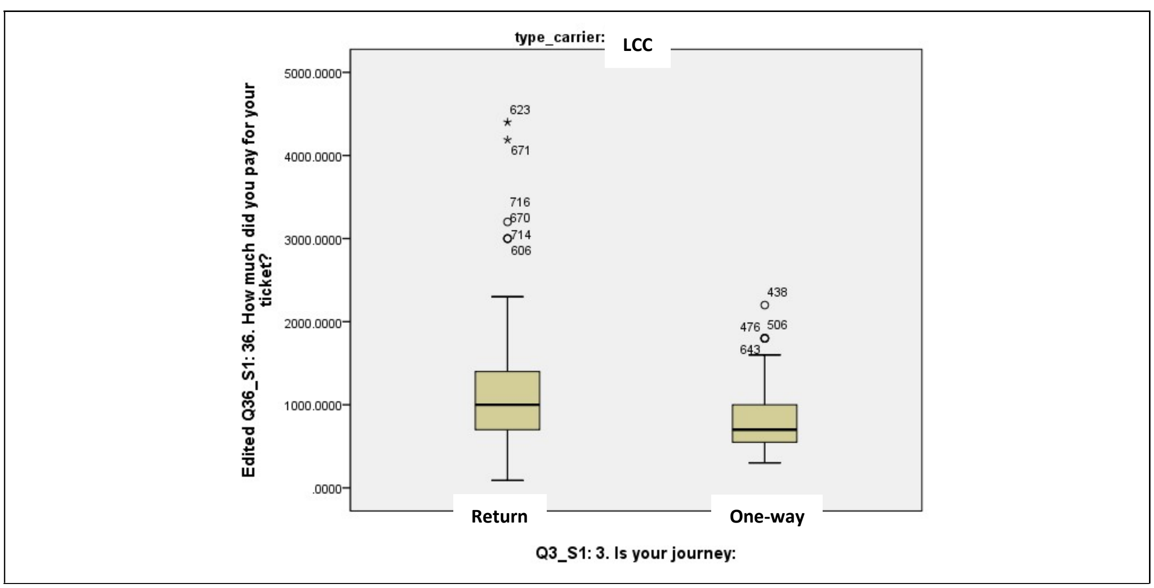



**Figure 8.23: Boxplot of the fare paid per ticket type (return vs one-way) for LCCs**

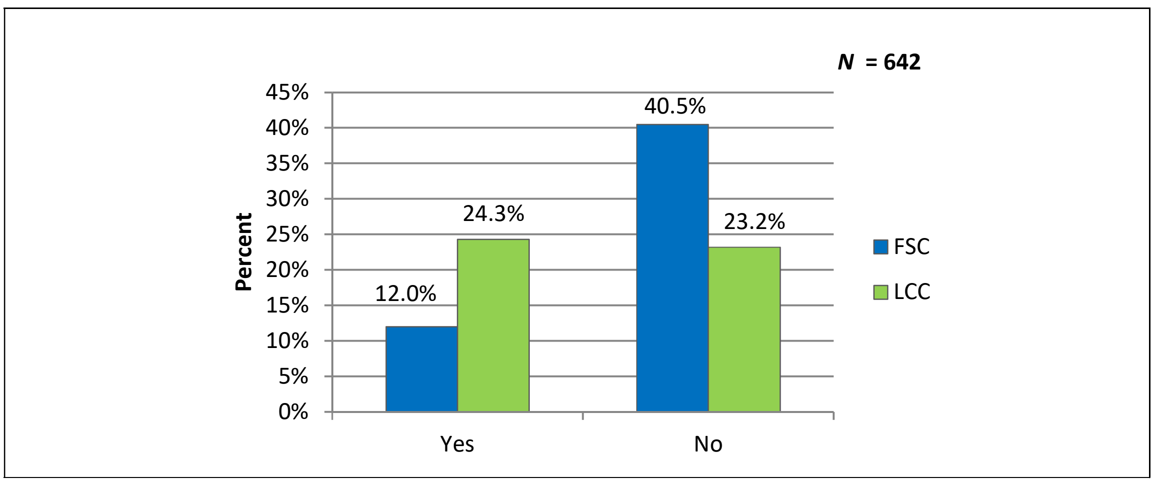


#### 8.2.5.5 Influence of ticket price on the decision to travel

Continuing with the issues relating to the purchase of the ticket for the flight, the research attempted to establish whether the decision to travel was influenced by the price of the ticket. This will give insight into the price sensitivity of the respondents and whether there is a difference in price sensitivity between respondents travelling on the two models. The topic of price sensitivity is explored in more detail in the analysis of questions 29–32 in section 8.2.10.

An analysis of the total valid responses for this question ($N = 642$) showed that 36.3% of the respondents stated that the final decision to go on the trip was influenced by the fare, whilst 63.7% of the respondents stated that it was not. In this context, the percentages do not give too much insight into the different behaviours of the respondents utilising the different models. When exploring the data further it can be seen that there are distinct differences between the two models regarding the influence of price on the decision to travel or not to travel. The overall distribution of all valid responses is depicted in figure 8.24. This figure shows that of the 642 valid responses to this question, 40.5% (260) were travelling on a FSC and stated that their decision to go on the trip was not influenced by the fare. This contrasts with the 23.2% (149) of total respondents that were travelling on a LCC and answered ‘no’ to the question. For those respondents that answered ‘yes’, it is seen that the trips by respondents travelling on a LCC were more likely to be influenced by price than respondents travelling on a FSC.

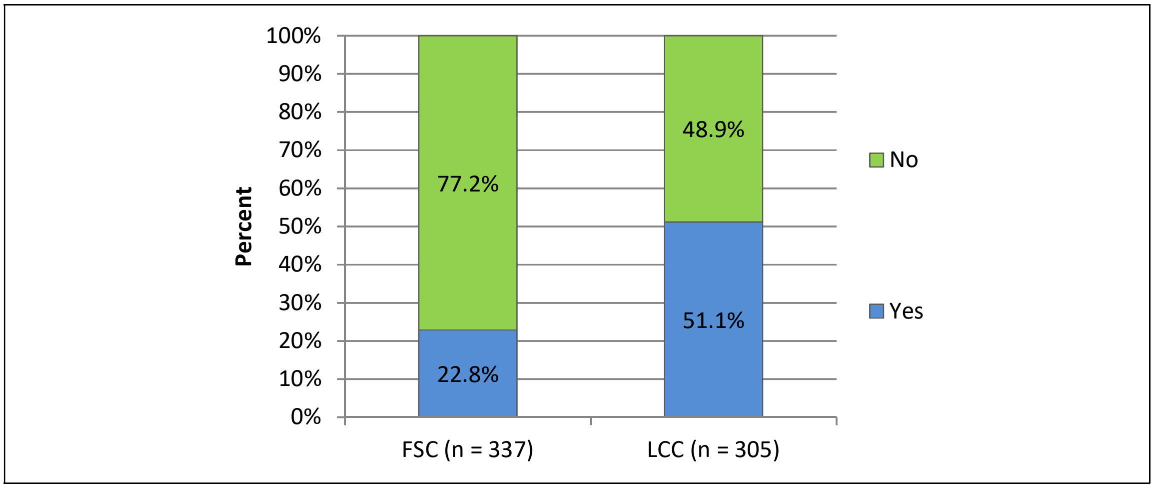
**Figure 8.24: Extent to which the trip was influenced by the price of the ticket expressed as a percentage of the total valid responses to the question**




Taking just the respondents that answered ‘Yes’ into account ($n = 233$), 33.0% were travelling on a FSC and 67.0% on a LCC. When considering just the respondents that answered ‘No’ ($n = 409$), the data shows that 63.6% were travelling on a FSC and 36.4% on a LCC. At this preliminary stage of the analysis it can be seen that respondents on a LCC tended to give the price of the ticket a lot more consideration than those flying on a FSC.

A closer look at the data within each model individually (product form level) shows a clear picture in terms of the influence of price on the respondents' decision to travel (*see* section 8.2 for explanation on product form level). This association is highlighted in figure 8.25.

**Figure 8.25: Influence of price on the decision to travel within each model (product form)**




The difference between the two models was hinted at in figure 8.24 with LCC respondents showing a much higher tendency towards being price sensitive than respondents on FSCs. Interpreting figure 8.25 it is shown on the one hand that for respondents flying on a FSC, only 22.8% stated that the decision to travel was influenced by the price of the ticket, whilst 77.2% stated that ticket price was not an influence. This indicates an overall lower level of price sensitivity on the part of FSC respondents and suggests that the decision to fly a particular airline is based on aspects other than price. This is explored further in the analysis of the data collected for question 17 (*see* section 8.2.7). On the other hand, the data relating to respondents flying on a LCC showed that 51.1% of them stated that price was an influencing factor in the decision to travel. This leaves 48.9% of the LCC respondents stating that price was not an influencing factor in the decision to travel. Interpreting these findings, it can be seen that respondents on a LCC place a far greater emphasis on price when making their travel decisions. When comparing the discussed differences between the responses of FSC respondents and LCC respondents, the overall difference in the influence of price is distinct, with LCC respondents showing a much higher level of price awareness, whilst for FSC respondents, something other than price was the determinant factor when deciding to undertake the trip. The suggested association between the model flown and the influence of ticket price on the decision to travel is tested for statistical significance in section 8.3.2 (v).

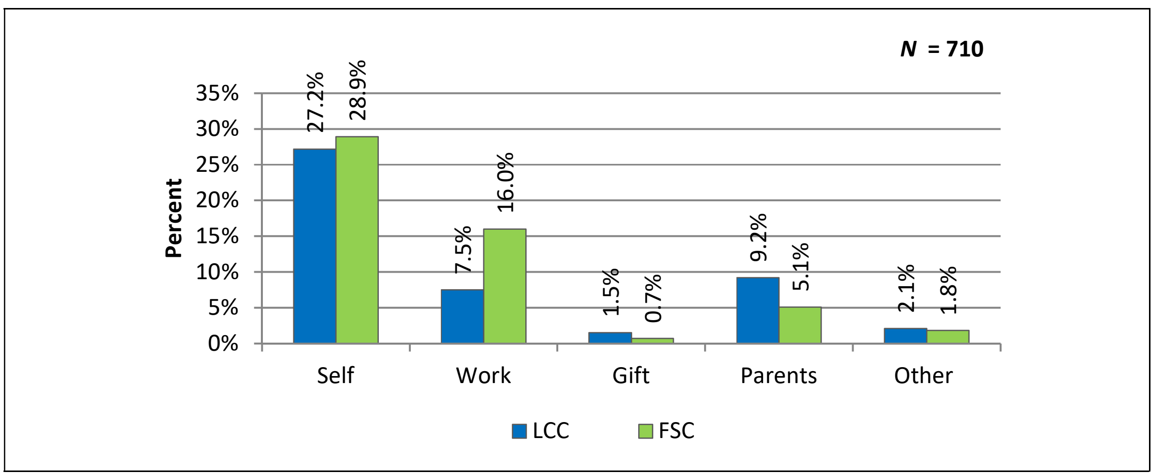
It must be kept in mind that the influence of price on the decision to travel can be viewed from two perspectives: Firstly, from the point of view that the respondents want to travel but don't because they cannot find an acceptable/affordable fare. Secondly, the respondent was not intending to fly but an affordable/acceptable fare was identified and a decision was made to travel. From either perspective, price is an influencing factor with opportunity costs weighing on the consumer's mind.

#### 8.2.5.6 Who paid for the tickets?

To provide greater insights into the booking processes followed by the respondents, the questionnaire asked that they identify who paid for their ticket. It was expected that the respondents themselves would have paid for most of the tickets, but it was uncertain as to the number of tickets that were paid for by third parties (parents or work for example) and if there would be a difference between the airline models.

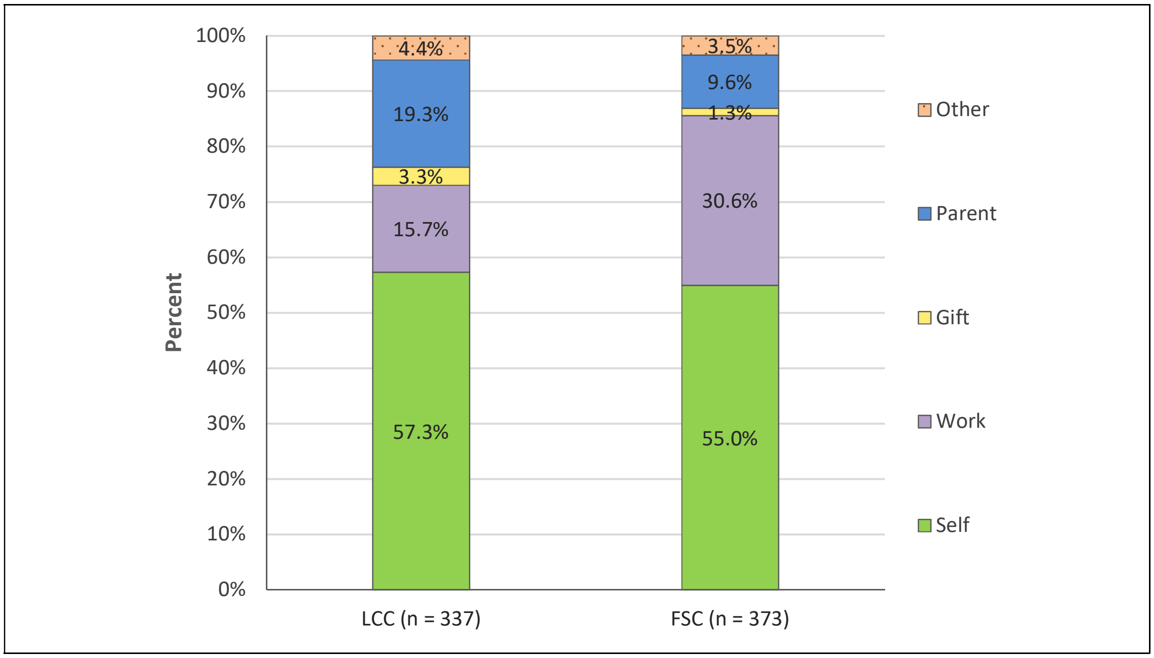
An overview of the data shows that, for the total valid responses to this question ($N$ = 710), 56.1% of the flights were paid for by the respondents themselves (27.2% for LCCs and 28.9% for FSCs). This was followed by 23.5% of the total flights being paid for by the respondent's company (7.5% LCC versus 16.0% FSC) and 14.3% being paid for by the respondent's parents (9.2% LCC versus 5.1% FSC). Tickets given as gifts, and those that fell into the category of 'other', represented a small proportion of the sources of payment (2.2% and 3.9% respectively). The category 'other' contains items like frequent flyer ticket redemptions, loyalty programme redemptions, and friends for example. For the purposes of analysis, the category of 'other' has been included in the descriptive analysis to provide the overall picture, but for purposes of the inferential analysis it has been excluded as it was not possible to identify what the specific 'other methods' were. Figure 8.26 provides a summarised representation of the distribution of responses in terms of who paid for the respondent's ticket.

**Figure 8.26: Distribution of responses in terms of who paid for the respondent's ticket**




From these overall classification percentages, it can be seen that whilst there was no discernible difference between the two models in terms of self-payment, it was not the case where the company paid for the ticket or where parents paid for the ticket. More insight can be obtained into this issue by considering the prominence of each source of payment from within each model individually. Figure 8.27 shows this distribution.

**Figure 8.27: Distribution of 'who paid' for the tickets within each model**




* 'other' includes items like frequent-flyer-miles redemptions and friends for example.

From a product form perspective (each model considered individually), figure 8.27 highlights the fact that the bulk of the tickets purchased, for both models, were paid for by the respondents themselves. Looking only at the LCCs (*n* = 337), payment by 'self' is the largest segment, accounting for 57.3% of the valid LCC respondents answering this question. Payment made by the respondent's 'parents' was the second most frequently identified method of payment by LCC respondents (19.3%). Payments for tickets made by the respondent's 'work' ranked as the third most popular method of ticket payment for LCC respondents at 15.7%. This is in line with the findings in section 8.2.4.2, which showed LCCs as having a lower percentage of business travellers than FSCs.

The picture is slightly different for FSCs (*n* = 373) in some respects. As with the LCCs, payment made by 'self 'is the largest segment, accounting for 55.0% of the valid FSC respondents answering this question. In sharp contrast to the LCCs, payment made by the respondent's company was the second most frequently identified method of payment by the FSC respondents (30.6%). This is in line with the findings discussed in section 8.2.4.2 (purpose of travel), where it was shown that travel for the purpose of business was more associated with flying on a FSC than a LCC. With 30.6% of the FSC respondents having their ticket paid for by their 'work', the business travel segment is shown to be a large and important segment for the FSC model. Whilst this emphasises the importance of business travel to the FSCs, it also shows that it is a market segment that needs to be further penetrated by the LCCs if they are to grow their operations. Payments made by parents ranked third as a source of payment on FSCs, but only accounted for 9.6% of the FSC respondents – 21% lower than payments made by 'work'.

Based on the discussion in this section, inferential testing is conducted in section 8.3.2 (vi) to determine whether there is an association between the type of carrier travelled on and the source of ticket payment.

Viewing the data in this section in conjunction with findings in sections 8.2.1.3 and 8.2.4.3 suggests that where parents make payment, the respondents in question would be from the younger age groups. It could also be suggested that in cases where the business pays for the ticket then the respondents would be part of the older age groups. Evidence to support this is given in table 8.17 in the next section.

#### 8.2.5.7 Cross-tabulation between who paid for the ticket and the age classification of respondents

The analysis in the previous section suggested that there is an association between 'who paid for the ticket' and the age of the respondent. It was suggested that the association between age and 'who paid for the ticket' was noticeable in the case where the payment was made by the respondent's parents and by the respondent's business. Table 8.17 sets out the cross-tabulation for the age of the respondent and 'who made payment' for the ticket. The table is divided per airline model and considers the findings between each age group per payment source (rows) and then within each age group for all payment sources (columns). For the purposes of this cross tabulation, and the resultant discussion, the responses given as 'other payment methods' in response to the question 'who paid for the ticket' have been excluded from the analysis as they represent a variety of unidentified persons/methods and offer no value in terms of a cross-tabulation with age groups and the focus of the research. The resultant value of $N$ for the cross-tabulation is $N = 676$.

From table 8.17, the following observations relating to payment made by parents, self, and work can be made:

- **Payment by parents.** A clear pattern emerges in the cross-tabulation regarding the age of the respondent and ticket payment made by parents. Considering each model individually, the table shows that the two under 24 age groups dominate the 'parents paid' category for the FSCs at 97.2% of the FSC respondents (36.1% + 61.1%). Equally dominant were the under 24 'parents paid' age categories for the LCCs which accounted for 95.4% (43.1% + 52.3%) of all LCC respondents in this case. Taking a broader perspective, of the total payments made by parents ($n$ = 101), 97 were made for respondents in the categories under 24 years of age (16–18 and 19–24). This equates to 96.0% of the payments made by this source of payment. Dividing this per model, 35 of the 97 (36.1%) respondents in these age groups were travelling on a FSC and 62 of the 97 (63.9%) travelling on a LCC. These findings can further be supported by the discussions in section 8.2.1.3 (age classification), which show that the younger age groups tended to fly more with LCCs than did the above 30's. Based on the analysis it is clear that there is a tendency for respondents under the age of 24, whose ticket is being paid for by their parents, to be flying on a LCC.

**Table 8.17: Cross-tabulation between who paid for the ticket and the age classification of the respondents**

| | | | Are you aged between: | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 16 - 18 | 19 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65+ | |
| Full-service carrier | Q38_S1: 38. Who paid for the ticket? Self | Count | 1 | 31 | 52 | 52 | 41 | 17 | 11 | **205** |
| | | % within who paid | 0.5% | 15.1% | 25.4% | 25.4% | 20.0% | 8.3% | 5.4% | **100.0%** |
| | | % within age group | 5.3% | 54.4% | 57.8% | 55.3% | 62.1% | 85.0% | 84.6% | **57.1%** |
| | Work | Count | 4 | 3 | 37 | 40 | 25 | 3 | 1 | **113** |
| | | % within who paid | 3.5% | 2.7% | 32.7% | 35.4% | 22.1% | 2.7% | 0.9% | **100.0%** |
| | | % within age group | 21.1% | 5.3% | 41.1% | 42.6% | 37.9% | 15.0% | 7.7% | **31.5%** |
| | Gift | Count | 1 | 1 | 1 | 1 | 0 | 0 | 1 | **5** |
| | | % within who paid | 20.0% | 20.0% | 20.0% | 20.0% | 0.0% | 0.0% | 20.0% | **100.0%** |
| | | % within age group | 5.3% | 1.8% | 1.1% | 1.1% | 0.0% | 0.0% | 7.7% | **1.4%** |
| | Parents | Count | 13 | 22 | 0 | 1 | 0 | 0 | 0 | **36** |
| | | % within who paid | 36.1% | 61.1% | 0.0% | 2.8% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | % within age group | 68.4% | 38.6% | 0.0% | 1.1% | 0.0% | 0.0% | 0.0% | **10.0%** |
| | Total | **Count** | **19** | **57** | **90** | **94** | **66** | **20** | **13** | **359** |
| | | **% within who paid** | **5.3%** | **15.9%** | **25.1%** | **26.2%** | **18.4%** | **5.6%** | **3.6%** | **100.0%** |
| | | **% within age group** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |
| Low-cost carrier | Q38_S1: 38. Who paid for the ticket? Self | Count | 2 | 42 | 51 | 45 | 30 | 12 | 8 | **190** |
| | | % within who paid | 1.1% | 22.1% | 26.8% | 23.7% | 15.8% | 6.3% | 4.2% | **100.0%** |
| | | % within age group | 6.3% | 48.3% | 67.1% | 80.4% | 69.8% | 85.7% | 88.9% | **59.9%** |
| | Work | Count | 0 | 10 | 18 | 10 | 12 | 1 | 0 | **51** |
| | | % within who paid | 0.0% | 19.6% | 35.3% | 19.6% | 23.5% | 2.0% | 0.0% | **100.0%** |
| | | % within age group | 0.0% | 11.5% | 23.7% | 17.9% | 27.9% | 7.1% | 0.0% | **16.1%** |
| | Gift | Count | 2 | 1 | 4 | 1 | 1 | 1 | 1 | **11** |
| | | % within who paid | 18.2% | 9.1% | 36.4% | 9.1% | 9.1% | 9.1% | 9.1% | **100.0%** |
| | | % within age group | 6.3% | 1.1% | 5.3% | 1.8% | 2.3% | 7.1% | 11.1% | **3.5%** |
| | Parent | Count | 28 | 34 | 3 | 0 | 0 | 0 | 0 | **65** |
| | | % within who paid | 43.1% | 52.3% | 4.6% | 0.0% | 0.0% | 0.0% | 0.0% | **100.0%** |
| | | % within age group | 87.5% | 39.1% | 3.9% | 0.0% | 0.0% | 0.0% | 0.0% | **20.5%** |
| | Total | **Count** | **32** | **87** | **76** | **56** | **43** | **14** | **9** | **317** |
| | | **% within who paid** | **10.1%** | **27.4%** | **24.0%** | **17.7%** | **13.6%** | **4.4%** | **2.8%** | **100.0%** |
| | | **% within age group** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

- **Payment by self.** The table shows the distribution of payment by self between the different age groups to be in line with the age representation of the sample. The exception to this was the age 24 and below groups, which showed that a smaller proportion of the respondents in these age groups paid for the tickets themselves and instead showed them having their tickets paid for by their parents

– particularly for those travelling on a LCC. This was particularly noticeable in the 16–18 age group which accounted for only 0.8% (3/395) of all ticket payments made by the respondents themselves (*n* = 1 for FSCs and *n* = 2 for LCCs).

- **Payment by work.** Where payment for a flight was made by the respondent's company, the general clustering tended to be around the 25–34, 35–44, and 45–54 age groups. This is precisely in line with the discussions in sections 8.2.4.2 and 8.2.4.3, which focussed the respondent's purpose of travel and on a cross tabulation between the purpose of trip and the respondents' age groups respectively. In these sections, it was established that FSCs attracted a larger number of business travellers and that these business travellers tend to be in the 25–55 age range. This can be clearly seen in table 8.17 where the 'work paid' clustering was around the identified age group range for each model, with the FSCs attracting the larger number of business travellers (102 for the three categories) versus only 40 across the three categories for the LCCs. Viewing each model in isolation, table 8.17 shows that the three identified age groups accounted for 90.2% (32.7% + 35.4% + 22.1%) of the 'work paid' FSC respondents (*n* = 113). In terms of LCCs, the three identified age categories accounted for 78.4% (35.3% + 19.6% + 23.5%) of the 'work paid' LCC respondents (*n* = 51). From the perspective of the two models combined, of the total number of respondents who had their tickets paid for by their 'work' (*n* = 164 for both models), 142 were respondents in the 25–34, 35–44, and 45–54 age groups. This equates to 86.6% of the total number of respondents who had their tickets paid for by this method of payment. When viewed per model, 102 of the 142 (71.8%) respondents in these age groups were travelling on a FSC, and 40 of the 142 (28.2%) were travelling on a LCC. Combining the data from these analyses confirms that respondents in the age range of 25–55, travelling for the purposes of business, and whose ticket was paid for by the company, predominantly travel on a FSC.

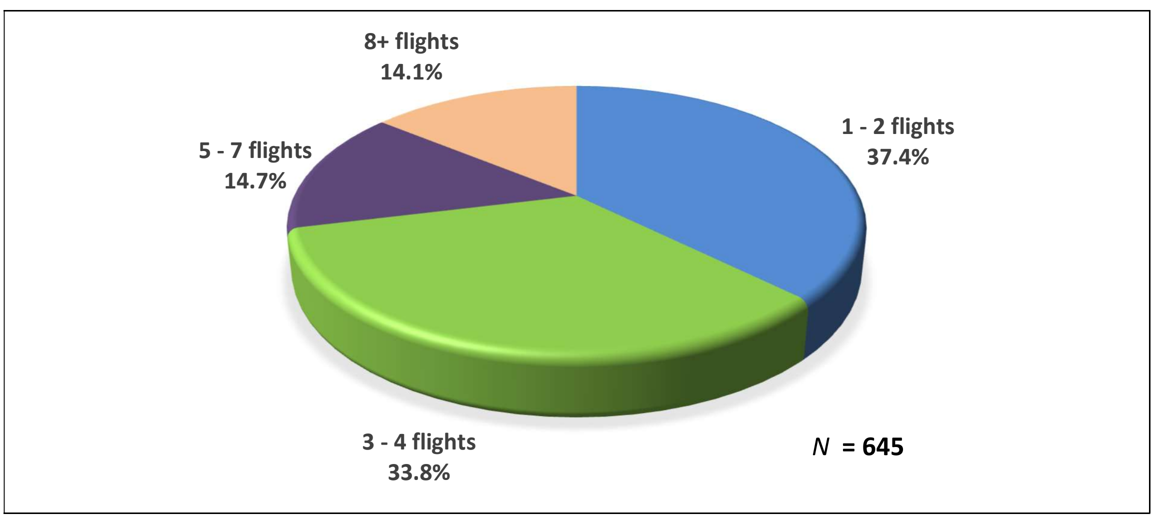
A look at table 8.17 down the columns provides a number of insights to support findings in previous sections. Looking at the 65+ age group it is apparent that the self-payment option was the most frequently cited payment option. In terms of FSCs, 11 of the 13 respondents paid for themselves, whilst on LCCs, eight of the nine respondents paid for themselves. Logically, most of these individuals are retired and therefore payment by work would not be a relevant option. The smallness of the sample in this case is acknowledged and that a larger sample will be required to make meaningful comparisons. Similarly, ticket payment by parents would not feature. The picture that emerges for the 55–64 age group is similar to the 65+ category, with self-payment being the dominant option cited. Reviewing the figures for the remaining age groups reconfirms what was discussed under the bullet points in the previous paragraphs and will not be repeated in any further discussion here.

### 8.2.6 Respondent short-haul travel frequency

The brief discussion in this section is based on questions 10 and 11 in the questionnaire, which focussed on identifying the number of short-haul trips taken by the respondents in the 12 months prior to the interview. It was not the aim of this study to explore travel frequency in depth, so the key points to be highlighted in this section are simply the travel frequency for the 12 months prior to the day of interview and an indication of model choice. Additionally, given that the key focus of this research is to consider the differences between the behaviours of respondents for the two models, the respondents that indicated that they did not fly in the 12 months prior to the interview were excluded from the analysis in this section. Logically, if no flights were undertaken in the 12 months prior to the interview, then no model was selected, and therefore no analysis can be made relating to the differences between the models – especially when considering question 11, which asked how many of the flights in the previous year were on a FSC. The resulting number of valid respondents for the analysis of the overall respondent short-haul flight frequency in the 12-month period prior to interview is 645.

This distribution of short-haul flight frequency of respondents is summarised in figure 8.28. It is important to note that the figures addressed relating to figure 8.28 highlight the number of flights taken by the respondents in the 12 months prior to interview but do not indicate which model or models they utilised. A review of the overall data for those that took at least one flight in the 12 months prior to the interviews shows that 71.2% of the respondents (*n* = 645) took between 1–4 short-haul flights in the previous 12 months. Breaking this figure down it is seen that 1–2 flights for the year was the most common at 37.4% (*n* = 241) of the valid respondents, followed by 3–4 flights at 33.8% (*n* = 218) of the valid respondents in question. The number of respondents that had taken between 5–7 flights in the 12-month period totalled 14.7% (*n* = 95) of the valid respondents, with the high frequency flyers (8 or more flights) accounting for only 14.1% (*n* = 91) of the valid respondents.

**Figure 8.28: Overall respondent short-haul flight frequency in the 12-month period prior to interview**



The brief discussion has thus far focussed on the overall travel frequency of the respondents, but has not linked travel frequencies to a particular model. In other words, whilst it can be seen that 14.7% of the valid respondents to this question stated that they travelled 5–7 times in the 12 months prior to interview, this figure gives no indication of the model/models which they utilised. Specifically, a respondent that indicated that they flew seven times in the past 12 months could have flown all seven on a LCC, or all seven on a FSC, or alternatively a mixture on each model. By linking the respondents and their travel frequencies to a particular model, insights can be obtained into the extent to which respondents stuck to a particular model for their air travel or whether they switched between models. This can be applied to both models and could identify an element of loyalty or disloyalty on the part of the respondent to the various models and show if loyalty is greater amongst FSC respondents or LCC respondents or neither. Table 8.18 shows the respondent's short haul travel frequency divided according to the models that they flew in the 12 months prior to interview. The data presented in table 8.18 is based on $N = 608$.

**Table 8.18: Respondents short-haul flight frequency for the past 12 months classified according to the models that they utilised**

| | | | Number of trips 12 months prior to interview* | | | | |
|---|---|---|---|---|---|---|---|
| | | | **1 – 2** | **3 – 4** | **5 – 7** | **8+** | **Total** |
| **FSC trips last year** | **1 – 2** | Count | 156 | 54 | 25 | 12 | 247 |
| | | % within FSC trips past 12 months | 63.1% | 21.9% | 10.1% | 4.9% | 100.0% |
| | | % within trips past 12 months (FSC only) | 100.0% | 33.3% | 31.6% | 15.0% | 51.8% |
| | **3 – 4** | Count | | 108 | 19 | 14 | 141 |
| | | % within FSC trips past 12 months | | 76.6% | 13.5% | 9.9% | 100.0% |
| | | % within trips past 12 months (FSC only) | | 66.7% | 24.1% | 17.5% | 29.6% |
| | **5 – 7** | Count | | | 35 | 7 | 42 |
| | | % within FSC trips past 12 months | | | 83.3% | 16.7% | 100.0% |
| | | % within trips past 12 months (FSC only) | | | 44.3% | 8.8% | 8.8% |
| | **8+** | Count | | | | 47 | 47 |
| | | % within FSC trips past 12 months | | | | 100.0% | 100.0% |
| | | % within trips past 12 months (FSC only) | | | | 58.8% | 9.9% |
| | **Total** | Count | 156 | 162 | 79 | 80 | 477 |
| | | % within FSC trips past 12 months | 32.7% | 34.0% | 16.6% | 16.8% | 100.0% |
| | | % within trips past 12 months (FSC only) | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | **Number of trips 12 months prior to interview** | | | | |
| | | | **1 - 2** | **3 - 4** | **5 - 7** | **8+** | **Total** |
| **LCC trips last year** | **1 – 2** | Count | 0 | 54 | 19 | 7 | 80 |
| | | % within LCC trips past 12 months | 0.0% | 67.5% | 23.8% | 8.7% | 100.0% |
| | | % within trips past 12 months (LCC only) | 0.0% | 100.0% | 43.2% | 21.2% | 61.1% |
| | **3 – 4** | Count | | 0 | 25 | 14 | 39 |
| | | % within LCC trips past 12 months | | 0.0% | 64.1% | 35.9% | 100.0% |
| | | % within trips past 12 months (LCC only) | | 0.0% | 56.8% | 42.4% | 29.8% |
| | **5 – 7** | Count | | | 0 | 12 | 12 |
| | | % within LCC trips past 12 months | | | 0.0% | 100.0% | 100.0% |
| | | % within trips past 12 months (LCC only) | | | 0.0% | 36.4% | 9.2% |
| | **8+** | Count | | | | 0 | 0 |
| | | % within LCC trips past 12 months | | | | 0.0% | 0.0% |
| | | % within trips past 12 months (LCC only) | | | | 0.0% | 0.0% |
| | **Total** | Count | 0 | 54 | 44 | 33 | 131 |
| | | % within LCC trips past 12 months | 0.0% | 41.2% | 33.6% | 25.2% | 100.0% |
| | | % within trips past 12 months (LCC only) | 0.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| **Total** | | Count | 156 | 216 | 123 | 113 | 608 |
| | | % of total valid responses | 25.7% | 35.5% | 20.2% | 18.6% | 100.0% |

* The grey shaded empty cells are cells where no response was possible (impossible combinations).

From table 8.18 it can be seen that, for the valid responses, those that undertook between 1–2 trips in the 12 months prior to interview predominantly travelled on a FSC. It can also be seen that of the respondents that travelled 1–2 times in the previous year on a FSC, 63.1% of these respondents only travelled 1–2 times in the year. The data also shows that 108 respondents stated that they had flown 3–4 times in the previous year and that these flights were only on a FSC. For each model, a look down the diagonal (top left to bottom right) where the flight frequencies intersect (1–2 and 1–2, 3–4 and 3–4 etc…) shows that, for the valid responses to this section, there were 346 respondents (156 + 108 + 35 + 47) that travelled only on a FSC during the 12 months prior to interview, but that for LCCs there were zero respondents that flew solely on a LCC in the identified period. This seems to indicate a greater loyalty towards a FSC than towards a LCC. This would also suggest that the choice between models is based on different criteria. This issue is explored in section 8.2.7.

Looking down the columns for each travel frequency, it can be seen that the number of respondents that took 8+ trips in the previous year favoured the FSCs by a margin of 70.8% (80/113) versus 29.2% (33/113), with 47 (41.6%) of the 8+ respondents travelling only on a FSC. It can also be seen that at the higher air travel frequencies that there is some level of loyalty towards the LCC model by some respondents, but at a lower level than for the FSCs.

### 8.2.7 Respondent reasons for selecting the airline

An important element of this research was to establish the principal reason why each respondent had selected a particular airline – be it a LCC or a FSC. Question 17 of the questionnaire was included to accomplish this objective. Through the respondents ranking their top five reasons for selecting a carrier it is possible to identify their decision-making criteria and to also to gain insight into their perceptions of the various carriers and airline models. This section focuses on identifying the respondents' choice criteria rankings, followed by a cross tabulation between mean values and gender, and then a cross tabulation between mean values and age groupings.

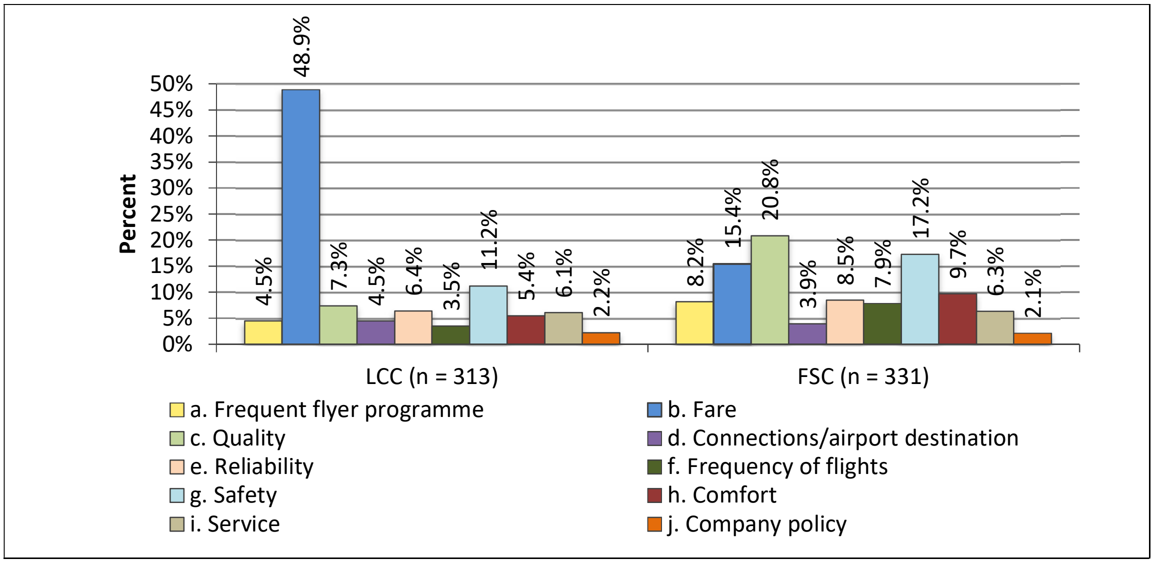
#### 8.2.7.1 Respondent airline selection criteria rankings

In this section, the results are presented firstly in terms of the criteria that were most frequently ranked as the most important criteria (ranked #1) per model, and secondly addressed based on the mean values for each choice criteria per model.

***(a) Criteria most frequently ranked as most important***

The collected data shows some interesting insights into the differences between respondents travelling on a FSC and a LCC. Figure 8.29 sets out the data based on the important choice criteria and the percentage of respondents that ranked each one as the most important (ranked 1st) criterion ($N$ = 644). The findings in figure 8.29 are set out according to the two airline models in question and are based on the valid responses to this question with $n$ = 331 for FSCs and $n$ = 313 for LCCs. The criteria are numbered (a) to (j), starting with (a) 'frequent flyer programmes' on the left and flowing to (j) 'company policy' on the right for each model.

**Figure 8.29: Criteria identified as the most important (#1) by respondents when selecting a carrier (per model)**




Immediately noticeable from figure 8.29 is the fact that 48.9% of the respondents travelling on a LCC ranked fare as the most important criterion (ranked #1) for selecting a carrier. Other choice criteria that were of key importance to LCC respondents, and thus ranked 1$^{st}$ by some LCC respondents, were safety, (11.2%), quality (7.3%), and reliability (6.4%). Although fare stands out as the most important choice criterion for the LCC respondent, it was at a level lower than what was expected, and lower than statistics for other countries around the world. It was particularly interesting to note the difference in these findings with the findings in the O'Connell (2007) study. Whilst his study showed that fare was also the most important choice criteria for LCC respondents in Europe and Asia, the results differed in that his study showed that in Asia approximately 84.0% of the LCC respondents stated that fare was the most important choice criterion, and in Europe the figure stood at approximately 75.0% of LCC respondents. This is a large difference and indicates that distinct differences exist between the South African air travel consumer and their counterparts in Europe and Asia. Population density, market size, and market competition between airlines have an influence in this regard. Taking a look beyond fare, the O'Connell (2007) study showed that, after fare, the second most 'first-mentioned' choice criterion was flight schedule at approximately 14.0% for Europe and approximately 8.0% for Asia. Schedule/frequency of flights only ranked 9th (out of 10 options) overall for South African respondents (3.5%) on LCCs in terms of being identified as the most important (ranked #1) choice criterion. This seems to indicate a relatively low level of importance being placed on this criterion by South Africans. Quality, reliability, and safety did not feature as a determinant choice criterion for the European or Asian respondents in the O'Connell (2007) study (measuring 2% or lower). As stated earlier, South African LCC respondents rated quality, safety, and reliability as being criteria of some importance when selecting their carrier. These are criteria that are normally associated with selecting a FSC and thus provides insight into the South African LCC passenger's frame of mind when viewing the LCCs. This could be due to a lack of experience with the true LCC business model and therefore their uncertainty on what to expect in terms of the product on offer. Whilst South Africa does have a number of LCCs operating in the market, there has never been a true ultra-LCC like Ryanair, Air Asia, Wizz Air, or even South West Airlines. Therefore, the South African consumer has not been exposed to the true nature of the LCC or ultra-LCC model and thus the associated service expectations.

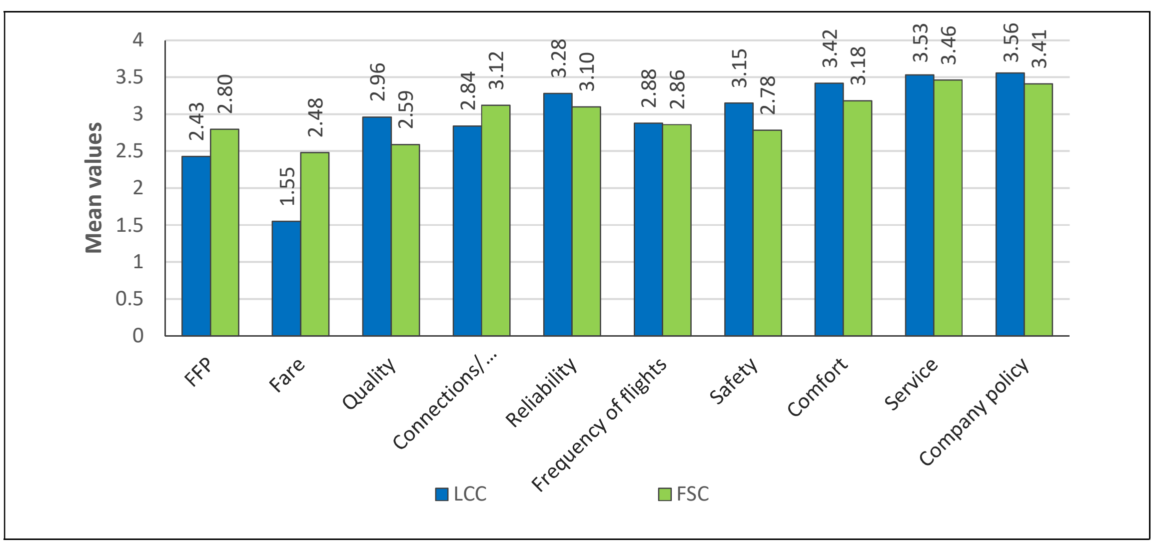
In contrast to the findings relating to the LCC respondents, the findings relating to FSC respondents were remarkably similar to the findings of the O'Connell (2007) study. Quality was the primary reason identified for selecting a FSC with 20.8% of the FSC respondents ranking it as their most important choice criterion. Safety ranked second in terms of rankings as most important (#1) at 17.2% of the FSC respondents, with fare occupying third position at 15.4% of the FSC respondents (noticeably lower than the level indicated by low-cost respondents). The evidence from this survey suggests that respondents choose a FSC based on a wider range of criteria. This is in line with the O'Connell (2007) study, which showed a much more even spread of the most important choice criteria identified by FSC respondents. Whilst fare is still considered a relatively important choice criterion in all markets (Europe, Asia and South Africa), it is not always the determinant criteria, with passengers preferring other comforts and peace of mind attributes when selecting their travel experience. Overall, it is suggested that the South African FSC passenger is more experienced with the FSC model and is aware of the product that they will receive. In terms of the LCCs, the market is still relatively young with few 'permanent' competitors following the pure low-cost model. As a result, the passengers that fly on a LCC have moved from the FSCs on the promise of lower fares but still have some expectations of receiving the services of the FSC. This issue is explored in section 8.2.8, which focuses on the respondent's understanding of the LCC model and their expectations relating to the model.

Referring back to figure 8.29, it was somewhat surprising for both models that service featured so low on the overall list of choice criteria ranked as most important (#1) – especially for the FSCs. Customer service is frequently cited as one of the main complaints about airlines and the flying experience, yet when questioned in this regard it featured in 5th position for LCCs and in 8th for FSCs in terms of being ranked most important (#1) by respondents (out of ten options). A look the data in terms of the choice criteria ranked as 2$^{nd}$ most important by respondents shows that service still does not feature as a key choice criterion, featuring in 7$^{th}$ overall position for LCC respondents and joint 7th position overall for FSC respondents. It is only at the criterion ranked 3$^{rd}$ most important by respondents that service starts to feature as a ranked criterion, being the 5$^{th}$ most frequently identified criterion ranked as the 3$^{rd}$ most important criterion by the respondents. This further adds to the perception of model 'expectation dilution' on the part of the consumer given that the data showed that LCC respondents valued 'service' higher than respondents on FSCs. This seems counter-initiative given that FSCs have the provision of superior customer service as one of their key points of differentiation and therefore part of their focus for achieving a sustainable competitive advantage. A further interesting feature of figure 8.29 is the relatively low number of respondents ranking frequent flyer programmes as the 'most important' (ranked #1) choice criterion, particularly on the FSCs (4.5% of respondents on LCCs and 8.2% of respondents on FSCs). Given the large amounts of investment put into the development of these programmes, it is surely concerning for airlines that so few respondents see frequent flyer programme membership as the most important choice criterion when selecting a carrier. It is acknowledged that loyalty programmes are viewed as being more effective at building a customer database than long-term customer loyalty. This is mainly due to the perceived value of loyalty programmes being relatively low because consumers essentially see no real difference between competing loyalty programmes. A clearer understanding of these findings and consumer choice criterion can help the carriers to improve their focus on their marketing and product development efforts.

### *(b) Mean values per choice criterion*

The results relating to question 17 can also be analysed according to the mean values of each choice criterion divided per model (figure 8.30). In this case, the figures show the average ranking (1st to 5th) of a particular criterion based on the responses of the respondents – divided per model. It is important to note that a 'low' mean value implies that the particular criterion was ranked higher more often than a criterion with a 'high' mean value (the top reason was ranked '1', with the lesser important criteria ranked downwards to 5).

**Figure 8.30: Reasons for choosing an airline - mean values**



From this figure, it can be identified that the mean values for LCCs were a lot more focussed on the fare than they were for the FSCs. In the case of LCC respondents, it is seen that the mean score for fare was 1.55, which gives a clear indication that the large majority of LCC respondents placed fare as their prime reason for selecting the particular carrier on which they were travelling on the day of interview. Frequent flyer programmes (FFPs) show a mean value of 2.43 indicting that whilst it was not ranked first that often, it was ranked relatively highly by many respondents (i.e. within the top five). Figure 8.29 showed that only 4.5% of the LCC respondents ranked FFPs as the most important choice criterion (#1). The finding that FFPs ranked so highly in terms of the overall mean values for LCCs is slightly surprising in itself, given that FFPs are not a key focus for the LCCs and many of them do not even have one. A closer look at figure 8.30 shows that FFPs had a higher mean value for LCC respondents than for FSC respondents (2.43 vs. 2.80). In this context, it seems that despite the nature of the low-cost model, LCC respondents have a real need to be part of a FFP and view it as needing to be a component of the LCC product. On reflection, this need for a FFP by LCC respondents can be rationalised by remembering that the perceived benefits of a FFP are the collection of miles, which can be redeemed for ‘free flights’. When considering the importance placed on fare by LCC respondents, as addressed in this and many other sections of this chapter, ‘free flights’ are part of the respondent’s cost minimisation efforts and therefore it is understandable that they rank the FFPs as important as they do. It therefore seems logical to suggest that the LCCs need to link the purchase of tickets on a LCC to some form of loyalty programme to attract the cost-conscious traveller and provide them with the incentive of earning ‘free flights’ or other benefits, just like they could if they were flying on a FSC.

The remainder of the LCC respondent mean values for the criteria identified in figure 8.30 vary in a narrow band between 2.84 and 3.56 indicating that the rankings for these criteria varied between respondents with no specific pattern being identified.

The findings for the FSC respondents showed that the mean values for the different criteria varied between 2.48 and 3.46, which is a particularly narrow band showing that no particular criterion dominated the FSC respondents’ choice criteria and thus their order of ranking. Whilst fare was shown to have the lowest mean value at 2.48 (meaning that it was ‘on average’ the highest ranked criteria), it was seen in figure 8.29 that fare was not the criterion most frequently ranked as the top reason for carrier selection; quality was. This shows that whilst the respondents might not have always ranked fare as the most important criteria, it was still ranked 2nd or 3rd quite frequently resulting in it having the lowest mean value. Service had the highest mean value at 3.46 (meaning it was ranked quite low by most FSC respondents). The key point reinforced in figure 8.30 is that price is a key determinant factor for LCC respondents, but for FSCs, a large number of other factors are at play when consumers make their airline choice decisions.

Section 8.3.3.1 tests whether there are statistical significant differences between the type of model travelled on and the median values per selection criteria.

### 8.2.7.2 Cross tabulation of respondent choice criteria mean values and gender

The mean values for the various choice criteria identified in figure 8.30 can be further sub-divided in order to explore the data further. In this case, the data has been sub-divided according to gender to establish whether there was any difference between the choice criteria rankings of males and females. The resultant cross-tabulation of choice criteria, gender, and model flown is given in table 8.19.

**Table 8.19: Cross tabulation of respondent choice criteria mean values per model subdivided according to gender**

| | | FFP | Fare | Quality | Connection/ airport destination | Reliability | Frequency of flights | Safety | Comfort | Service | Company policy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FSC | Male | 2.76 | 2.53 | 2.63 | 3.23 | 3.01 | 2.89 | 2.66 | 3.03 | 3.53 | 3.61 |
| | Female | 2.78 | 2.43 | 2.57 | 2.91 | 3.24 | 2.78 | 2.95 | 3.42 | 3.32 | 3.00 |
| | Total | 2.77 | 2.49 | 2.61 | 3.13 | 3.10 | 2.85 | 2.77 | 3.18 | 3.46 | 3.41 |
| LCC | Male | 2.39 | 1.58 | 2.86 | 2.73 | 3.28 | 2.95 | 3.09 | 3.45 | 3.64 | 3.41 |
| | Female | 2.45 | 1.52 | 3.13 | 2.91 | 3.35 | 2.77 | 3.13 | 3.40 | 3.40 | 4.07 |
| | Total | 2.41 | 1.55 | 2.97 | 2.80 | 3.31 | 2.88 | 3.10 | 3.43 | 3.54 | 3.59 |
| Total | Male | 2.62 | 1.96 | 2.72 | 3.03 | 3.13 | 2.92 | 2.84 | 3.21 | 3.58 | 3.48 |
| | Female | 2.68 | 1.88 | 2.83 | 2.91 | 3.30 | 2.78 | 3.03 | 3.41 | 3.36 | 3.60 |
| | Total | 2.64 | 1.93 | 2.77 | 2.98 | 3.19 | 2.86 | 2.91 | 3.29 | 3.50 | 3.52 |

The analysis of the data shows that for the overall mean values there is not much difference between male and female respondents on most choice criteria. The biggest difference between the two sexes was under ‘service’ where it is seen that female respondents, on average, ranked ‘service’ higher than males – 3.36 versus 3.58 for a difference of 0.22 (remembering that a ranking of 1 was the highest ranking and therefore the closer the mean value is to 1, the higher a criterion was ranked on average). The only other choice criterion where a noticeable difference was seen was ‘comfort’, where male respondents on average ranked it higher than female respondents – 3.21 versus 3.41 for a difference of 0.20.

It is when a look is taken at the mean values per model that a number of bigger differences can be seen. Looking specifically at the LCCs, the few respondents that did identify ‘company policy’ as a choice criterion showed that this affected males much more than females (mean values of 3.41 vs 4.07). This is however, an external influence on the individual in terms of selecting an airline so not much emphasis will be given to the differences between the sexes in the case of this criterion. Besides ‘company policy’, the next biggest difference is in terms of ‘quality’ where males are seen to attach more importance to it in terms of selecting a LCC (a mean value of 2.86 vs 3.13 for a difference of 0.27). In contrast to his, female respondents on LCCs, on average, ranked ‘service’ higher than male respondents (mean values of 3.40 vs 3.64 for a difference of 0.24). The remainder of the choice criteria for LCCs showed very little difference between the mean values per gender (less than 0.2).

The biggest differences between the genders were seen in the respondents travelling on the FSCs, with the difference between the mean values for six of the choice criteria being over 0.2. As with the LCCs, the largest difference between the genders was seen on the choice criterion of ‘company policy’, except in this case, it was the female respondents who on average ranked it higher than the males (3.00 vs 3.61). Male respondents on FSCs, on average, ranked ‘reliability’, ‘safety’, and ‘comfort’ as choice criteria higher than their female counterparts at differences of 0.23, 0.29, and 0.39 respectively. The only choice criterion where female FSC respondents showed a much higher ranking than male FSC respondents was for ‘connections/airport destination’ (mean values of 2.91 vs 3.23).

Interesting insights can also be obtained by looking at the individual genders between the two models (FSC male vs. LCC male and FSC female vs. LCC female). Overall, the table shows that there is a lot more variation in terms of mean values between male respondents on the two models than female respondents. In terms of female respondents, the biggest differences between the two models were on the criteria of ‘fare’ and ‘quality’. The data shows that on the issue of ‘fare’, female LCC respondents on average ranked fare as more important[1] than did female FSC respondents by almost a full ranking point (1.52 vs. 2.43 = a difference of 0.91). In line with the earlier overall findings, female respondents on a FSC, on average, ranked ‘quality’ as more important than did LCC female respondents, at just over half a ranking point (2.57 vs. 3.13 = a difference of 0.56). The remainder of the criteria showed minimal difference between females on a FSC and females on a LCC (excluding ‘company policy’ which is an externally determined factor).

Focussing in on the male respondents, greater differences between male respondents on the two models and their mean values were observed when compared to female respondents. The biggest differences were observed on the criteria of ‘fare’, ‘connections/airport destination’, ‘safety’, and ‘comfort’. Similar to the female respondents, male respondents showed the biggest difference between the models in terms of ‘fare’. In this case, the mean value of ‘fare’ for males on a LCC was 1.58 versus 2.53 on a FSC, for a difference of 0.95 of a ranking point. Curiously, ‘connections/airport destinations’ showed the second biggest difference between males on the two models, with male respondents on a LCC, on average, ranking this criterion as more important than male respondents on a FSC (2.73 vs. 3.23 = 0.50). The other two criteria that showed a noticeable difference between male respondents on the two models were ‘safety’ and ‘comfort’. In this case, the FSC male respondents, on average, ranked these criteria noticeably higher than their LCC counterparts. The mean values for ‘safety’ showed a difference of 0.43 of a ranking point and ‘comfort’ a difference of 0.42 of a ranking point.

#### 8.2.7.3 Cross-tabulation of respondent choice criteria mean values and age grouping

Exploring the mean values for the various choice criteria further, this section sub-divides the data further according to the age groups of the respondents. The aim in this case is to identify any differences between the various age groups in terms of their mean values of the identified choice criteria. The

[1] Take note that a ranking of 1 indicates a higher importance ranking than 5.

analysis considers any differences in the overall mean values between the two models and then considers any differences between the age groups within a particular model. The cross-tabulation on which the discussion is based is shown in table 8.20. The two empty blocks in the table are a result of zero valid respondents in that age group ranking the specific criterion in their top five reasons for selecting a carrier.

**Table 8.20: Cross tabulation of respondent choice criteria mean values per model subdivided according to age group**

| | Age | FFP | Fare | Quality | Connections/ airport destination | Reliability | Frequency of flights | Safety | Comfort | Service | Company policy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FSC | 16 - 18 | 4.50 | 2.25 | 2.87 | 3.13 | 4.00 | 3.57 | 1.85 | 2.69 | 3.25 | 2.50 |
| | 19 - 24 | 3.27 | 2.31 | 2.49 | 3.21 | 3.46 | 2.67 | 2.76 | 2.95 | 3.63 | 2.50 |
| | 25 - 34 | 3.22 | 2.40 | 2.61 | 2.63 | 2.98 | 3.00 | 2.69 | 3.50 | 3.23 | 2.50 |
| | 35 - 44 | 2.31 | 2.58 | 2.37 | 3.52 | 2.82 | 3.06 | 2.88 | 3.13 | 3.63 | 3.53 |
| | 45 - 54 | 2.44 | 2.48 | 2.59 | 3.24 | 3.02 | 2.56 | 3.08 | 3.47 | 3.38 | 4.00 |
| | 55 - 64 | 2.00 | 2.31 | 3.13 | 2.29 | 3.54 | 2.89 | 2.93 | 3.00 | 3.44 | 5.00 |
| | 65+ | | 3.33 | 3.38 | 3.00 | 2.60 | 2.80 | 2.33 | 2.20 | 3.71 | |
| | **Total** | **2.80** | **2.48** | **2.60** | **3.12** | **3.11** | **2.86** | **2.77** | **3.18** | **3.46** | **3.36** |
| LCC | 16 - 18 | 3.00 | 1.58 | 3.26 | 2.17 | 3.13 | 3.15 | 3.18 | 3.19 | 4.00 | 5.00 |
| | 19 - 24 | 2.18 | 1.41 | 3.17 | 2.74 | 3.31 | 2.57 | 2.98 | 3.59 | 3.60 | 3.89 |
| | 25 - 34 | 2.00 | 1.33 | 2.84 | 2.96 | 3.55 | 2.90 | 3.12 | 3.28 | 3.30 | 3.53 |
| | 35 - 44 | 2.63 | 1.81 | 2.70 | 3.19 | 3.16 | 3.09 | 3.32 | 3.43 | 3.39 | 3.20 |
| | 45 - 54 | 2.33 | 1.97 | 2.74 | 2.83 | 3.29 | 2.83 | 2.91 | 3.69 | 3.89 | 3.40 |
| | 55 - 64 | 1.00 | 1.40 | 3.00 | 2.40 | 2.50 | 3.38 | 3.83 | 2.71 | 3.63 | 4.00 |
| | 65+ | 5.00 | 1.33 | 3.17 | 2.00 | 3.50 | 3.00 | 3.33 | 4.00 | 2.83 | 4.50 |
| | **Total** | **2.43** | **1.56** | **2.96** | **2.81** | **3.28** | **2.90** | **3.14** | **3.42** | **3.53** | **3.65** |
| Total | 16 - 18 | 3.38 | 1.67 | 3.11 | 2.71 | 3.53 | 3.30 | 2.69 | 3.00 | 3.70 | 3.33 |
| | 19 - 24 | 2.73 | 1.69 | 2.86 | 2.94 | 3.37 | 2.62 | 2.89 | 3.29 | 3.61 | 3.75 |
| | 25 - 34 | 2.88 | 1.82 | 2.70 | 2.82 | 3.25 | 2.94 | 2.87 | 3.41 | 3.27 | 3.24 |
| | 35 - 44 | 2.43 | 2.16 | 2.50 | 3.38 | 2.97 | 3.07 | 3.05 | 3.25 | 3.54 | 3.40 |
| | 45 - 54 | 2.42 | 2.18 | 2.64 | 3.12 | 3.11 | 2.63 | 3.02 | 3.54 | 3.55 | 3.75 |
| | 55 - 64 | 1.50 | 1.91 | 3.08 | 2.33 | 3.14 | 3.12 | 3.19 | 2.89 | 3.53 | 4.50 |
| | 65+ | 5.00 | 2.33 | 3.29 | 2.70 | 2.94 | 2.89 | 2.73 | 3.00 | 3.31 | 4.50 |
| | **Total** | **2.66** | **1.93** | **2.75** | **2.98** | **3.19** | **2.88** | **2.94** | **3.29** | **3.50** | **3.54** |

The bottom block of table 8.20 (total) shows the overall mean values of the various age groups for the two models combined. Even at this combined level it can be observed that there are distinct differences between the different age groups and the criterion they rank as important when selecting an airline. Once again, it is important to remember that a mean value closer to '1' shows that the criterion is ranked as more important by the respondent. 'Fare' is the highest ranked criterion, but the data does show that the younger and older groups, on average, gave a higher importance ranking than did the middle-range age groups. This does make sense in terms of the previous findings described in this chapter. The choice criteria where the greater differences between the mean values were observed included 'frequent flyer programmes', 'quality', 'connections/airport destination', 'frequency of flights', and 'comfort'. 'Service' showed a fairly consistent mean value between all age groups. Whilst the mean values for the 65+ age group did show some noticeable differences to the other age groupings, in some cases this was based on a low number of respondents and thus requires a larger sample size for this age group in order to be able to make meaningful comparisons.

The real value from this cross tabulation is found when the differences in mean values are explored within and between the two models.

The differences between the age groups in terms of their mean values for LCC respondents can be clearly viewed from table 8.20. A number of specific observations can be made. From the perspective of the LCCs, the mean value of 'fare' for LCC respondents was below 2.0 for all age groups. It can however be seen that the younger and older groups viewed 'fare' as being slightly more important than the mid-range age groups, with the differences between them ranging between approximately 0.3 and 0.65 of a ranking point. The inverse relationship seemed to apply for the mean values regarding 'quality'. In this case, the younger and older age groups showed a mean value of over 3.0 on 'quality' but the middle-range age groups ranked this criterion higher on average at 2.84, 2.70 and 2.74 (well below 3.0). The pattern of mean values for 'connections/airport destinations' is similar to that of 'fare', where the younger and older age groups placed more importance on this criterion than did the middle-range age groups. When considering the criteria of 'reliability', 'flight frequency', 'safety', 'comfort', and 'service', whilst there are differences between the various age groups in terms of their mean values, there is no observable pattern within each criterion that can be directly linked to an influence of age. Instead, the mean values for these criteria between the various age groups show an erratic pattern with some mean values below 3.0, some between 3.0 and 3.5, and some hovering near the 4.0 mark. From the LCC respondent perspective, 'service' as a choice criterion received a mean value that ranged between 3.30 and 4.00 respectively (excluding the 65+ age group, which had a mean value of 2.83 but was based on only 6 respondents). 'Frequent flyer programmes' (FFP) were ranked as quite important by LCC respondents. This despite the fact that they are more traditionally associated with the FSC model. The 16–18 age group placed the least importance on the 'FFPs' (3.00) but the remaining age groups ranked these programmes sufficiently high enough as a choice criterion that (in terms of mean values) they take overall second place behind 'fare' as a key choice criterion (*see* section 8.2.7.1). In this case, it is shown to be at all except one of the age categories (35-44 group).

Shifting the focus to the mean values of the FSC respondents at the different age groups, 'fare' was identified as the overall most important choice criterion even though it was not the most frequently identified first choice criterion of the respondents (see section 8.2.7.1). This is illustrated in the point that the 'fare' mean values for all age groups were above 2.25 and ranged up to a maximum of 3.33 (which was for the 65+ age group; $n$ = 9). This is in contrast to the mean values of LCC respondents, which were all below 1.97. A look across the seven age groups shows that the mean values for age were fairly evenly spread, with no age group standing out from the others. Other choice criteria that showed a fairly even spread of mean values between the age groups included 'connections/airport destination', 'frequency of flights', and 'service'. In the few cases where an age group did stand out, they were primarily at the extreme ends of the age group ranges, i.e., the 16–18 and 65+ age groups. As an example, for ‘frequency of flights’ the 16–18 age group had a mean value of 3.57, whereas the remainder of the age groups for this criterion ranged between 2.56 and 3.06. ‘Quality’, which was the criterion most frequently ranked 1st by FSC respondents, saw the mean value for the age groups largely over 2.45, with the exceptions being the 55–64 and 65+ age groups, which placed less importance on the criterion as shown by mean values of 3.13 and 3.38 respectively. The main differences between the various age groups in terms of mean values were observed on the criteria of ‘FFPs’, ‘safety’, and ‘comfort’. ‘Safety and comfort’ followed a similar pattern with the younger age groups ranking the criteria as relatively more important than the mid-age groups. This is seen in table 8.20, where for ‘safety’ the 16–18 age group had a mean value of 1.85 and the 35–44 age group had a mean value of 2.88, which is a full ranking point difference between them. A similar situation is seen with ‘comfort’ where the 16–18 age group had a mean value of 2.69, with the 45–54 age group only having a mean value of 3.47. For the older age groups on the criteria of ‘safety’ and ‘comfort’, the mean values were higher than the mid-age groups, showing that these respondents placed more importance on these criteria. Interestingly, the FSC respondent mean values across the age groups for ‘FFPs’ showed that the younger age groups did not rank them as an important criterion, but as the respondents got older, FFPs became more important. This is seen where the 16–18 age group showed a 4.50 mean value compared to the 35–44 age group, which showed a mean value of 2.31.

A look between the models at the corresponding age groups highlights some large differences between them and identifies areas of similarity. The differences between the individual age groups between the two models are calculated from table 8.20 by subtracting the LCC mean values from the FSC mean values, with the results highlighted in table 8.21. Where a value in table 8.21 has a positive sign, it means that the particular choice criteria was more important to the LCC respondents than the FSC respondents (closer to a #1 ranking). A negative value means that a particular choice criteria was more important to the FSC respondents than to the LCC respondents (closer to a #1 ranking).

**Table 8.21: Mean value differences (FSC - LCC) between individual age groups across the two models per choice criterion**

| | | FFP | Fare | Quality | Connections/ airport destination | Reliability | Frequency of flights | Safety | Comfort | Service | Company policy |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FSC - LCC | 16 - 18 | 1.50 | 0.67 | -0.39 | 0.96 | 0.87 | 0.42 | -1.33 | -0.50 | -0.75 | -2.50 |
| | 19 - 24 | 1.09 | 0.90 | -0.68 | 0.47 | 0.15 | 0.10 | -0.22 | -0.64 | 0.03 | -1.39 |
| | 25 - 34 | 1.22 | 1.07 | -0.23 | -0.33 | -0.57 | 0.10 | -0.43 | 0.22 | -0.07 | -1.03 |
| | 35 - 44 | -0.32 | 0.77 | -0.33 | 0.33 | -0.34 | -0.03 | -0.44 | -0.30 | 0.24 | 0.33 |
| | 45 - 54 | 0.11 | 0.51 | -0.15 | 0.41 | -0.27 | -0.27 | 0.17 | -0.22 | -0.51 | 0.60 |
| | 55 - 64 | 1.00 | 0.91 | 0.13 | -0.11 | 1.04 | -0.49 | -0.90 | 0.29 | -0.19 | 1.00 |
| | 65+ | -5.00 | 2.00 | 0.21 | 1.00 | -0.90 | -0.20 | -1.00 | -1.80 | 0.88 | -4.50 |
| | **Total** | **0.37** | **0.92** | **-0.36** | **0.31** | **-0.17** | **-0.04** | **-0.37** | **-0.24** | **-0.07** | **-0.29** |

*The two values indicated in orange represent those where there were 0 FSC respondents

The key differences between the age groups across the models can be read directly from the table. As can be seen, there are a number of cases where the differences between the two models are more than a full ranking point. This is particularly evident under 'Frequent Flyer Programmes' where it is clear that the younger age groups on a LCC place a lot more value on a FFP than do younger respondents on a FSC (1.50, 1.09, and 1.22). When considering 'fare', it is seen at each age group that LCC respondents place greater importance on the fare than do their FSC counterparts. In most cases, the difference is above 0.7 of a ranking point. The criterion of 'quality' shows the opposite effect, where FSC respondents at most age groups consistently ranked 'quality' higher than the corresponding LCC age group. The slight variation to this trend relating to 'quality' is seen at the 55–64 and 65+ age groups, where LCC respondents had a higher mean value than the FSC respondents. Respondent mean values relating to 'frequency of flights' was the only other choice criteria where a distinctive pattern could be identified. In this case, respondents on LCCs at the younger age groups (16–18, 19–24, & 25–34) ranked 'frequency of flights' as marginally more important than respondents on FSCs at the corresponding age groups. From the 35–44 age groups onwards this switched around, with FSC respondents at each age group ranking 'frequency of flights' as more important than the LCC respondents. Overall, FSC respondents at the various age groups ranked 'comfort' as more important than LCC respondents, although there were a couple of marginal exceptions only showing a difference of 0.22 and 0.29. In terms of 'safety', the FSC respondents showed higher mean values than LCC respondents with the differences between mean values for the different age groups across the models being easily noticeable. The exception was the 45–54 age group, which showed a difference of 0.17 in favour of the FSC respondents. This difference implies that, overall, FSC respondents ranked 'safety' as being quite a bit more important than the LCC respondents. For the remainder of the choice criteria, the differences between the age groups across the models shows no distinct pattern apart from their variability. The choice criterion of 'company policy' has not been explored in detail as it relates to a decision made by an external party and not by the respondents themselves.

### 8.2.8 Understanding of the concepts 'low-cost carrier' and 'full-service carrier'

Question 18 in the questionnaire was an open-ended question that asked respondents to describe their understanding of the concept of a low-cost carrier and a full-service carrier. This question was included because preliminary discussions with industry insiders suggested that there is a general misunderstanding of the concept of a LCC and what to expect in terms of the product/service to be delivered. This 'general misunderstanding' was provisionally confirmed in the testing of the questionnaires where the responses that were obtained suggested a superficial understanding of the concept. Question 18 is to be seen in conjunction with questions 19–28, which explore this topic in more detail. In this context, question 18 serves to openly identify the perceptions and understanding of the two models before exposing the respondents to questions 19–28, which seek to explore the topic in more depth. The number of valid and usable responses is $N = 561$.

The question was posed to respondents travelling on LCCs and FSCs in order to gain insights from across the spectrum of airlines and respondents. The majority of the respondents chose to answer in the format of comparing their perceptions of what a FSC is with what they perceived a LCC to be. In the data collection process the interviewers wrote down all comments made by the respondents and these were then captured into the database. After editing the data, it was ordered and arranged based on common answers. This resulted in 46 common responses being identified. These were further refined and combined to identify 18 generic categories that encapsulated the main differences between the two models as perceived by the respondents. Table 8.22 identifies these 18 categories and, as can be seen, the responses represent a broad range of answers obtained from the respondents and show a clear picture as to what the perceived differences are. In reading table 8.22 it might seem that some of the points identified could be further combined into a smaller number of categories. However, when considered in the context of the respondent's full answer given to the interviewers, they have been kept as a separate category. The value of 699 refers to the number of differences specified by respondents and <u>not</u> individual respondents. Some respondents provided more than one perceived difference.

**Table 8.22: Respondent understanding and perceptions of the differences between the concepts of a low-cost carrier and a full-service carrier**

| | Count | Percentage |
|---|---|---|
| Age of planes | 4 | 0.6% |
| All inclusive | 20 | 2.9% |
| Baggage allowance and charges | 3 | 0.4% |
| Business class available | 9 | 1.3% |
| Convenience and flexibility* | 11 | 1.6% |
| Cost | 192 | 27.5% |
| Flight Availability and frequency | 3 | 0.4% |
| Frequent flyer programme related | 3 | 0.4% |
| Gets you where you want to go | 5 | 0.7% |
| Heavy penalties for cancellations or changes | 2 | 0.3% |
| Meals included - free vs pay extra and assortment | 113 | 16.2% |
| No difference | 11 | 1.6% |
| No frills on LCCs | 32 | 4.6% |
| Quality and standards* | 57 | 8.1% |
| Safety and reliability related issues | 15 | 2.1% |
| Service | 127 | 18.2% |
| Stated 'don't know' | 89 | 12.7% |
| Top airline names | 3 | 0.4% |
| | **699** | **100.0%** |

* Convenience and flexibility includes answers like more destinations, flexibility, easy access for pensioners, provides for sports people.

* Quality and standards includes answers like class, comfort, better facilities, luxury, quality, higher standards, style, and carry less people.

In answering the question, respondents gave a wide variety of answers that ranged from the relevant to the ridiculous. Overall, respondents perceived low-cost carriers to be a cheaper, 'no frills' service where refreshments and other added services needed to be purchased. Full-service carriers were perceived to be a more expensive service where everything is included, refreshments are complimentary, they are more luxurious, and more comfort is offered. Paradoxically, much of this seems to be in conflict with the traditional complaint that airlines (FSCs specifically) are not that luxurious, they are cramped, the food is terrible, and the service bad. Regardless of this, the perceived differences clearly revolve around service features and price - which makes senses from the consumer's perspective. In this case, there seems to be a disconnect between expectations and reality when comparing the two models - particularly from the FSC perspective. A further observation was that in section 8.2.7 respondents travelling on both models did not rank service high at all in terms being an important factor determining or influencing the choice between models. Yet in response to this question, service is seen as a main differentiator between the models by the respondents. Clearly, whilst service is an important factor to the respondents when deciding on a carrier to fly on, it is not a determinant factor. By analysing respondent answers where they express opinions on service on the two models it is possible to gain insights into their perceptions and expectations related to each model.

It needs to be re-emphasised that it is not expected of the consumer to have perfect insight into the various models and their characteristics. The point is to understand what their perceptions are so that airlines can have a greater understanding of their customers and thus better manage their product offering and communication messages. In terms of the valid responses to this question, it is evident from the data collected that the respondents have a relatively limited and superficial insight into the real differences between the two models. This was seen from the fact that 192 respondents identified price alone to be the key difference between the two models. Of those interviewed, 89 were not able to explain the difference between the two models; with an additional 11 stating that there is no difference between the two models at all. Focussing in on product features, 127 of the respondents perceived an important difference between the two models to be the service offered by the carriers (or not offered). Only 32 respondents viewed the difference between the models to simply be 'no frills on a LCC'. For 113 of the respondents, a key differential was whether the carrier offered a free meal/drink or not. From a FSC perspective, quality and standards were seen as a key difference between the models by 57 respondents. Safety and reliability related issues were only identified by 15 respondents as being a difference. Some of the intriguing or contradictory responses included 'better treatment on a FSC', 'more qualified', 'age of planes', 'the LCCs don't provide you with the necessary help' and, 'pay for toilet'. Whilst these points were only identified by a few respondents, they are perceptions that exist in the market and represent barriers for the LCCs to overcome if they are to attract a larger market to their service offerings.

### 8.2.9 Perceptions of features and services offered by LCCs and FSCs

The issues explored in this section covers questions 19–28 of the questionnaire. Questions 19–23 asked all respondents to rate the services and features offered by a LCC, whilst questions 24–28 asked all respondents to rate the services and features offered by a FSC. The inclusion of this question was an attempt to gain greater insight into the respondents' perceptions and understanding of the two models in question. It builds on the open-ended question (Q18) addressed in section 8.2.8 which obtained a superficial overview of the respondent's understanding and perceptions of the two models. For questions 19–28, the questionnaire made use of rating scales on specifically identified service issues that have proven insightful in previous research. By following this approach, a clearer picture of the nature of the respondents' perceptions of the two models emerged.

The service features that were used in the structuring of the question were based on the conceptual model of service quality established by Parasuraman, Zeithaml, and Berry (1988), which focussed on the concept of perceived service quality. In their article, perceived service quality is identified as the difference between the customer's expected service and the service they actually experienced, referred to as the 'perceived service'. The questions in this case asked the respondents to rate the various carriers in terms of their perceptions of the carriers on the dimensions of service quality identified in the Parasuraman, Zeithaml, and Berry model. These dimensions of service quality include empathy, responsiveness, assurance, tangibles, and reliability. Respondents were asked to give their rating of each dimension on a seven-point scale; where 1 represented 'poor' and 7 represented 'excellent'.

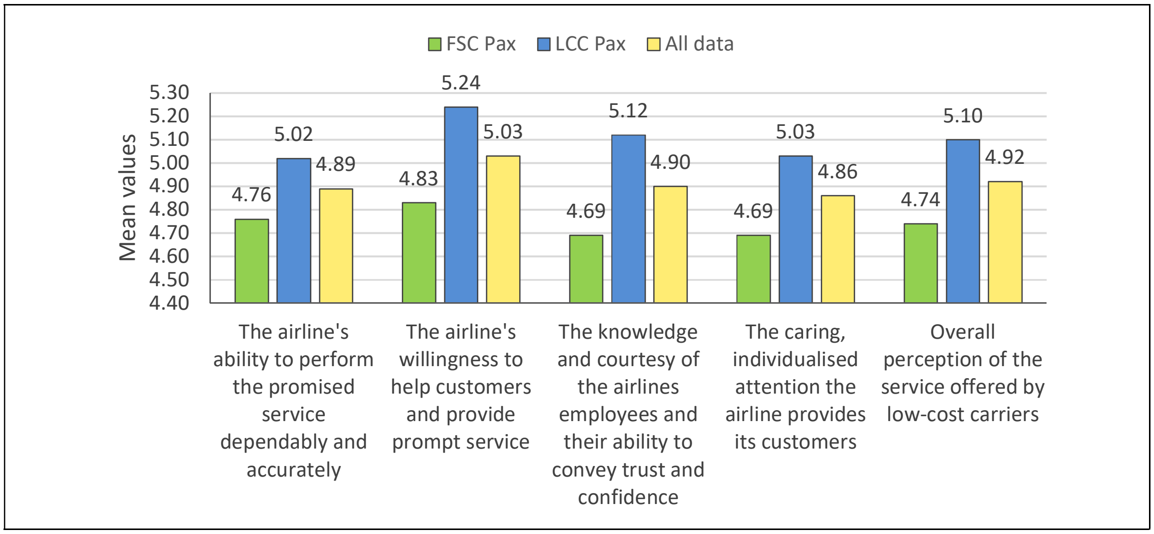
The findings will be addressed per model; firstly, the perceptions of respondents relating to the services and features of a LCC, and secondly, the perceptions of respondents relating to the service and features of a FSC. After this, comment will be given on the similarities or differences between the two models and the perceptions of the respondents relating to each model. The inferential analysis relating to the topics addressed in this descriptive section are addressed in section 8.3.4.

#### 8.2.9.1 Respondent perceptions of the features and services offered by a low-cost carrier

This section relates to questions 19–23 which required all respondents to provide ratings for all five dimensions relating to LCCs. Note that this includes respondents that were travelling on a LCC on the day of interview as well as respondents travelling on a FSC on the day of interview. The discussions that follow all refer to the findings represented in figure 8.31.

The first observation to be made is that on all five dimensions it can be seen that LCC respondents rate LCCs at a higher level than FSC respondents rate LCCs. The calculated mean values of LCC respondents ranged from a low of 5.02 to a high of 5.24 out of a possible 7, which indicates a relatively positive perception of the model on the specific dimensions. Interestingly, the highest rated dimension by LCC respondents was the airline's 'willingness to help customers and provide prompt service', which resulted in a mean value of 5.24. At the other end of the spectrum, the lowest rated dimension was the airline's 'ability to perform the promised service accurately and dependably' with a mean value of 5.02. This does, however, still represent an overall 'good' rating with a mean value at just over five out of a maximum of seven.

**Figure 8.31: Respondent perceptions of the features and services of low-cost carriers**




Reviewing the responses of the FSC respondents and their perceptions of LCCs reveals a different picture. Overall, the ratings across all dimensions given by these FSC respondents were lower than those given by the LCC respondents. In fact, the lowest mean value by the LCC respondents was still higher than the highest mean value of the FSC respondents. The mean values per dimension varied between a low of 4.69 to a high of 4.83 (out of a possible seven) for FSC respondents, which is a relatively narrow band. Looking at individual dimensions, the highest rated dimension by FSC respondents regarding LCCs was the airline's 'willingness to help customers and provide prompt service' with a mean value of 4.83. In terms of mean values, LCC respondents also rated this dimension highest with a mean value of 5.24. Lowest rated was the 'knowledge and courtesy of the airlines employees and their ability to convey trust and confidence' with a mean value of 4.69.

Overall, it can be seen that, on average, LCC respondents rate LCCs higher than FSC respondents, which gives an indication of the mind-set of the LCC respondent and their acceptance of the LCC experience. The extent of this relationship is tested statistically in section 8.3.4. When looking at the perception ratings of the LCCs, the differences between the mean values of the FSC and LCC respondents per dimension can provide a clear picture of the difference between the two models. These differences are clearly seen in figure 8.31.

Considering the individual dimensions, figure 8.31 reflects that the biggest difference between the perceptions of LCC and FSC respondents was on the dimension dealing with the 'knowledge and courtesy of the airline's employees and their ability to convey trust and confidence'. In this case, the difference between the mean values was 0.43 (5.12 versus 4.69), which represents nearly half a point on the rating scale of 1–7. This represents a relatively large difference and tends to suggest a difference in terms of passenger service expectations from the two models. Respondents on a LCC, on average, perceive the LCC's 'employee's knowledge and courtesy and their ability to convey trust and confidence' to be relatively high, whilst FSC respondents, who have higher expectations from the FSCs, have the perception that the LCCs will not be able to match the FSCs on this dimension and thus, on average, rated it lower. The difference in mean values between LCC respondents and FSC respondents in terms of their 'overall perceptions of the service offered' by LCCs is 0.36 (5.10 vs. 4.74). A point to note here is that these are the perceptions of the respondents. In many cases, FSC respondents had not yet had a flight on a LCC and thus based their answers on perceptions alone and not on perceptions and experience. From the airline marketer's point of view, it is important to acknowledge the market's perceptions. Whether the perceptions are right or wrong is irrelevant; it is the fact that they exist that is relevant, and this needs to be managed. On the dimension 'the airline's willingness to help customers and provide prompt service', the difference in mean values between LCC respondents' and FSC respondents' perceptions was equally high at 0.41 (5.24 vs. 4.83). Again, an indication is given by the FSC respondents that they do not perceive the LCCs as being able to provide a service on the same level as the FSCs (as will be noted in figure 8.32 in the next section).

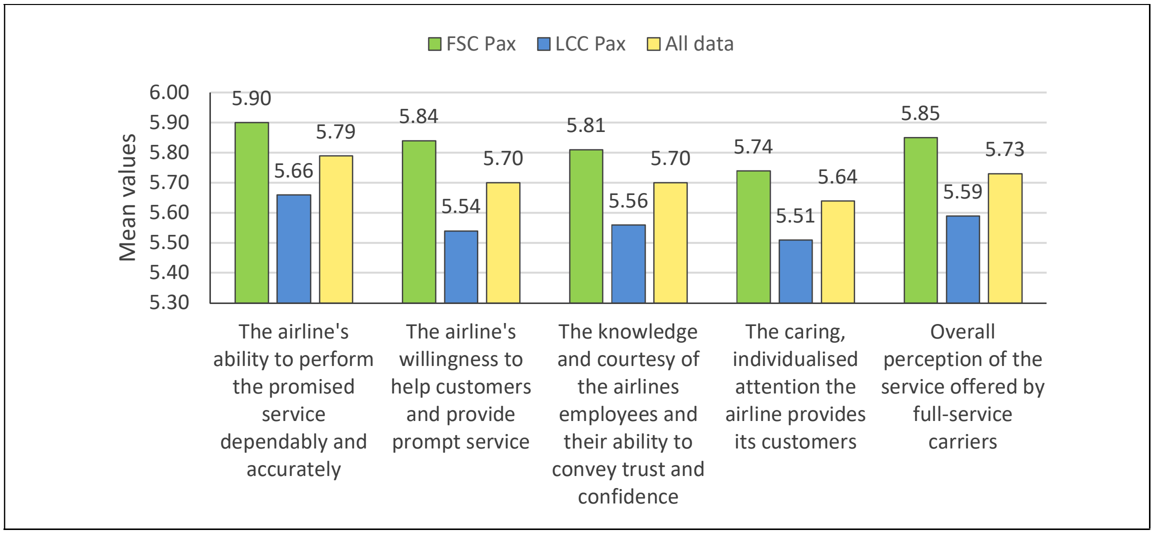
The smallest difference between the perceptions of the different respondent groups was on the airlines 'ability to perform the promised service dependably and accurately' dimension. In this case, the difference between the mean values was 0.26 (5.02 vs. 4.76). Coincidently, the dimension that shows the smallest difference between the two respondent groups is also the dimension that was overall one of the lowest rated dimensions by both groups. This does seem to suggest that there is a perception in the mind of the consumer that LCCs do experience service problems and are not as dependable as the larger FSCs, which operate bigger networks and more frequent flights.

Considering the ratings given by LCC respondents in isolation, the overall ratings suggest a considerable amount of room for improvement for the LCC operators to increase the overall ratings on the service quality dimensions. The same comment applies to the FSC respondent ratings, where it is seen that these respondents perceive the low-cost option as an option that does not/will not fully meet their perceived service expectations. If the LCCs wish to penetrate the consumer market further, or attract FSC passengers to the LCC model, then they will need to understand and manage the perceptions in the marketplace – especially those that are important to the consumer when making the purchase decision. This includes understanding the trade-offs consumers make when deciding between the two models.

#### 8.2.9.2 Respondent perceptions of the features and services offered by a full-service carrier

This section relates to questions 24–28, which required all respondents to provide ratings for all five dimensions relating to FSCs. Note that this includes respondents that were travelling on a FSC on the day of interview as well as respondents travelling on a LCC on the day of interview. The discussions that follow all refer to the findings represented in figure 8.32.

**Figure 8.32: Respondent perceptions of the features and services of full-service carriers**




A distinct difference can be seen in the findings in this section when compared to the previous section. The first observation is that FSC respondents rate FSCs higher than do LCC respondents, although both do give a relatively high rating. In terms of the LCC respondent's ratings of FSCs, their mean values ranged between 5.51 (the caring individualised attention the airline provides its customers) and 5.66 (the airline's ability to perform the promised service dependable and accurately). This represents a very narrow band of ratings across the five dimensions. At such a narrow band, the difference between the highest and lowest rated dimension does not represent a particularly large difference in terms of preference or perception of the dimensions. This seems to indicate a consistent rating of the FSCs across all dimensions and that this rating represents a relatively favourable perception towards the FSC model (and the service and product features on offer) by the LCC respondents (*see* section 8.3.4.1).

As with section (8.2.9.1), the responses of the FSC respondents differ from that of the LCC respondents. Whilst the previous section showed that LCC respondents had a more favourable perception of the LCC model than FSC respondents, in this case the data shows that FSC respondents have a much higher overall rating of the FSC model than do LCC respondents. Particularly noticeable are the ratings given by the FSC respondents, which are particularly high, especially when compared to their LCC model ratings addressed in the previous section. As with the ratings given by the LCC respondents on the FSC model, the mean values by the FSC respondents across the different five dimensions are found within a very narrow band. Figure 8.32 shows that these mean values range from a high of 5.90 to a low of 5.74. Interestingly, the FSC respondents and the LCC respondents both rated 'the airlines ability to perform the promised service dependable and accurately' the highest and 'the caring, individualised attention the airline provides its customers' the lowest. Again, the concept of 'lowest' is a relative term as the 'low' mean value of 5.74 is still a high rating on the particular dimension. Section 8.3.4.2 takes a closer look at these perception ratings and seeks to establish whether there are any statistically significant differences between the FSC and LCC respondents in terms of their ratings of the two models.

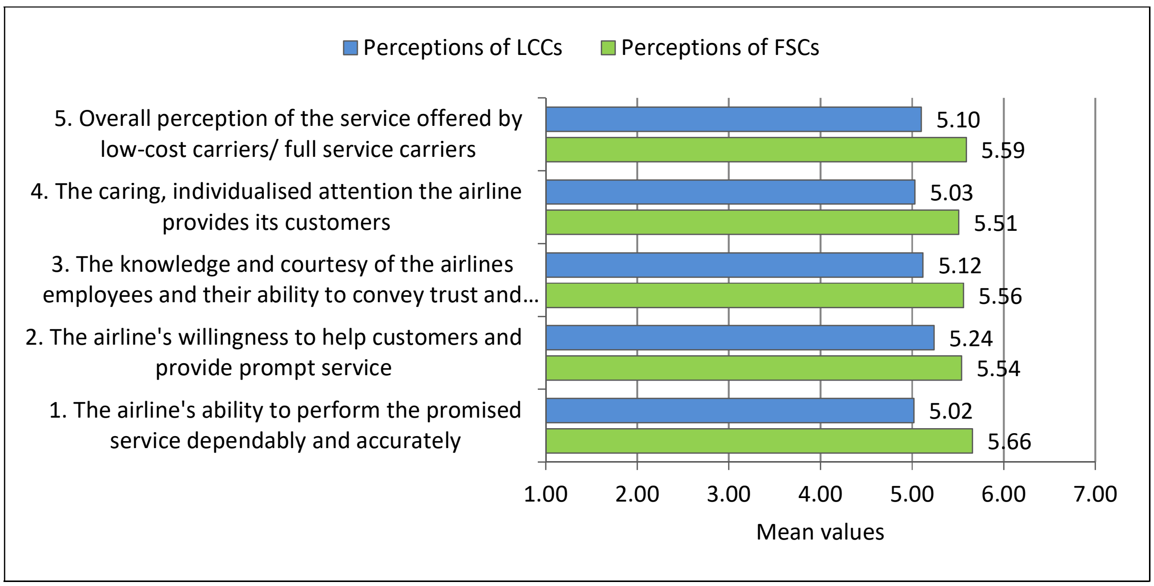
A review of the differences between the two groups on the different dimensions provides some interesting observations and are clearly seen in figure 8.32. When considering the respondent's 'overall perceptions of the service offered' by FSCs it is seen that the difference in mean values between LCC respondents and FSC respondents is 0.26 (5.85 vs. 5.59). This is a relatively small difference for the size of the sample and again it is noteworthy that the means are at the high end of the rating scale. This shows a consistently favourable perception of the products and services offered by the FSCs by the broader air travelling public. Looking at specific dimensions, the largest difference (0.3 of a rating point) between the two respondent groups was on the 'the airline's willingness to help customer and provide prompt service' (a mean value of 5.54 by LCC respondents versus 5.84 by FSC respondents). This indicates a slight tendency for FSC respondents to have a more favourable perception of the helpfulness and willingness of FSCs than the LCC respondents. In terms of the other four dimensions, the difference between the perception ratings of LCC respondents and FSC respondents relating to FSCs is approximately the same (within 0.03 of a rating point). This again highlights the general positive perceptions of the FSC model by both sets of respondents.

#### 8.2.9.3 Comments on the differences between models and respondent perceptions

The discussions given in sections 8.2.9.1 and 8.2.9.2 focussed on the respondents' perceptions of the two models in isolation. That is, the ratings of all the respondents regarding the LCC model were given in one section and then the ratings of all the respondents regarding the FSC model were given in another. In this section, FSC and LCC respondents will be separated and attention given to viewing their mean values and perceptions of the two models together to highlight the distinct differences that were observed. The discussion that follows is based on figures 8.33 and 8.34, which take the data given in figures 8.31 and 8.32, and refocuses it according to the different respondent groups. In essence, the perception ratings of the LCC respondents regarding FSCs and LCCs are viewed together, and the perception ratings of FSC respondents regarding FSCs and LCCs are viewed together.

Giving attention firstly to LCC respondents, figures 8.31 and 8.32 in the previous section clearly showed that respondents travelling on FSCs have a less favourable view of LCCs than they do of FSCs. It was also evident that respondents travelling on LCCs have a substantially more favourable perception of the features and services offered by LCCs than do respondents on FSCs across all dimensions. However, it is when respondents are divided according to the model flown and their mean perception values on the features and services provided by FSCs and LCCs are compared that an interesting situation can be noted. What the data shows is that, although respondents on LCCs have a highly favourable perception of LCCs and the features and services that they offer, they give an even higher rating for FSCs. This is clearly highlighted in figure 8.33, which shows that they rate FSCs consistently, and considerably higher, than LCCs (the model on which they are flying) in terms of service perceptions and performance. The fact that they are flying on a LCC but rate FSCs higher suggests that the purchase decision to fly on a LCC is made on variables other than premium service features or other product related comforts. It is postulated that this finding can be directly linked to the most important reason for selecting a carrier as identified by 48.9% of the low-cost respondents: fare. This issue was explored in section 8.2.7. It is further suggested that in the case of LCCs, respondents accept the fact that they will receive fewer service benefits and product features and therefore make a voluntary trade-off to receive the lower, more affordable fare. As a form of post-purchase behaviour, the LCC respondents accept this situation and lower their service expectations accordingly to the extent that, even though they still rate the FSCs higher than LCCs, they become more accepting of the service features of the LCCs and thus rate them higher than do the FSC respondents.

**Figure 8.33: LCC respondents mean values relating to their perceptions of the LCC and FSC models**




From figure 8.33 it is worth noting the differences between the LCC respondent's mean values relating to their perceptions of FSCs and LCCs across the various dimensions. From the figure, it is seen that the differences range between 0.30 and 0.64, which given the sample size in this study, shows that there are relatively large differences between the LCC respondent's mean values for each dimension relating to their perception ratings of the two models. The figure highlights that LCC respondents perceive the biggest difference between LCCs and FSCs to be on dimension 1 (the airline's ability to perform the promised service dependably and accurately). In terms of the mean values, the biggest difference is 0.64 of a rating point (5.66 versus 5.02). Again, this reinforces the point that even though LCC respondents have more confidence in a FSC delivering the expected service, they have still selected to fly with the LCC.

Switching the attention to the ratings and perceptions of the FSC respondents travelling on full-service carriers**,** a very different picture emerges to the one that was seen for the LCC respondents. The data shows that respondents travelling on a FSC have a substantially more favourable perception of the features and services offered by FSCs and gave significantly lower perception ratings for LCCs across all dimensions. This is clearly illustrated in figure 8.34. A brief glance back to figure 8.33, which focusses on LCC respondents, will show the extent of the difference between the two respondent groups. The finding that FSC respondents show such a difference in terms of perceptual ratings between the two models seems to suggest that they have a significant perceptual block against LCCs and view the FSC as vastly superior. This also confirms the findings in section 8.2.7, where it was shown that the main reasons for selecting to fly on a FSC went beyond more than just fare and included reasons such as quality, comfort, safety, and reliability. Clearly, FSC respondents have a need for the added service and product features offered on a FSC and are willing to pay the higher fare to experience these benefits. From a LCC operator's perspective this presents a particular challenge in attempting to get these 'feature and quality demanding consumers' to switch to the LCC offering. It is also interesting to note that when viewed together (in figure 8.34), the FSC respondent mean values on the various dimensions for the two models are extremely consistent with minimal difference between the highest and lowest rated dimensions.

**Figure 8.34: FSC respondent mean values relating to the perceptions of the LCC and FSC models**

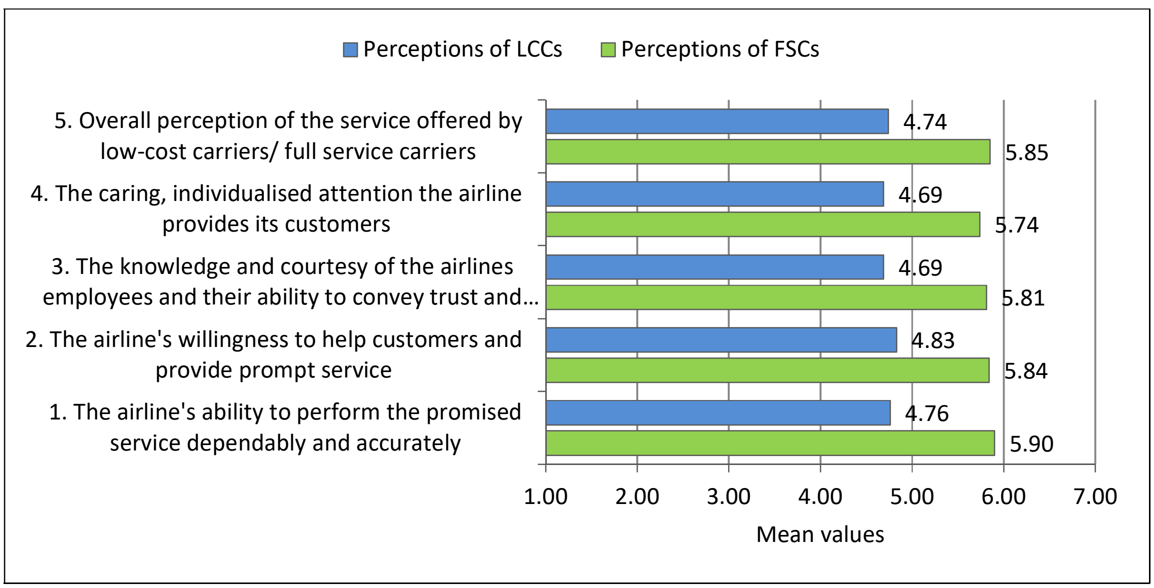



Figure 8.34 shows the differences that can be observed between the FSC respondent's mean values relating to their perceptions of FSCs and LCCs across the various dimensions. From this figure, it can be seen that the differences range between a high of 1.14 to a low of 1.01. Given the sample size in this study, this shows that there are relatively large differences between the FSC respondent's mean values

for each dimension relating to their perception ratings of the two models. The perceptions of the FSC respondents are quite distinct when viewed from this perspective especially when compared with mean values of the LCC respondents (*see* figure 8.33). In support of the point made in the previous paragraph, the consistency of the respondent's ratings can clearly be seen in figure 8.34, with the range of the differences being only 0.13 (1.14–1.01) across all dimensions.

The extent of the differences between the perceptions and expectations of the respondents in this study is interesting because they were not aware of the question that followed the rating of the LCCs (questions 19–23). From their perspective, the rating of the LCCs was done in isolation from questions 24–28 (which focussed only on their perceptions of FSCs). Respondents thus had a clear focus on one particular model at a time so the opportunity to artificially manipulate their answers was limited.

It must also be noted that a review of individual respondent responses showed that for many dimensions there were ratings of 7 (excellent) in some cases, and ratings of 1 (poor) in others. In this case, some respondents showed distinctive preferences and opinions towards a specific model. This was particularly the case with FSC respondents, where some gave extremely high ratings for FSCs and extremely low ratings for the LCCs. The data relating specifically to FSC respondent's ratings of LCCs on all five dimensions shows that the number of respondents that gave a rating of 3 or lower for any of the five dimensions ranged from a low of 18.7% to a high of 20.4% of the FSC respondents. This is in stark contrast to their ratings of FSCs where, across all five dimensions, the number of respondents that gave a rating of 3 or lower for any of the five dimensions ranged from a low of 1.1% to a high of 2.4% of the FSC respondents. At the other extreme, when rating LCCs, the number of FSC respondents that gave a rating of 7 on one or more of the five dimensions ranged from a low of 8.7% to a high of 11.8% of the FSC respondents. The same FSC respondents, when rating the FSCs, were much more generous, with the number of respondents awarding a rating of 7 on one or more of the five dimensions ranging from a low of 25.9% to a high of 29.9% of the FSC respondents.

The data relating to LCC respondent's ratings of FSCs and LCCs on the five dimensions was less wide-ranging than the FSC respondents (as expected given the findings outlined in figures 8.33 and 8.34). In this context, the data relating specifically to the LCC respondent's ratings of LCCs on all five dimensions shows that the number of LCC respondents that gave a rating of 3 or lower for any of the five dimensions ranged from a low of 5.6% to a high of 9.2% of the LCC respondents. This is in contrast to their ratings of FSCs where, across all five dimensions, the number of respondents that gave a rating of 3 or lower for any of the five dimensions ranged from a low of 2.5% to a high of 4.0% of the LCC respondents. At the other extreme, when rating LCCs, the number of LCC respondents that gave a rating of 7 for any of the five dimensions ranged from a low of 8.6% to a high of 14.7% of the LCC respondents. The same LCC respondents, when rating the FSCs, were much more generous, with the number of respondents awarding a rating of 7 for any of the five dimensions ranging from a low of 21.2% to a high of 25.9% of the LCC respondents.

Overall, it was seen in the data that a larger percentage of the FSC respondents gave ratings that were more extreme when rating the LCCs and FSCs, than did LCC respondents. Whilst LCC respondents did show a more favourable rating of FSCs than for LCCs, their ratings were more concentrated around the middle ratings than the opposite extremes (ratings of 1, 2 & 7).

#### 8.2.9.4 Cross tabulation of respondent mean values relating to perceptions of the two models and age

The findings presented in figures 8.31 and 8.32 can be used to explore the data at a number of sub-levels. In the context of this study, the mean values relating to the respondents' perceptions of the two models can be sub-divided according to the identified age groups. In this instance, the idea is to establish whether there are any differences between the various age groups in terms of their mean values on the five dimensions and whether these differences exist between the two models. The discussion that follows firstly considers the age group mean values relating to the respondent's perceptions of (i) LCCs and then (ii) FSCs. Attention is then, secondly, given to noticeable differences between the two models. The cross tabulations on which the discussions are based are given in table 8.23 (perceptions of the LCC model) and table 8.24 (perceptions of the FSC model). The inferential analysis relating to the topic addressed in this descriptive section is done in section 8.3.4.4.

Table 8.23 illustrates the differences between the age groups in terms of the respondent's mean values relating to their perception ratings for the LCC model. As with the discussions in sections 8.2.9.1–8.2.9.3, the table distinguishes between the mean values of the FSC and LCC respondents and their perceptions of the specific model (LCC model in this case).

The most noticeable feature of table 8.23 is the point that when rating the features and services of a LCC, for all age groups, on all five dimensions, the respondents travelling on a LCC had a higher mean value than the respondents travelling on a FSC, except for the 16–18 age group. In the case of the 16–18 age group, the FSC respondents overall gave higher ratings on all five dimensions than did the LCC respondents when rating the LCC model. To add to this, the mean values of the FSC respondents in this case were amongst the highest mean values across all age groups and respondent groups. From the FSC respondent perspective, the 55–64 age group showed the second most favourable mean values with regard to their ratings of the five dimensions for the LCCs but at a noticeably lower level than the 16–18 age group. The mean values for LCC respondents were fairly consistent across all dimensions and age groups, but it could be seen that the older age groups (55+) did show slightly higher overall mean values indicating that they are more accepting overall of the LCC product.

**Table 8.23: Cross tabulation of respondent's mean values relating to perceptions of the LCC model versus age group**

| Age group | Respondent Model flown | Airline's ability to perform the promised service dependably and accurately | Airline's willingness to help customers and provide prompt service | Knowledge and courtesy of the airlines employees and their ability to convey trust and confidence | Caring, individualised attention the airline provides its customers | Overall perception of the service offered by low-cost carriers |
|---|---|---|---|---|---|---|
| 16 - 18 | FSC | 5.71 | 5.53 | 5.41 | 5.65 | 5.76 |
| | LCC | 5.09 | 5.35 | 4.97 | 4.97 | 5.12 |
| | Total | 5.29 | 5.41 | 5.12 | 5.20 | 5.33 |
| 19 - 24 | FSC | 4.68 | 5.00 | 4.66 | 4.75 | 4.67 |
| | LCC | 4.88 | 5.25 | 5.11 | 4.96 | 5.06 |
| | Total | 4.80 | 5.15 | 4.93 | 4.88 | 4.90 |
| 25 - 34 | FSC | 4.76 | 4.60 | 4.45 | 4.55 | 4.61 |
| | LCC | 5.01 | 5.14 | 5.08 | 5.08 | 5.04 |
| | Total | 4.88 | 4.86 | 4.75 | 4.80 | 4.81 |
| 35 - 44 | FSC | 4.58 | 4.79 | 4.79 | 4.76 | 4.79 |
| | LCC | 4.95 | 5.04 | 4.88 | 4.91 | 4.95 |
| | Total | 4.73 | 4.88 | 4.83 | 4.82 | 4.85 |
| 45 - 54 | FSC | 4.70 | 4.77 | 4.71 | 4.57 | 4.67 |
| | LCC | 5.02 | 5.28 | 5.30 | 5.09 | 5.12 |
| | Total | 4.83 | 4.98 | 4.95 | 4.78 | 4.85 |
| 55 - 64 | FSC | 5.27 | 5.14 | 5.13 | 4.87 | 5.07 |
| | LCC | 5.60 | 5.53 | 5.73 | 5.27 | 5.53 |
| | Total | 5.43 | 5.34 | 5.43 | 5.07 | 5.30 |
| 65+ | FSC | 4.77 | 4.92 | 4.46 | 4.15 | 4.31 |
| | LCC | 5.70 | 5.45 | 5.70 | 5.36 | 5.91 |
| | Total | 5.17 | 5.17 | 5.00 | 4.71 | 5.04 |
| Total | FSC | 4.76 | 4.83 | 4.70 | 4.70 | 4.74 |
| | LCC | 5.02 | 5.22 | 5.12 | 5.02 | 5.10 |
| | Total | 4.89 | 5.02 | 4.91 | 4.86 | 4.92 |

A look at the rest of the table shows that the biggest difference in mean values across all five dimensions between the two groups of respondents was at the 65+ age group. In this instance, the LCC respondents showed an overall more favourable rating of the LCCs compared to the FSC respondents. In some cases, there was a difference of up to 1.24 on one dimension between the two groups, with the smallest difference being 0.53. Respondents from the 35–44 age group showed the overall smallest difference in mean values between respondents travelling on the two models.

Moving the attention to the mean values relating to the LCC and FSC respondent's perceptions of the FSC model, it is immediately noticeable that the overall mean values are higher than the mean values given for the LCC model. It is also noticeable that there are no real standout differences between the age groups. The mean values relating to the perceptions of the FSC model are given in table 8.24.

Table 8.24 shows that for all except one of the crosses between age and the five dimensions, the FSC respondents had a higher mean value than the LCC respondents. In the one case where the LCC respondents had a mean value higher than the FSC respondents (highlighted in purple in the table), the difference was very small at 0.13 and, in any event, the overall mean values were 6.00 and 6.13 (out of a possible maximum of seven), which are both extremely high values.

**Table 8.24: Cross tabulation of respondent's mean values relating to perceptions of the FSC model versus age group**

| Age group | Respondent Model flown | Airline's ability to perform the promised service dependably and accurately | Airline's willingness to help customers and provide prompt service | Knowledge and courtesy of the airlines employees and their ability to convey trust and confidence | Caring, individualised attention the airline provides its customers | Overall perception of the service offered by full-service carriers |
|---|---|---|---|---|---|---|
| 16–18 | FSC | 6.26 | 6.21 | 6.05 | 6.26 | 6.05 |
| | LCC | 5.77 | 5.61 | 5.52 | 5.52 | 5.39 |
| | Total | 5.96 | 5.84 | 5.72 | 5.80 | 5.64 |
| 19–24 | FSC | 5.98 | 5.87 | 5.95 | 5.97 | 6.08 |
| | LCC | 5.78 | 5.66 | 5.62 | 5.77 | 5.83 |
| | Total | 5.86 | 5.74 | 5.76 | 5.85 | 5.93 |
| 25–34 | FSC | 5.70 | 5.74 | 5.64 | 5.55 | 5.63 |
| | LCC | 5.61 | 5.44 | 5.53 | 5.40 | 5.56 |
| | Total | 5.65 | 5.60 | 5.59 | 5.48 | 5.60 |
| 35–44 | FSC | 5.80 | 5.81 | 5.87 | 5.69 | 5.84 |
| | LCC | 5.46 | 5.44 | 5.46 | 5.39 | 5.42 |
| | Total | 5.67 | 5.67 | 5.72 | 5.58 | 5.69 |
| 45–54 | FSC | 6.00 | 5.76 | 5.72 | 5.69 | 5.90 |
| | LCC | 5.73 | 5.43 | 5.48 | 5.38 | 5.53 |
| | Total | 5.90 | 5.64 | 5.63 | 5.58 | 5.77 |
| 55–64 | FSC | 6.09 | 6.14 | 6.00 | 5.91 | 5.91 |
| | LCC | 5.71 | 6.07 | 6.13 | 5.60 | 5.80 |
| | Total | 5.94 | 6.11 | 6.05 | 5.78 | 5.86 |
| 65+ | FSC | 6.43 | 6.14 | 5.93 | 5.86 | 5.86 |
| | LCC | 5.67 | 5.78 | 5.78 | 5.67 | 5.78 |
| | Total | 6.13 | 6.00 | 5.87 | 5.78 | 5.83 |
| Total | FSC | 5.90 | 5.84 | 5.82 | 5.75 | 5.86 |
| | LCC | 5.66 | 5.55 | 5.57 | 5.52 | 5.61 |
| | Total | 5.80 | 5.71 | 5.71 | 5.65 | 5.74 |

As was noted earlier, when rating the LCCs, the FSC respondents in the 16–18 age group had a mean value higher than the LCC respondents across all five dimensions and that these mean values were the highest across all age groups and respondent groups. The same group of respondents did however rate the FSC model even higher than they did the LCC model (across all five dimensions). Once again, the mean values for this age group were amongst the highest across all age groups and respondent groups. Further research should be conducted to gain insight into the reasons behind this age group's favourable perceptions related to the two models compared to the other age groups. The FSC respondents in the 55–64 and 65+ age groups followed the 16–18 age group in terms of the higher mean values. In terms of the LCC respondents and their mean values relating to their perceptions of the FSC model, no age group really stands out as having the highest mean values across the five dimensions. A visual inspection of the table will show that the 55–64 age group probably shows the overall higher mean values, as was the case with the FSC respondents.

Reviewing the rest of the table shows that the biggest difference in mean values across the five dimensions between the two groups of respondents was at the 16–18 age group. As stated previously, the FSC respondents showed an overall more favourable rating of the FSCs compared to the LCC respondents. Unlike with the mean values relating to the perceptions of the LCCs, the differences were not extremely large, with the biggest difference being 0.74 and the smallest 0.49. The differences between FSC and LCC respondents for the rest of the age groups across the five dimensions were very small, indicating that most respondents have an overall favourable perception rating of the FSC model.

#### 8.2.9.5 Cross tabulation of respondent mean values relating to perceptions of the two models and gender

As stated in the introduction to section 8.2.9.3, the findings presented in figures 8.31 and 8.32 can be used to explore the data at a number of sub-levels. In the context of this study the mean values relating to the respondents' perceptions of the two models can be sub-divided according to the identified gender categories. In this instance, the idea is to establish whether there are any differences between the genders in terms of their mean values on the five dimensions and whether these differences exist between the two models. The discussion that follows firstly considers the gender mean values relating to the respondent's perceptions of (i) LCCs and then (ii) FSCs. Secondly, attention is given to noticeable differences between the two models. The cross tabulations on which the discussions are based are given in table 8.25 (perceptions of the LCC model) and table 8.26 (perceptions of the FSC model). The inferential analysis relating to the topic addressed in this descriptive section is done in section 8.3.4.3.

**Table 8.25: Cross tabulation of respondent's mean values relating to perceptions of the LCC model versus gender**

| Respondent model flown | Gender | Airline's ability to perform the promised service dependably and accurately | Airline's willingness to help customers and provide prompt service | Knowledge and courtesy of the airlines employees and their ability to convey trust and confidence | Caring, individualised attention the airline provides its customers | Overall perception of the service offered by low-cost carriers |
|---|---|---|---|---|---|---|
| FSC | Male | 4.79 | 4.89 | 4.70 | 4.78 | 4.79 |
| | Female | 4.94 | 5.21 | 5.02 | 4.92 | 5.01 |
| | Total | 4.86 | 5.04 | 4.85 | 4.84 | 4.89 |
| LCC | Male | 4.67 | 4.69 | 4.64 | 4.50 | 4.62 |
| | Female | 5.11 | 5.24 | 5.27 | 5.16 | 5.23 |
| | Total | 4.91 | 4.99 | 4.98 | 4.86 | 4.95 |
| Total | Male | 4.75 | 4.82 | 4.68 | 4.69 | 4.73 |
| | Female | 5.01 | 5.22 | 5.12 | 5.02 | 5.10 |
| | Total | 4.88 | 5.02 | 4.90 | 4.85 | 4.91 |

Looking firstly at the respondent perceptions of the LCC model (table 8.25), it is interesting to note that the overall figures show that female respondents had higher mean values than the male respondents across all five dimensions. In other words, female respondents rate the LCCs more favourably on the perceived service dimensions than do male respondents.

The table also indicates that, in terms of the FSC respondent's ratings of the LCC model, female respondents have higher mean values across all five dimensions than their male counterparts. In terms of the LCC respondent's ratings of the LCC model, the female respondents once again have higher mean values across all five dimensions than their male counterparts. The differences between the genders in terms of their mean values is larger between male and female respondents travelling on a LCC than those travelling on the FSCs. In this case, the mean values show that female respondents travelling on a LCC rate LCCs higher than any of the other categories.

When comparing the individual genders directly, an interesting observation is made. Table 8.25 shows that when rating a LCC, female respondents on a LCC have higher mean values than female respondents on a FSC across all five dimensions (albeit a relatively small difference). This was to be expected and is in line with other findings in this chapter. The interesting observation is that when rating LCCs, male respondents travelling on a FSC had higher mean values than male respondents actually travelling on a LCC across all five dimensions. This point is particularly interesting given the large difference that will be seen in their mean values relating to their perception of the FSC model (Table 8.26).

Switching the attention to the respondent's perceptions of the FSC model (table 8.26) it is interesting to note that, in complete contrast to the gender findings relating to respondent perceptions of the LCC model, the overall mean values (total rows) relating to the FSC model show that male respondents had higher mean values across all five dimensions than their female counterparts. In other words, male respondents rate the FSCs more favourably on the service dimensions than do female respondents.

**Table 8.26: Cross tabulation of respondent's mean values relating to perceptions of the FSC model versus gender**

| Respondent model flown | Gender | Airline's ability to perform the promised service dependably and accurately | Airline's willingness to help customers and provide prompt service | Knowledge and courtesy of the airlines employees and their ability to convey trust and confidence | Caring, individualised attention the airline provides its customers | Overall perception of the service offered by full-service carriers |
|---|---|---|---|---|---|---|
| FSC | Male | 5.93 | 5.82 | 5.77 | 5.76 | 5.80 |
| | Female | 5.72 | 5.53 | 5.58 | 5.53 | 5.60 |
| | Total | 5.84 | 5.69 | 5.69 | 5.66 | 5.71 |
| LCC | Male | 5.83 | 5.83 | 5.85 | 5.66 | 5.92 |
| | Female | 5.60 | 5.60 | 5.56 | 5.55 | 5.62 |
| | Total | 5.72 | 5.72 | 5.71 | 5.61 | 5.77 |
| Total | Male | 5.89 | 5.83 | 5.80 | 5.73 | 5.84 |
| | Female | 5.67 | 5.56 | 5.57 | 5.54 | 5.61 |
| | Total | 5.79 | 5.70 | 5.69 | 5.64 | 5.73 |

In terms of the LCC respondent's ratings of the FSC model, the male respondents have higher mean values across all five dimensions than their female counterparts. The difference between the genders in terms of their mean values across all five dimensions is relatively similar between respondents travelling on LCCs and FSCs. This is in contrast with the perceptions of the LCC model, where it was established that the differences were much larger. In this case, the mean values show that male respondents travelling on a FSC rate FSCs higher than any of the other categories

When comparing the individual genders and their mean values relating to FSCs directly, once again a distinct difference is seen when compared to the mean values relating to perceptions of the LCCs. Table 8.26 shows that across all five dimensions there is no noteworthy difference between the mean values of male respondents travelling on a FSC or a LCC. On some dimensions, FSC respondents had the higher mean value, and on others the LCC respondents had the higher mean value. Exactly the same observation applies to the mean values of female respondents travelling on either a FSC or a LCC. This is distinctly different to the findings relating to the perceptions of LCCs (table 8.25) where male FSC respondents had higher mean values than male LCC respondents across all five dimensions and female LCC respondents had higher mean values than female FSC respondents across all five dimensions. Of particular interest is the observation that across all five dimensions, when rating the FSC model, male respondents travelling on a LCC have higher mean values than female respondents travelling on a FSC. The overall preference of the male respondents for the FSC is clear. The overall figures clearly show that, on average, male and female respondents rate FSCs more favourably than LCCs across all five dimensions.

Reviewing table 8.25 and table 8.26, the difference between the mean values relating to male and female respondent ratings of the FSC and LCC models is readily apparent. The main point to be highlighted is that the greatest differences exist between the mean values of the male respondents, with the female respondents showing much lower differences. This applies across all five dimensions that were rated. Specifically stated:

- The differences across all five dimensions between the mean values of male FSC respondents when rating FSC vs LCCs ranged from a low of 0.93 to a high of 1.14 in favour of the FSC model. In this case, even the low difference represents a large difference. Similarly, the differences across all five dimensions between the mean values of male LCC respondents when rating FSC vs LCCs ranged from a low of 1.14 to a high of 1.30 in favour of the FSC model, which shows an even higher gap between the two models.
- In comparison to the male mean values, the differences across all five dimensions between the mean values of female FSC respondents when rating FSC vs LCCs ranged from a low of 0.32 to a high of 0.78 in favour of the FSC model. Similarly, the differences across all five dimensions between the mean values of female LCC respondents when rating FSC vs LCCs ranged from a low of 0.29 to a high of 0.49 in favour of the FSC model, which shows an even smaller gap than the FSC female respondents.

In summary, when reviewing the data contained in the tables for this section it can be seen that whilst both genders have an indicated preference to the FSC model when rating the models on a number of service dimensions, it is the males that show a clearer picture as to the extent of their preference. The smaller differences seen in the mean values of the female respondents indicate that female respondents view the models as being relatively similar, which has implications for FSC and LCC airline marketers.

### 8.2.10 Respondent price sensitivities and reasons for switching/not switching

O'Connell (2007) in his study stated that "from an academic and commercial point of view, fare is a very important determining criterion for passengers in selecting an airline for travel, especially in short-haul markets". It is therefore extremely important to understand the influence of fare on consumer demand, especially how the change in the fare offered by a particular carrier affects demand for the carrier and the amount of brand switching that occurs. Carriers, in effect, are seeking to maximize revenue by attempting to obtain the highest fares possible from passengers without them engaging in switching behaviours to a competing operator that offers a better overall deal.

The findings addressed in this section relate to questions 29–32 of the questionnaire. In these questions an attempt was made to gain insight into the respondent's price sensitivity, and therefore their inclination to switch to another carrier type should the fares increase or decrease on the different models. Answers to these questions give insights into price sensitivity as well as an indication of loyalty to carrier and model.

The questions had a filter, with respondents travelling on FSCs only having to answer questions 29 and 30 and respondents travelling on LCCs only answering questions 31 and 32. The questions were phrased from the perspective of each respondent type. Respondents were firstly required indicate at what level of a fare increase (FSC respondents) or fare reduction (LCC respondents) they would switch to the other model, and then secondly, indicate the reasons as to why they chose to switch or not to switch, as the case may be. As was with the previous section, which dealt with respondent perceptions, the responses to these questions showed some distinct differences between the respondents travelling on FSCs and those travelling on LCCs. In addition to this, there were some interesting and distinct differences in this study compared to the O'Connell (2007) study, which covered Europe and Asia. Points raised in this descriptive discussion are tested for statistical significance in section 8.3.5.

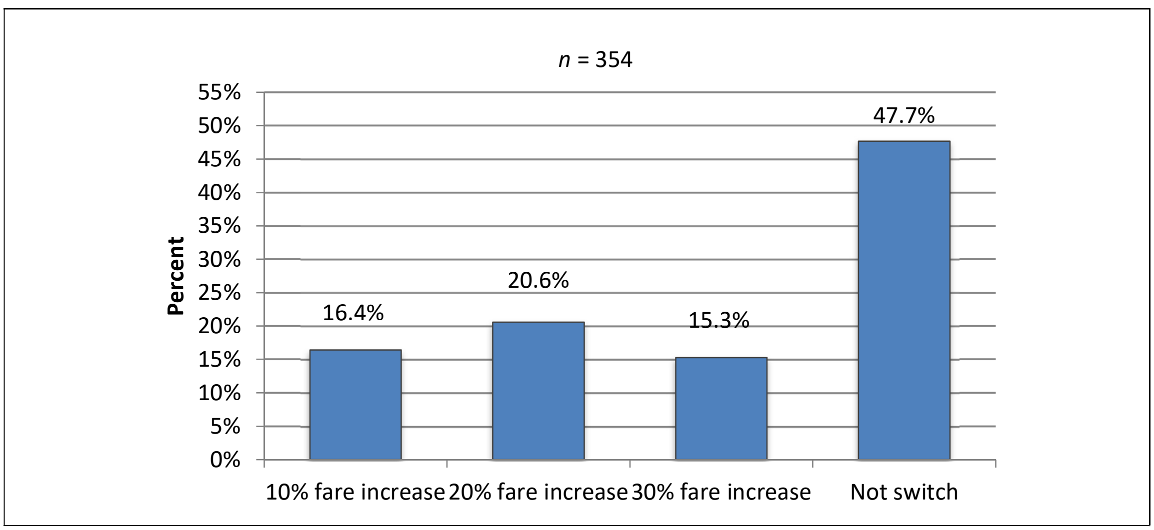
#### 8.2.10.1 Respondent levels of price sensitivity – FSC respondents

The focus in this section is on the responses of respondents travelling on a FSC (questions 29 and 30). The question asked the FSC respondents to identify at what level of fare increase by the full-service carriers they would consider switching to a LCC. Respondents were given the alternatives of a 10%

fare increase, a 20% fare increase, a 30% fare increase, or 'not switch'. They had to select one alternative only. Following this, respondents were asked to explain their choice and indicate why they chose to switch or not to switch, and why they chose to switch at the particular level they selected. In terms of the number of valid responses to this question, the value of *n* for this section of analysis is 354.

Figure 8.35 provides an indication of what proportion of the full-service carrier respondents would switch over to low-cost airlines if the FSCs raised their fares by 10%, 20%, and 30%. In terms of the valid responses to question 29 (*n* = 354), the data shows that a fare increase of 10% by the FSCs would persuade approximately 16.4% of the FSC respondents to switch to a LCC. At a fare increase level of 20% by the FSCs, the data shows that 20.6% of the FSC respondents would decide to switch to the LCCs. A fare increase of 30% was shown to be the breaking point of 15.3% of the FSC respondents, which would be sufficient for them to consider switching to the lower fare option offered by the LCCs. In total, this shows that a cumulative 52.3% of the FSC respondents indicated that they would switch to low-cost carriers if the FSC fares increased by up to 30%. A key observation is that 47.7% of the FSC respondents indicated that they would not switch at all – even when faced with the prospect of a 30% increase in the fare charged by the FSCs. The implications of this needs to be considered in the context that in section 8.2.5.4 it was shown that the average fare for a FSC ticket (ZAR 1 538,96) was ZAR 533,81 (53.1%) higher than the average fare on a LCC (ZAR 1 005,15). A 30% increase on this average FSC fare results in an additional ZAR 461,69 per ticket. To reinforce the point, 47.7% of the valid FSC respondents to question 29 stated that even when faced with this 30% increase (ZAR 461,69) they would choose to remain loyal to the FSCs, which implies that fares are not the primary driver of FSC choice.

**Figure 8.35: FSC respondent switching tendency should FSCs increase fares**




As stated in the introduction to the section, respondents were also asked why they would consider switching or why they would not consider switching (Question 30). The responses to this open-ended question were recorded and then edited to a number of common themes given by the respondents. In some cases, some respondents gave more than one reason for switching and their responses were recorded under each reason. The accompanying tables distinguish between where a reason was given as the sole reason for the respondent switching/not switching and where a reason was given with multiple reasons by the respondent. Any contradictory or unclassifiable responses were grouped separately and shown in the tables as such. The responses and groupings are summarised in table 8.27 (would switch to a LCC) and table 8.28 (would not switch to a LCC).

**Table 8.27: FSC respondent reasons for switching to LCCs if FSCs increased their fares**

| Why would you consider switching to a LCC if the FSCs increased their fares? | | | |
|---|---|---|---|
| | **Count** | **Total** | **Percent** |
| Fare | | 155 | 88.6% |
| - Fare (only) | 141 | | |
| - Fare (but would prefer not to change) | 2 | | |
| - Fare (FSC and LCC very similar anyway) | 5 | | |
| - Fare (Increase not accompanied by extra services so will switch) | 4 | | |
| - Fare (with other reasons) | 3 | | |
| Comfort | | 3 | 1.7% |
| - Comfort (only) | 2 | | |
| - Comfort (with other reasons) | 1 | | |
| Company policy | 1 | 1 | 0.6% |
| Better planes | 1 | 1 | 0.6% |
| More services | 1 | 1 | 0.6% |
| Short flight does not justify extra expense | 1 | 1 | 0.6% |
| Convenience (With other reasons) | 2 | 2 | 1.1% |
| Service (with other reasons) | 1 | 1 | 0.6% |
| Safety (with other reasons) | 1 | 1 | 0.6% |
| Contradictory/unclassifiable responses | 9 | 9 | 5.1% |
| **Total reasons** | **175** | **175** | **100.0%** |

Table 8.27 highlights that in terms of reasons given by FSC respondents for switching to LCCs if the FSCs increased their fares, ten unique reasons could be identified from 175 recorded responses. Regarding these respondents that indicated that they would consider switching, 155 of the 175 (88.6%) recorded responses were by respondents stating that they would consider switching due to the price of the airfare. If the unclassifiable/contradictory reasons are excluded (nine), then the data reveals that 93.4% of the recorded responses for switching are because of the fare. The remaining 11 recorded responses indicated that FSC respondents would switch because they perceived no real difference between the two models or because there was no great sacrifice in terms of comfort or luxury – especially for such a short flight (generally less than two hours). Convenience and service were mentioned in conjunction with other reasons. In reviewing the responses from the respondents in this regard, there were a limited variety of responses given to explain the reasoning for switching.

It was noted in figure 8.35 that 47.7% of the FSC respondents would remain loyal to the FSCs despite the suggested fare increases. In contrast to the low variety of reasons offered by FSC respondents for opting to switch carrier, a much larger variety of reasons were put forward by respondents for not switching. Table 8.28 contains the summary of the key reasons put forward by the FSC respondents for not switching to LCCs if the FSCs increased their fares. From table 8.28 it is seen that 26 unique reasons could be identified from 121 recorded responses. The main reasons given for not switching included the respondents being happy with their current airline (24.8% of the reasons given) and respondents not paying for the ticket/ the company deciding on the airline (17.4% of the recorded responses). Other noteworthy reasons identified included service (10.7% of the recorded responses), reliability (6.6% of the recorded responses), and loyalty to the airline (5.8% of the recorded responses). A total of six of the 121 (5.0%) recorded responses for not switching stated that fare was not an issue and they would not switch. Some passengers are clearly willing to pay more for these features. This supports the finding in section 8.2.7 that price was not the main reason for FSC respondents selecting a FSC over a LCC.

**Table 8.28: FSC respondent reasons for not switching to LCCs if FSCs increased their fares**

| Why would you not consider switching to a LCC if the FSCs increased their fares? | | | |
|---|---|---|---|
| | **Count** | **Total** | **Percent** |
| Company or other third party pays | | 21 | 17.4% |
| - Employer pays | 15 | | |
| - Friends/relatives pay | 4 | | |
| - Sponsored ticket | 2 | | |
| Happy with airline | | 30 | 24.8% |
| - Happy with airline | 18 | | |
| - Provides exactly what I need | 4 | | |
| - Have no problems with my airline | 8 | | |
| Connections/airport destination | 6 | 6 | 5.0% |
| Service | | 13 | 10.7% |
| - Service (only) | 11 | | |
| - Service (with other reasons) | 2 | | |
| Price not an issue/ fares are fine | | 6 | 5.0% |
| - Price not an issue (only) | 5 | | |
| - Price not an issue (with other reasons) | 1 | | |
| Reliability | | 8 | 6.6% |
| - Reliability (only) | 4 | | |
| - Reliability (with other reasons) | 4 | | |
| Loyal former employee | 1 | 1 | 0.8% |
| Habit | 2 | 2 | 1.7% |
| Frequent flyer programme | 1 | 1 | 0.8% |
| Food quality | 1 | 1 | 0.8% |
| Quality | | 4 | 3.3% |
| - Quality (only) | 3 | | |
| - Quality (with other reasons) | 1 | | |
| Value for money | 1 | 1 | 0.8% |
| Business class | 1 | 1 | 0.8% |
| Availability of flights | 1 | 1 | 0.8% |
| Loyal to airline | | 7 | 5.8% |
| - Loyal (only) | 6 | | |
| - Loyal (with other reasons) | 1 | | |
| Convenience | 2 | 2 | 1.7% |
| Considers package in its entirety (with other reasons) | 1 | 1 | 0.8% |
| Safety (with other reasons) | 2 | 2 | 1.7% |
| Luxury | 1 | 1 | 0.8% |
| Reputation (with other reasons) | 1 | 1 | 0.8% |
| Space (with other reasons) | 1 | 1 | 0.8% |
| Accommodate sports people | 1 | 1 | 0.8% |
| Frequency of flights (with other reasons) | 1 | 1 | 0.8% |
| Trustworthy (with other reasons) | 1 | 1 | 0.8% |
| Comfort (with other reasons) | 5 | 5 | 4.1% |
| Contradictory/unclassifiable responses | 2 | 2 | 1.7% |
| **Total reasons** | **121** | **121** | **100.0%** |

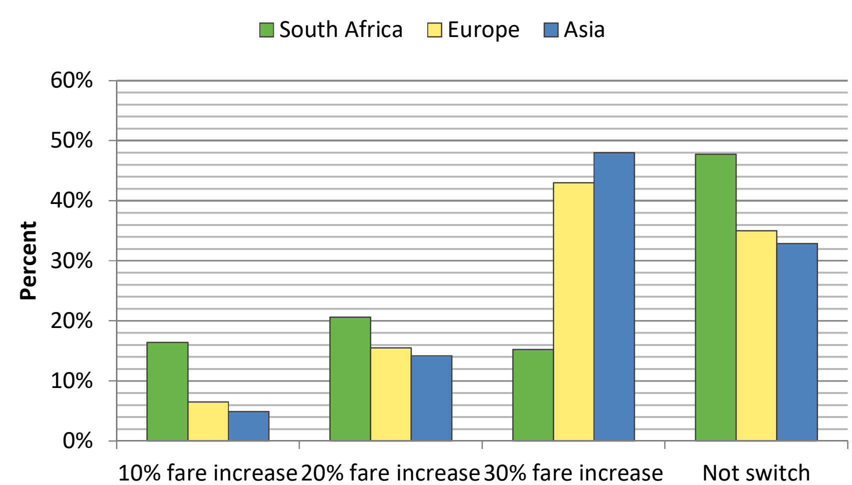
Taking the observations in figure 8.35, table 8.27, and table 8.28 into account, a number of observations can be made. From figure 8.35 it can be seen that the uptake of respondents in deciding to switch across the three increase levels is fairly evenly spread with a 20% increase in fare by the FSCs attracting the biggest response; 20.6%. The decision not to switch was the standout feature of the data at 47.7% of the FSC respondents. This information provides an indication of the amount of fare flexibility that FSCs have and identifies the point at which respondents would begin to shift their custom to the LCCs. In this case, the data suggests that the FSCs have a fair amount of fare flexibility because the levels of loyalty seem to be relatively high with suggested fare increases only provoking a limited number of defections. The fact that such small numbers decided to move to the LCC at the various levels of fare increase shows that, whilst there is some price sensitivity amongst the FSC respondents, it still took high fare increases of more than 20% to entice 35.9% (20.6% + 15.3%) of the respondents to consider changing model. This 'hesitation' or low level of change suggests that the respondents did still want to fly on the FSC model but were reaching their price threshold. The option for the FSCs in this case is to add value and enhance the features and/or perceived features of the FSC product and thereby raise the FSC passenger price threshold. This applies in particular to the FSC respondents that opted to switch at the 30% fare increase point. Building on this argument, it was seen in table 8.27 that the majority of those respondents that decided to switch cited price as the determining factor (88.6% of the total recorded responses). Furthermore, figure 8.35 shows that the number of respondents that would move across to the LCC model due to price changes is lower at the 30% fare increase point (15.3%) than at the 20% fare increase point (20.6%). This suggests that these respondents are essentially very loyal and that only an extreme fare increase would push them over to the other model. The addition of value in this case may be all that is required to retain these passengers, which will have the effect of reducing the importance of price in the decision-making process of these passengers. From a different perspective, this situation provides a business case for the hybrid model. In this situation, the FSC respondents that switched showed a degree of price sensitivity, but through their answers to the perceptions of the different models and the reasons for selecting a carrier they showed that they still want the benefits and features offered by the FSC. The hybrid model is one that is free from the legacy cost burden of the established carriers and is designed to fill this exact gap.

Looking at figure 8.35, it does also suggest that those respondents on the full-service carriers can be split into two distinct categories – those that are price sensitive (to differing degrees) and those that are extremely loyal. Each of these passenger 'types' require focussed attention from the airlines and their marketing departments in order to retain and regain their patronage. As addressed in the previous paragraph, the addition of value to the switching passengers could reduce the price sensitivity of these passengers. On the other hand, when addressing the loyal respondents that indicated that they would not switch (47.7%), the carriers should attempt to move them up the price/capacity curve in order to maximise the revenue gained from each passenger. Overall, it can be seen that FSC respondents are willing to pay for the additional features that are not offered by the LCCs. The extent of loyalty to the

FSCs by FSC respondents and the reasons given in table 8.28 (reasons for not switching to a LCC) strongly support the findings outlined in section 8.2.9, which addressed the respondent's perceptions of the two models on a number of quality dimensions. In section 8.2.9 it was shown that FSC respondents had a strongly favourable perception of the FSC model and strongly preferred it to the LCC model.

In terms of FSC respondent price sensitivities and their switching dispositions, a brief comparison of the results of this study with the findings in the O'Connell (2007) study shows some similarities and some interesting patterns and differences. These are illustrated in figure 8.36.

**Figure 8.36: FSC respondent switching tendencies if FSCs increase fares – a comparison with the O'Connell study findings**



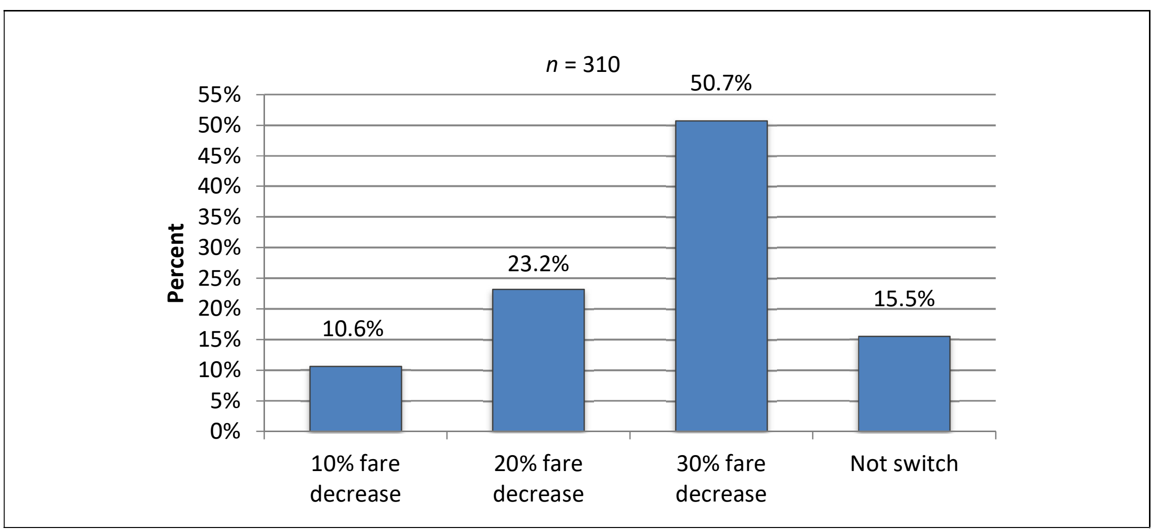

When considering the responses of respondents travelling on FSCs, the findings of the South African study are similar to the O'Connell (2007) study findings when looking at the 10% and 20% fare increase categories in that they are all relatively low, but showed noticeable differences for the 30% fare increase category and 'not switch' category. The findings of the European and Asian study showed that at a 30% increase in fare, approximately 43% and 48% of respondents respectively would switch to a low-cost carrier, but in the South African study, only 15.3% stated that they would switch. For the 'not switch' category, European and Asian respondents indicated that approximately 35% and 32% respectively would not switch, compared to the South African study finding that 47.7% would not switch. This finding does take the 'company paid' respondents into account. The findings of the O'Connell (2007) study shows a progressively higher switching rate at the higher fare increases for both Europe and Asia. South Africa on the other hand showed that, whilst the number of respondents willing to switch at the 10% increase option was higher than both Europe and Asia, there was not the increase in uptake at the higher levels, but instead there was a plateau and then a smaller number at the 30% increase option. This is particularly noticeable at the 30% increase option where the South African results show a distinct difference to the Europe and Asia results. Whilst the European and Asian findings do indicate a level of loyalty to the FSC model, neither of them rises to the level of the South African FSC respondents who tended to indicate substantially higher levels of loyalty to the FSC model. This would all seem to suggest that the South African FSC passenger is overall less price sensitive than the European or Asian FSC passengers and they show higher levels of loyalty. The nature and location of the South African market, limited competitive alternatives, and other structural differences could explain the reasons behind these differences. Further studies into this topic would be required for greater insights.

#### 8.2.10.2 Respondent levels of price sensitivity – LCC respondents

In this section, the focus is on the responses of respondents travelling on a LCC (questions 31 & 32). The question asked the LCC respondents to identify at what level of fare decrease they would consider switching to a FSC should the FSCs decrease their fares. They were given the alternatives of a 10% fare reduction, a 20% fare reduction, a 30% fare reduction, or not to switch. Respondents had to select one alternative only. Following this, respondents were asked to explain their choice and indicate why they chose to switch or not to switch, and why at the particular level they selected. In terms of the number of valid responses to this question, the value of *n* for this section of analysis = 310.

Figure 8.37 provides an indication of what proportion of the LCC respondents would switch over to a full-service carrier if the full-service carriers reduced their fares by 10%, 20%, and 30%. In terms of the valid responses to question 31, the data shows that a 10% fare reduction would be sufficient to persuade 10.6% of the LCC respondents to switch to a FSC. A 20% fare reduction by the FSCs would be the level at which 23.2% of the LCC respondents would make the decision to switch to a FSC. The offer of a reduction of 30% in the FSC fare proved to be the most popular option for respondents, with 50.7% of the LCC respondents indicating that at this level of fare reduction by the FSCs they would be tempted to switch to a FSC.

**Figure 8.37: LCC respondent switching tendency should FSC reduce fares**



Taking all three fare reduction options into account, it is seen that a cumulative total of 84.5% of the LCC respondents would be persuaded to switch to a FSC if the FSCs reduced their fares. This is in sharp contrast to the FSC respondents, which showed that only 52.3% of the respondents would switch to the LCC model should the FSC fares be raised. Adding to the contrast between the responses of respondents on the two models is the finding that only 15.5% of all LCC respondents indicated that they would not switch at all but would remain loyal to the LCCs. The implications of this needs to be considered in the context that in section 8.2.5.4 it was shown that the average fare for a FSC ticket (ZAR 1 538,96) was ZAR 533,81 higher (53.1%) than the average fare for a ticket on a LCC (ZAR 1 005,15). In the context of the question put to the LCC respondents in the survey (i.e., at what level would they switch to a FSC if the FSCs reduced their fares), this is an interesting finding. If a FSC reduced the fare by the highest option (30%), then, using the average fare, the fare would still be ZAR 1 077,27, which is still higher than the average price paid for a LCC ticket (albeit by only ZAR 72,12). At only a 10% reduction in the fare the ticket price would be ZAR 1 385,06, which is still substantially higher than the LCC average fare. In other words, LCC respondents indicated that even though the fare paid on FSC would still be higher than the fare on a LCC, they could be persuaded to switch to a FSC. The concept of 'perceived price' seems to be more important than 'actual price' (*see* section 9.2.5.9 and 9.36 in the study for comments on the issue of perceived price'). It does need to be remembered that the respondents did not base their mental calculation on the average fare of all respondents, but probably on the fare they paid for the current trip and their perceptions of a FSC fare. Overall, the fact that 84.5% of all LCC respondents indicated that they could be persuaded to switch to a FSC if FSCs reduced their fares indicates a clear opinion and preference on the part of the LCC respondents.

As stated in the introduction to the section, respondents were also asked to identify the reasons why they would consider switching or why they would not consider switching carrier in the light of the identified fare reduction options. The responses to this open-ended question were recorded and then edited to a number of common themes given by the respondents. The responses and groupings are summarised in table 8.29 (would switch to a FSC) and table 8.30 (would not switch to a FSC). As with the FSC respondent analysis, in some cases some respondents gave more than one reason for switching and their responses were recorded under each reason. The accompanying tables distinguish between where a reason was given as the sole reason for the respondent switching/not switching and where a reason was given with multiple reasons by the respondent. Any contradictory or unclassifiable responses were grouped separately and shown in the tables as such.

Table 8.29 highlights that in terms of reasons given by LCC respondents for switching to FSCs if the FSCs decreased their fares, 23 unique reasons could be identified from 285 recorded responses. Regarding the LCC respondents that stated that they would consider switching to a FSC if the FSC fare was reduced, 168 of the 285 (58.9%) recorded responses were by respondents indicating that they would switch because of the price of the ticket (62.0% if the contradictory/unclassifiable responses are removed). This seems to be quite paradoxical given that even at a 30% reduction in ticket price by the FSCs the fare would still be higher than that of the LCCs. Beyond this, 6.3% of the recorded responses indicated that the thought of the additional comfort offered was the reason to switch to a FSC, with a further 6.3% of the recorded responses representing respondents that stated they would switch because of the additional service offered by the FSC product. In a similar vein, 4.6% of the recorded responses identified 'getting more for less' as a reason for why they would switch. Eight of the 285 (2.8%) recorded responses identified by respondents flying on the LCCs showed the switching decision to be based on the fact that the meals/snacks were included on the FSCs, which seems a rather frivolous reason to make a switching decision given the relatively low value that is attached to the meal that is offered.

**Table 8.29: LCC respondent reasons for switching to FSCs if FSCs reduced their fares**

| Why would you consider switching to a full-service carrier if the FSCs reduced their fares | | | |
|---|---|---|---|
| | Count | Total | Percent |
| Price | | 168 | 58.9% |
| - Price (only) | 155 | | |
| - Price (with other reasons) | 13 | | |
| Luxury | | 4 | 1.4% |
| - Luxury (only) | 3 | | |
| - Luxury (with other reasons) | 1 | | |
| Service | | 18 | 6.3% |
| - Service (only) | 10 | | |
| - Service (with other reasons) | 8 | | |
| Food included | | 8 | 2.8% |
| - Food (only) | 4 | | |
| - Food (with other reasons) | 4 | | |
| Comfort | | 18 | 6.3% |
| - Comfort (only) | 10 | | |
| - Comfort (with other reasons) | 8 | | |
| To experience a FSC | 5 | 5 | 1.8% |
| Reliability (with other reasons) | 3 | 3 | 1.1% |
| Availability | 2 | 2 | 0.7% |
| Convenience | 2 | 2 | 0.7% |
| Patriotic | 1 | 1 | 0.4% |
| Safety (with other reasons) | 2 | 2 | 0.7% |
| More for less | 13 | 13 | 4.6% |
| Prefer FSC | 4 | 4 | 1.4% |
| Reputation | | 4 | 1.4% |
| - Reputation (only) | 3 | | |
| - Reputation (with other reasons) | 1 | | |
| Better airline | | 3 | 1.1% |
| - Better airline (only) | 1 | | |
| - Better airline (with other reasons) | 2 | | |
| Class | 1 | 1 | 0.4% |
| No real difference between models - doesn't matter | 7 | 7 | 2.5% |
| FSCs have more lenient luggage restrictions (with other reasons) | 1 | 1 | 0.4% |
| Quality | | 3 | 1.1% |
| - Quality (only) | 2 | | |
| - Quality (with other reasons) | 1 | | |
| Better facilities | 1 | 1 | 0.4% |
| Frequency (with other reasons) | 1 | 1 | 0.4% |
| Value for money | 2 | 2 | 0.7% |
| Contradictory/unclassifiable responses | 14 | 14 | 4.9% |
| **Total** | **285** | **285** | **100.0%** |

Many other reasons for switching to FSCs were given by the respondents in table 8.29, with the bulk of them relating to the additional services and product features on offer. Some LCC respondents (five of the 285 recorded responses - 1.8%) stated that they would switch to the FSCs just to experience the full-service product and the associated perceived luxury compared to the LCCs. Interestingly, seven of the 285 recorded responses (2.5%) were by respondents that directly stated that they see no differences between the two models. These reasons all link up to the perceptions of the two models addressed in section 8.2.9 – specifically in terms of the perceptions of LCC respondents towards both models.

Figure 8.37 showed that only 15.5% of the LCC respondents indicated that they would not switch to a FSC. Table 8.30 summarises the main reasons given by LCC respondents for not switching to a FSC even if the FSCs lowered their fares. From this table, it is seen that 16 unique reasons could be identified from 49 recorded responses. Those respondents that stated that they would not consider switching identified a much smaller variety of reasons for their answer than those that indicated they would consider switching. The two dominant reasons offered by respondents were (i) that they felt that LCCs would still provide a cheaper fare (18 of the 49 recorded responses - 36.7%) and (ii) that they were happy with their airline (11 of the 49 recorded responses - 22.4%). Other minor reasons given include better service on a LCC (4.1% of the recorded responses) and the two models being viewed as basically the same (4.1% of the recorded responses). Only one respondent stated that they did not see the need for full services on short haul flights. This, in conjunction with other findings discussed in section 8.2.7, supports the fact that, whilst fares are the main reason the LCC respondents select LCCs, they still have aspirational tendencies and do want to experience the perceived increased luxury of the FSCs.

**Table 8.30: LCC respondent reasons for not switching to FSCs if FSCs reduced their fares**

| Why would you not consider switching to a FSC if the FSCs reduced their fares? | | | |
|---|---|---|---|
| | **Count** | **Total** | **Percentage** |
| Fare | | 18 | 36.7% |
| - Fare (only) | 15 | | |
| - Fare (with other reasons) | 3 | | |
| Happy with airline | | 11 | 22.4% |
| - Happy with airline (only) | 10 | | |
| - Happy with airline (with other reasons) | 1 | | |
| Convenience | 1 | 1 | 2.0% |
| Company pays | 1 | 1 | 2.0% |
| Service/product is similar to FSC | 2 | 2 | 4.1% |
| FSC prices will always be more expensive | 1 | 1 | 2.0% |
| Better service on LCC | | 2 | 4.1% |
| - Better service (only) | 1 | | |
| - Better service (with other reasons) | 1 | | |
| Availability | 1 | 1 | 2.0% |
| Better attitude towards customers | 1 | 1 | 2.0% |
| Frequency of flights | 1 | 1 | 2.0% |
| Reliability | 1 | 1 | 2.0% |
| Comfort | 1 | 1 | 2.0% |
| Loyal to airline | 1 | 1 | 2.0% |
| Humour | 1 | 1 | 2.0% |
| No need for FSC on short haul | 1 | 1 | 2.0% |
| Contradictory/unclassifiable responses | 5 | 5 | 10.2% |
| **Total** | **49** | **49** | **100.0%** |

Taking the observations in figure 8.37, table 8.29, and table 8.30 into account, a number of observations can be made. Figure 8.37 shows that the number of LCC respondents willing to switch to a FSC at the low levels of fare reductions by FSCs seems to suggest that most LCC respondents still considered the LCC fares to be lower than those of the FSCs. This is seen in the low switching numbers (10.6%) at the 10% fare reduction level and the gradual increase shown at the 20% fare reduction level (23.2%). As was shown in section 8.2.7, the most important reason for the selection of a LCC was price and thus the lack of movement at the lower price reduction levels indicates that the truly price conscious LCC respondent was aware of the prices and saw that the LCCs still offered the better price option. Respondents that did state that they would switch at the lower levels of FSC price reductions clearly had aspirations of flying on a FSC and were seeking the added benefits on offer. The number of LCC respondents willing to switch to a FSC at the 30% fare reduction level (50.7%) is an important issue for the LCCs in that it indicates that 'loyalty' is based on price, but given the opportunity, the so-called 'loyal passengers' will shift their custom to the FSCs. In contrast to the fare flexibility that the FSCs seem to have, LCCs have significantly less room to manoeuvre in terms of price. The model, which has formulated itself on the concept of 'low-cost', has to defend its position on two fronts to retain its customers:

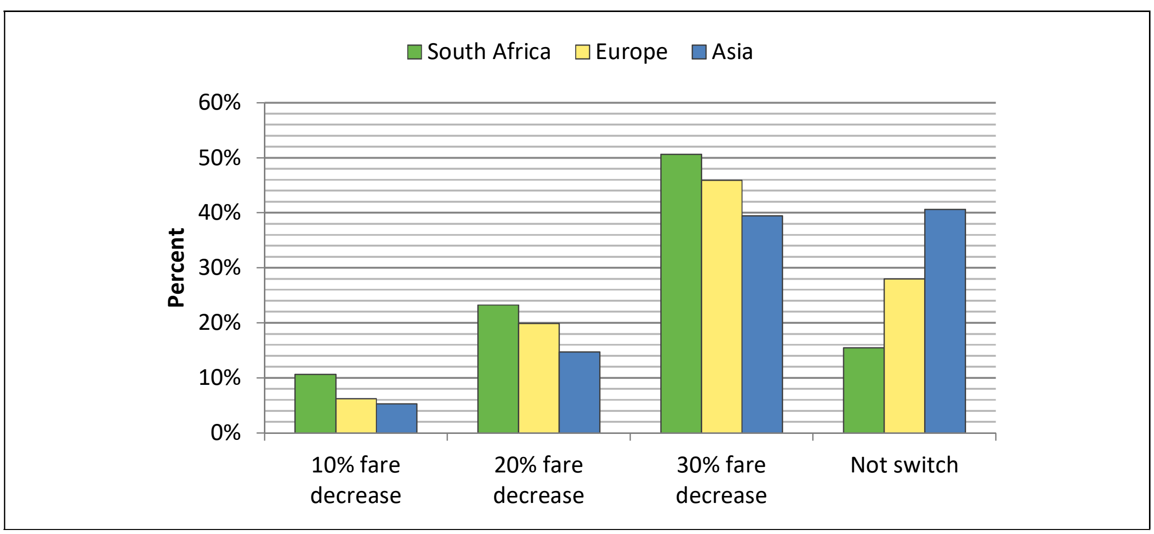
- Firstly, LCCs have to ensure that their fares are not too high that they are perceived as being as expensive as a FSC.
- Secondly, LCCs have to watch that the FSC fares do not decline to a level where the FSC is perceived to be as cheap as the LCC.

The finding that cumulatively 84.5% of the LCC respondents, when answering question 31, indicated that they would switch to a FSC if the FSCs reduce their prices (at various levels) indicates a distinct lack of loyalty on the part of the LCC respondents. It confirms the point that price is the main reason for selecting the model type and also confirms the 'perceptions of service features and quality' ratings given by the LCC respondents in section 8.2.9. The findings in that section highlighted the fact that although the LCC respondents rated LCCs higher than FSC respondents did, they still rated FSCs higher than LCCs across all five dimensions. Given these points and circumstances that need to be faced by the LCCs, it is clear that they need to implement strategic changes to ensure that they address the diverse needs and demands of the air traveller. This includes understanding the price sensitivities and aspirational needs of the LCC passenger, as well as attempting to tap into the price sensitive FSC passenger in order to attract them to the LCCs. The move by some LCCs to evolve into a hybrid carrier (intentional or not) is perhaps an attempt to move from the constraints of the requirements of the low-cost model and tap into this highly fickle and price sensitive consumer (travelling on both the LCCs and FSCs) that wants an affordable fare coupled with the comforts that accompany the differentiated product offered by the FSCs. It was established earlier in the study that consumers associate the word 'cost' with 'price' and therefore view LCCs primarily as 'cheap fare airlines'. The move towards a hybrid model could also be seen as an escape from having the business model permanently tied to the concept of ‘low-cost’ and thereby offer the airline more manoeuvrability in terms of their pricing flexibility.

An overview of figures 8.35 and 8.37 shows a distinct difference between the price sensitivity of respondents travelling on a FSC and a LCC. A simple look at the distribution of the columns shows the major differences in the loyalty of the respondents of each model. It is also interesting to note that respondents on both models, who indicated that they would switch, both overwhelmingly stated that price would be the main reason. Reviewing tables 8.27, 8.28, 8.29, and 8.30 it is furthermore interesting to note that FSC respondents identified a relatively small variety of reasons (mainly price) why they would switch to a LCC, but identified a large variety of different reasons as to why they would not switch. LCC respondents showed the exact opposite pattern, in that they identified a large variety of different reasons why they would switch to a FSC, but offered relatively few reasons as to why they would not switch. In essence, FSC respondents offered more reasons to stay with a FSC than to move to a LCC compared to LCC respondents, who offered more reasons to move to a FSC than to stay with the LCC. Again, this highlights the distinct differences that South African passengers perceive between the two models and suggests, that given the chance, the FSC would be the preferred model.

In terms of LCC respondent price sensitivities and their switching dispositions, a simple comparison of the results of this study with the findings in the O’Connell (2007) study shows some similarities as well as some interesting patterns and differences between the two. These similarities and differences are represented in figure 8.38.

**Figure 8.38: LCC respondent switching tendencies should FSCs reduce fares – a comparison with the O’Connell study findings**




The overall findings relating to the price sensitivity of South African LCC respondents on low-cost airlines show similarities to the findings of the study of European and Asian passengers. However, a closer look at figure 8.38 shows that whilst the overall pattern follows the same line/pattern as the European and Asian findings, it is the difference in values at each fare reduction level that actually indicates a noticeable difference between them. For all three groups, the number of respondents that would switch at the 10% fare reduction point more than doubles at the 20% fare reduction point, which in turn more than doubles at the 30% fare reduction point. The South African study, however, shows a much higher rate of switchers at each point, which accumulates to a total of 84.5% of LCC respondents that would switch to a FSC if the FSCs lowered their fares. The European and Asian results showed that an approximate accumulative total of 72.0% and 59.4% of the LCC respondents respectively would switch to a FSC. In terms of loyalty to the LCCs, this implies that for the South African study, only 15.5% of the respondents would remain loyal to the LCCs. For the European and Asian airlines, the respondents that remained loyal to the LCCs stood at approximately 28.0% and 40.6% respectively. These higher levels of loyalty have significant implications for an airline and affect the strategic approach to marketing and strategy development.

The discussion in section 8.2.10.1 (comparison between the findings of the O'Connell (2007) study and the South African study for the price sensitivity of FSC respondents) suggested that South African FSC passengers are less price sensitive and more loyal than the European and Asian passengers. In contrast to this, the findings in this section suggest that the South African LCC passenger is much more price sensitive and less loyal to the LCC model than the European and Asian passengers. Possible reasons behind this difference could be income levels in South Africa and the price of an air travel ticket as a percentage of total income, which makes price more of an issue. Further studies into this topic would be required to establish if this is the case and to gain greater insights.

#### 8.2.10.3 Respondent price sensitivities sub-divided according to age

The findings presented in figures 8.35 and 8.37 can be used to explore the data at a number of sub-levels. In the context of this study the different levels at which the respondents indicated they would switch/not switch to a different model can be sub-divided according to the identified age groupings. The idea is to establish whether there are any differences between the various age groups in terms of the price increase/decrease levels at which they would switch to a different model and whether these differences are similar for respondents travelling on the two models. The discussions firstly address the FSC respondents (per age group) and their pattern of responses should the FSCs increase their fares. Attention is then, secondly, given to the LCC respondents (per age group) and their pattern of responses should the FSCs decrease their fares. The cross tabulations for the analysis are given in table 8.31 (FSC respondents) and table 8.32 (LCC respondents). Inferential analysis relating to this topic is given in section 8.3.5.4.

- **FSC respondents**

Figure 8.35 showed the overall distribution of the FSC respondent's answers when faced with the question at what level of fare increase by the FSCs they would consider switching to a LCC. Table 8.31 shows these results sub-divided according to the various age groups.

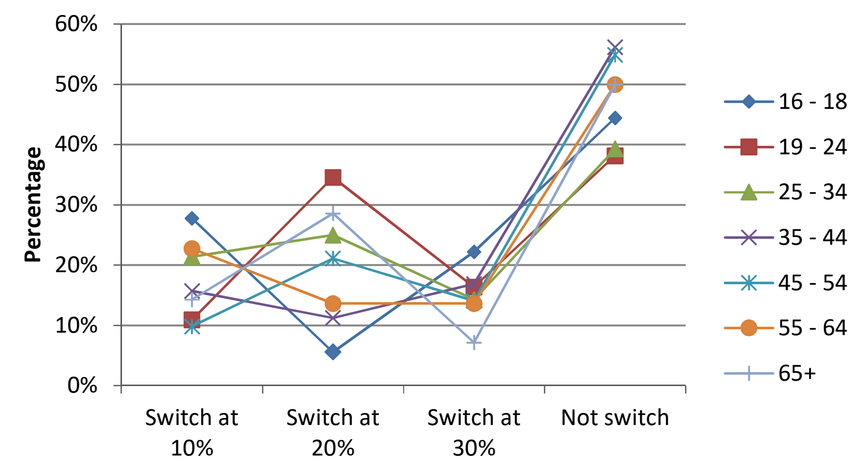
**Table 8.31: Cross tabulation of respondent price sensitivities sub-divided according to age – FSC respondents**

| | | | If FSC increased its fare, at what interval would you consider switching to a LCC? | | | | |
|---|---|---|---|---|---|---|---|
| | **Age** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| **FSC respondents (if FSC increased fares)** | **16–18** | **Count** | 5 | 1 | 4 | 8 | **18** |
| | | **% row** | 27.8% | 5.6% | 22.2% | 44.4% | **100.0%** |
| | | **% column** | 8.8% | 1.4% | 7.4% | 4.7% | **5.1%** |
| | **19–24** | **Count** | 6 | 19 | 9 | 21 | **55** |
| | | **% row** | 10.9% | 34.5% | 16.4% | 38.2% | **100.0%** |
| | | **% column** | 10.5% | 26.0% | 16.7% | 12.4% | **15.6%** |
| | **25–34** | **Count** | 18 | 21 | 12 | 33 | **84** |
| | | **% row** | 21.4% | 25.0% | 14.3% | 39.3% | **100.0%** |
| | | **% column** | 31.6% | 28.8% | 22.2% | 19.5% | **23.8%** |
| | **35–44** | **Count** | 14 | 10 | 15 | 50 | **89** |
| | | **% row** | 15.7% | 11.2% | 16.9% | 56.2% | **100.0%** |
| | | **% column** | 24.6% | 13.7% | 27.8% | 29.6% | **25.2%** |
| | **45–54** | **Count** | 7 | 15 | 10 | 39 | **71** |
| | | **% row** | 9.9% | 21.1% | 14.1% | 54.9% | **100.0%** |
| | | **% column** | 12.3% | 20.5% | 18.5% | 23.1% | **20.1%** |
| | **55–64** | **Count** | 5 | 3 | 3 | 11 | **22** |
| | | **% row** | 22.7% | 13.6% | 13.6% | 50.0% | **100.0%** |
| | | **% column** | 8.8% | 4.1% | 5.6% | 6.5% | **6.2%** |
| | **65+** | **Count** | 2 | 4 | 1 | 7 | **14** |
| | | **% row** | 14.3% | 28.6% | 7.1% | 50.0% | **100.0%** |
| | | **% column** | 3.5% | 5.5% | 1.9% | 4.1% | **4.0%** |
| | **Total** | **Count** | **57** | **73** | **54** | **169** | **353** |
| | | **% row** | **16.1%** | **20.7%** | **15.3%** | **47.9%** | **100.0%** |
| | | **% column** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

Looking at the percentages across the rows it can be seen that most age groups followed approximately the same general pattern as established in figure 8.35. This entailed an initial switch at the 10% fare increase level, followed by a higher percentage at the 20% fare increase level, which was then followed by a smaller percentage at the 30% fare increase level, and then concluding with a drastically higher percentage for those that indicated that they would not switch to a LCC. There were three age groups where a slight difference to this pattern was noticed, but in terms of the overall picture do not represent a distinctive difference. These three differences are visually highlighted in figure 8.39 and it is seen that the differences occur at the 20% fare increase level. Two of them are highlighted in the discussion that follows. Firstly, in the 16–18 age group, where the greatest switching percentage was at the 10% fare increase level (it is noted that the number of respondents in this age group was relatively small; $n = 18$). The 55–64 age group showed a similar pattern to the 16–18 age group, with the highest switching uptake at the 10% fare increase option. Overall, the 19–24 age group showed a relatively high uptake at the

20% fare increase level (34.5%), which is similar to the percentage in this age group that indicated that they would not switch (38.2%). All other age groups showed a much larger gap between the percentages that would switch and those that would not. The overall pattern shows that for the younger age groups (34 and younger), the number of respondents that would switch at the 10% and 20% fare increases was higher than that of the 35 and older age groups.

**Figure 8.39: FSC respondent switching patterns per age group**




On closer inspection, the biggest stand out point was the differences identified between the older and younger groupings in terms of those that indicated that they would not switch to a LCC if the FSCs increased their fares. Looking at the 'not switch' option in figure 8.35, it was shown that when answering this question, 47.7% of the total valid FSC respondents indicated that they would not switch to a LCC. Looking across the age groups it can be seen that the age groups above 35 years of age showed a higher level of non-switching behaviour than did the 34 and younger ages. This can be seen by inspection where between 38.2% and 44.4% of the 34 and younger respondents stated that they would not switch to a LCC, whereas between 50.0% and 56.2% of the 35 and older respondents stated that they would not switch to a LCC. From this it can be seen that, when faced with fare increases, the older respondents show a greater level of loyalty to the FSC model than the younger respondents. The 35–44 and 45–54 age groups showed the highest levels of non-switching behaviour.

- **LCC respondents**

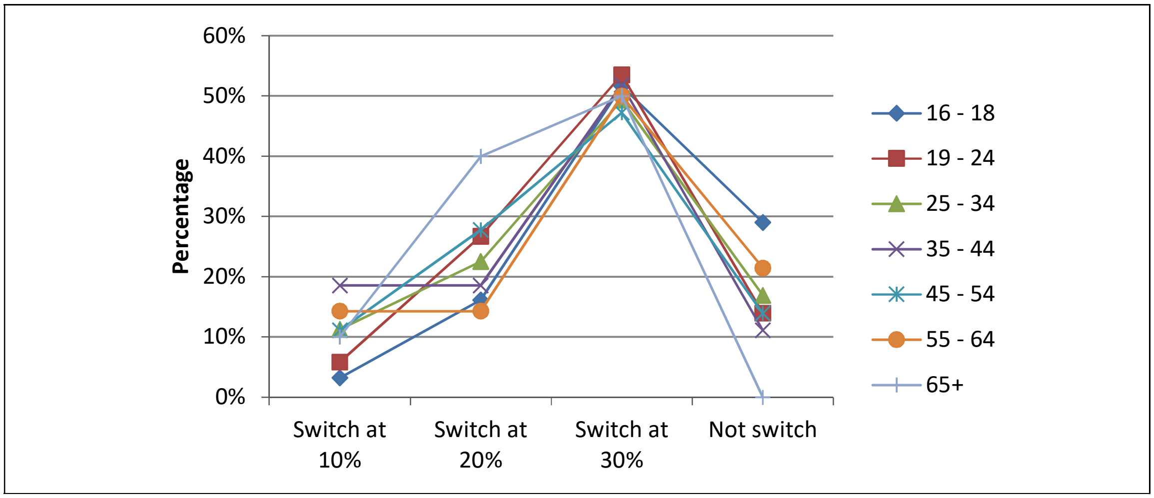
Figure 8.37 showed the overall distribution of the LCC respondent's answers when faced with the question at what level of fare decrease by the FSCs they would consider switching to a FSC. Table 8.32 shows these results sub-divided according to the various age groups.

**Table 8.32: Cross tabulation of respondent price sensitivities sub-divided according to age – LCC respondents**

| | | | If a FSC reduced its fare, at what interval would you consider switching to a full-service airline? | | | | |
|---|---|---|---|---|---|---|---|
| | **Age** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| LCC respondents (if FSCs decreased fares) | **16–18** | **Count** | 1 | 5 | 16 | 9 | **31** |
| | | **% row** | 3.2% | 16.1% | 51.6% | 29.0% | **100.0%** |
| | | **% column** | 3.2% | 7.1% | 10.4% | 19.1% | **10.3%** |
| | **19–24** | **Count** | 5 | 23 | 46 | 12 | **86** |
| | | **% row** | 5.8% | 26.7% | 53.5% | 14.0% | **100.0%** |
| | | **% column** | 16.1% | 32.9% | 29.9% | 25.5% | **28.5%** |
| | **25–34** | **Count** | 8 | 16 | 35 | 12 | **71** |
| | | **% row** | 11.3% | 22.5% | 49.3% | 16.9% | **100.0%** |
| | | **% column** | 25.8% | 22.9% | 22.7% | 25.5% | **23.5%** |
| | **35–44** | **Count** | 10 | 10 | 28 | 6 | **54** |
| | | **% row** | 18.5% | 18.5% | 51.9% | 11.1% | **100.0%** |
| | | **% column** | 32.3% | 14.3% | 18.2% | 12.8% | **17.9%** |
| | **45–54** | **Count** | 4 | 10 | 17 | 5 | **36** |
| | | **% row** | 11.1% | 27.8% | 47.2% | 13.9% | **100.0%** |
| | | **% column** | 12.9% | 14.3% | 11.0% | 10.6% | **11.9%** |
| | **55–64** | **Count** | 2 | 2 | 7 | 3 | **14** |
| | | **% row** | 14.3% | 14.3% | 50.0% | 21.4% | **100.0%** |
| | | **% column** | 6.5% | 2.9% | 4.5% | 6.4% | **4.6%** |
| | **65+** | **Count** | 1 | 4 | 5 | 0 | **10** |
| | | **% row** | 10.0% | 40.0% | 50.0% | 0.0% | **100.0%** |
| | | **% column** | 3.2% | 5.7% | 3.2% | 0.0% | **3.3%** |
| | **Total** | **Count** | **31** | **70** | **154** | **47** | **302** |
| | | **% row** | **10.3%** | **23.2%** | **51.0%** | **15.6%** | **100.0%** |
| | | **% column** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

As was the case with the FSC respondents when looking across the rows, it can be seen that most age groups followed approximately the same pattern as established in figure 8.37 (LCC respondent switching tendency). This entailed an initial low switch rate at the 10% fare decrease level, followed by a higher percentage at the 20% fare decrease level, which is then followed by an even higher percentage at the 30% fare decrease level, and then concluding with a drastically smaller percentage that indicated that they would not switch to the FSCs. The overall pattern per age group is graphically illustrated in figure 8.40. Two age groups (35–44 and 55–64) showed a slight difference to this pattern, but in terms of the overall picture do not represent a distinctive difference. In these two cases, the difference was at the 20% fare decrease level where the percentage uptake remained the same as the 10% fare decrease level instead of more than doubling the percentage as was the case with the other age groups. Overall, the 35–44 age group showed the highest percentage uptake at the 10% fare decrease level. The 65+ group showed the highest percentage uptake at the 20% fare decrease level (40.0%), but this was based on four out of ten respondents for this age group. The 45–54 age group showed a 27.8% uptake at the 20% fare decrease level. At the 30% fare decrease level all age groups showed a high percentage of switching (ranging from 47.2% to 53.5%), with the 19–24 age group showing the highest percentage uptake. Noticeable from table 8.32 was that at the 10% fare decrease level the 16–18 and 19–24 age groups showed a relatively low uptake (3.2% and 5.8% respectively) compared to the other age groups. Given the discussions in section 8.2.10.2, these price sensitive respondents perceived that a 10% decrease in the FSC fare was still more expensive than the LCC fare and the fare had not yet reached the threshold where they were willing to pay extra for the additional benefits offered by the FSC product.

**Figure 8.40: LCC respondent switching patterns per age group**




Considering the 'not switch' option, it is seen that all age groups fall into the approximate overall percentage (15.5%) with the main exception being the 16–18 age group where 29.0% of the valid respondents started that they would not switch to the FSC. It was shown in section 8.2.5.7 and table 8.17 that for this age group, 88.2% of the tickets were paid for by the respondent's parents or work (with 80.4% of those by parents). Looking across the rows and down the columns, the LCC age groups show many similarities in terms of their responses to the question with no real differences between them other than the few points identified in this and the preceding paragraph.

#### 8.2.10.4 Respondent price sensitivities sub-divided according to gender

As with section 8.2.10.3, the findings presented in figures 8.30 and 8.30 can be explored further at a number of sub-levels. In the case of this section, the different levels at which the respondents indicated they would switch/not switch to a different model can be sub-divided according to the two genders. The idea is to establish whether there are any differences between the two genders in terms of the price increase/decrease levels at which they would switch to a different model and whether these differences are similar for male and female respondents travelling on the two models. The discussions that follow firstly address the FSC respondents (per gender) and their pattern of responses should the FSCs increase their fares. Attention is then, secondly, given to the LCC respondents (per gender) and their pattern of responses should the FSCs decrease their fares. The cross tabulations on which the discussions are based are given in table 8.33 (FSC respondents) and table 8.34 (LCC respondents). Inferential testing relating to this topic is given in section 8.3.5.4.

- **FSC respondents**

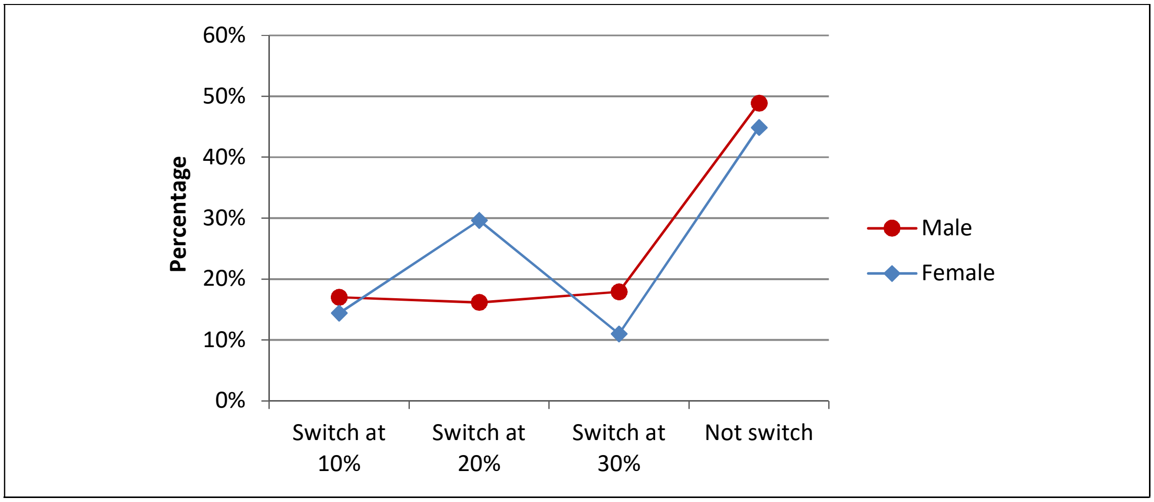
Figure 8.35 showed the overall distribution of the FSC respondent's answers when faced with the question at what level of fare increase by the FSCs they would consider switching to a LCC. Table 8.33 shows these results sub-divided according to the two genders.

**Table 8.33: Cross tabulation of respondent price sensitivities sub-divided according to gender – FSC respondents**

| | | | If a FSC increased its fare, at what interval would you consider switching to a low-cost carrier? | | | | |
|---|---|---|---|---|---|---|---|
| | **Gender** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| **FSC respondents (if FSC increased fares)** | **Male** | ***n*** | 39 | 37 | 41 | 112 | **229** |
| | | **% row** | 17.0% | 16.2% | 17.9% | 48.9% | **100.0%** |
| | | **% column** | 69.6% | 51.4% | 75.9% | 67.9% | **66.0%** |
| | **Female** | ***n*** | 17 | 35 | 13 | 53 | **118** |
| | | **% row** | 14.4% | 29.7% | 11.0% | 44.9% | **100.0%** |
| | | **% column** | 30.4% | 48.6% | 24.1% | 32.1% | **34.0%** |
| | **Total** | ***n*** | **56** | **72** | **54** | **165** | **347** |
| | | **% row** | **16.1%** | **20.7%** | **15.6%** | **47.6%** | **100.0%** |
| | | **% column** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

Looking at the percentages across the rows it can be seen that there is a noticeable difference in the pattern between male and female FSC respondents. The number of males that stated that they would switch at the three fare increase levels was practically equal at 17.0%, 16.2%, and 17.9% of the valid male respondents. This is in contrast to the responses of the female FSC respondents, which showed that 14.4% would switch at a 10% fare increase, 29.7% would switch at a 20% fare increase, and 11.0% at a 30% fare increase. Figure 8.41 clearly shows the contrasting pattern. From this it is seen that those female respondents that were going to switch to a LCC, the greater percentage were tempted at a lower level of fare increase (20%) than their male counterparts. At the 30% fare increase level, the percentage of female switchers (11.0%) was lower than at the 10% and 20% fare increases (14.4% and 29.7% respectively) showing that the critical level required to entice them away had been passed. In terms of those respondents that stated that they would not switch, both sexes showed relatively high levels of loyalty to the FSC model with 44.9% of female respondents indicating that they would not switch to a LCC and 48.9% of the male respondents indicating that they would not switch to a LCC. Taking all aspects of the discussion into account, it seems to suggest that the FSCs have a bit more fare flexibility regarding a portion of the male passengers before they switch to a LCC. From a different perspective, in order to attract passengers from the FSCs, the LCCs need to understand that it will take more effort, particularly in terms of price, to persuade male passengers to switch model.

**Figure 8.41: FSC respondent switching patterns per gender**




- **LCC respondents**

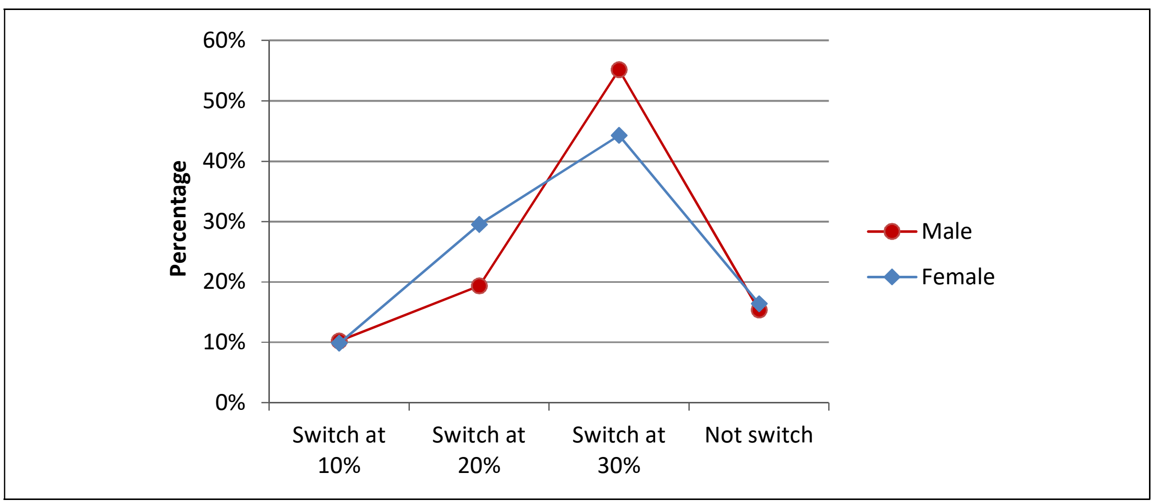
Figure 8.37 showed the overall distribution of the LCC respondent's answers when faced with the question at what level of fare decrease by the FSCs they would consider switching to a FSC. Table 8.34 shows these results sub-divided according to the two genders.

**Table 8.34: Cross tabulation of respondent price sensitivities sub-divided according to gender – LCC respondents**

| | | | If a FSC reduced its fare, at what interval would you consider switching to a full-service airline? | | | | |
|---|---|---|---|---|---|---|---|
| | **Gender** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| LCC respondents if FSCs decreased fares) | **Male** | **n** | 18 | 34 | 97 | 27 | **176** |
| | | **% row** | 10.2% | 19.3% | 55.1% | 15.3% | **100.0%** |
| | | **% column** | 60.0% | 48.6% | 64.2% | 57.4% | **59.1%** |
| | **Female** | ***n*** | 12 | 36 | 54 | 20 | **122** |
| | | **% row** | 9.8% | 29.5% | 44.3% | 16.4% | **100.0%** |
| | | **% column** | 40.0% | 51.4% | 35.8% | 42.6% | **40.9%** |
| | **Total** | ***n*** | **30** | **70** | **151** | **47** | **298** |
| | | **% row** | **10.1%** | **23.5%** | **50.7%** | **15.8%** | **100.0%** |
| | | **% column** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

The pattern of differences between the genders for the LCC respondents is different to that of the FSC respondents. In this case, the patterns for both sexes are essentially the same in terms of the rate of take-up at each fare decrease level. That is, a small percentage indicating that they would switch to a FSC at a 10% fare decrease by the FSCs (around 10%), followed by over a doubling of the percentage indicating that they would switch at a 20% fare decrease, then an even larger percentage indicating that they would switch at a 30% fare decrease, and then a low percentage indicating that they would not switch at all (refer also to figure 8.37). From table 8.34, male and female LCC respondents at the 10% fare decrease level were comparable in terms of the percentage of respondents that indicated they would switch (10.2% of the male respondents and 9.8% of the female respondents). Similarly, 15.3% of the male respondents and 16.4% of the female respondents stated they would not switch at all. The main difference between the two genders is seen at the 20% and 30% fare decrease levels. In this case, similar to the FSC respondents, a greater percentage of the female LCC respondents (29.5%) indicated they would switch at the 20% fare decrease level than did their male counterparts (19.3%). At the 30% fare decrease level, the situation was reversed, with a greater percentage of the male respondents indicating they would change to a FSC (55.1%) compared to female respondents (44.3%). The overall pattern is graphically represented in figure 8.42. In summarised terms, table 8.34 indicates that a greater proportion of LCC female respondents will be enticed to switch to a FSC at a lower percentage fare decrease by the FSCs (at least a 20% decrease) than their male counterparts. The results relating to the males saw a big jump in the number of respondents indicating they would switch at the 20% fare decrease level compared to the 30% fare decrease level (from 19.3% to 55.1% of the valid male respondents). At the same fare decrease points, female respondents had a difference of 14.8% between the two points. From an airline's perspective, the LCCs have a greater amount of fare flexibility for male passengers than female passengers before they switch to a FSC. From the FSC's perspective, the data suggests that enticing passengers from the LCCs will require a greater level of price change for the male consumers than for female consumers.

**Figure 8.42: LCC respondent switching patterns per gender**




Interestingly, a review of the two tables suggests that (i) female respondents will generally switch from a FSC to a LCC at a lower fare increase level by the FSCs than the male respondents will, and (ii) female respondents will generally switch from a LCC to a FSC at a lower fare decrease level by the FSCs than the male respondents.

## 8.3 INFERENTIAL ANALYSIS

The previous section focussed on the descriptive analysis of the data that was collected. A number of key points were identified and a number of trends and preferences suggested. The focus of this section is the inferential analysis where statistical testing is used to determine the statistical significance of some of the key findings addressed in the descriptive analysis. Use was made of SPSS (versions 23 and 24) and Microsoft Excel to perform the analyses. In this study, inferential analysis was conducted to determine the existence of statistical significant associations or statistical significant differences (as the case may be) between identified variables and to determine the nature of the associations/differences. This section is discussed based on the various cross tabulations that were constructed in the descriptive findings section with some additional tabulations generated where necessary.

The analyses have been set out according to six main sections with each section equating to specific secondary objectives as set out in chapter one. In many cases the results of the analysis in one section support and/or contribute to the achievement of the objective in another section.

### 8.3.1 Testing for a statistically significant association between respondent characteristics and the type of model flown

The analysis in this section focuses specifically on the first few questions of the questionnaire. The aim in this case was to establish whether or not statistically significant associations exist between the model flown and the respondent characteristics of age, gender, type of ticket, and purpose of travel.

In the discussions that follow, the hypotheses used for the testing of the association between the type of model flown and respondent characteristics are formulated and tested. The Pearson chi-square test for independence was used to test if a statistical significant association exists between each set of two nominal variables. Appendix A contains the cross-tabulations that were constructed for the tests conducted in this section. The descriptive findings relating to these topics are discussed in sections 8.2.1.2, 8.2.1.3, 8.2.4.2, and 8.2.2.1 respectively.

The following hypotheses were tested:

- $H_0$: There is no statistical significant association between the type of model flown by the respondents and
  - (i) their gender
  - (ii) their age
  - (iii) their purpose of their journey
  - (iv) type of ticket purchased

- $H_1$: There is a statistical significant association between the type of model flown by the respondents and
  - (i) their gender
  - (ii) their age
  - (iii) their purpose of their journey
  - (iv) type of ticket purchased

The results of the testing of the identified hypotheses are tabled in table 8.35.

**Table 8.35: Pearson Chi-square test results for association between the type of model flown and the identified respondent characteristics**

| Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Between type of model flown and gender | 3.586[a] | 1 | .058 |
| Between type of model flown and respondent age | 26.640[a] | 6 | .000 |
| Between type of model flown and purpose of journey | 10.873[a] | 1 | .001 |
| Between type of model flown and type of ticket purchased | 11.606[a] | 1 | .001 |

From table 8.35 above, the results indicated that:

(i) At the 5% level of significance there is no statistical significant association. However, at the 10% level of significance (as per section 7.3.9.4), it is seen that a statistical significant association exists between **gender** and type of model ($p$ = .058). In this case, the null hypothesis can therefore be rejected and a conclusion drawn that there is evidence of an association between the model flown and the gender of the respondent. This supports the statement made in section 8.2.1.2 indicating that male respondents tend to prefer the FSC model (55.8% vs 44.2%) and female respondents have a slight preference for the LCC model (51.5% vs 48.5%). This can also be seen from the figures in appendix A.1.

(ii) A statistical significant association, at the 1% level of significance, exists between the **age groups** and type of model flown ($p$ = .000). The null hypothesis can therefore be rejected and a conclusion drawn that there is evidence of an association between the model flown and the age of the respondents. This test supports the discussion in section 8.2.1.3 (refer to table 8.2), which suggested that the younger age groups showed a preference towards the LCC model and the older age groups (35+) tended to prefer the FSCs. This can also be seen in the cross tabulation in Appendix A.2 which clearly highlights the point that the under 25's favour the low-cost model (60.9% LCC vs. 39.1% FSC), the 25–34 group is fairly balanced between the two models, and the above 35's favour the full-service model (61.5% FSC vs. 38.5% LCC).

(iii) A statistical significant association, at the 1% level of significance, exists between the **purpose of visit** and the type of model flown ($p$ = .001). The null hypothesis can therefore be rejected. This supports the discussion in section 8.2.4.2, which indicated that respondents tended to favour a particular model dependant on the purpose of their travel, that is, business versus leisure. In the case of the data from the cross-tabulation (*see* appendix A.3) it was seen that the preferred model of choice for business travel is the FSC (60.8% FSC vs. 39.2% LCC). Whilst the data relating to leisure travel does not show an overwhelming preference to either model, respondents are more likely to choose a LCC for leisure travel than a FSC (52.3% LCC vs. 47.7% FSC). Looking at the 'within type model' percentages (across the rows) it is clear that the make-up of a LCC's respondents is largely leisure travellers (72.0% leisure vs. 28.0% business).

(iv) A statistical significant association, at the 1% level of significance, exists between **ticket type** (one-way or return) and type of model flown ($p$ = .001). The null hypothesis can therefore be rejected and a conclusion drawn that there is evidence of an association between the model flown and the type of ticket purchased. This confirms the discussion in section 8.2.2.1 indicating that there is a tendency for the majority of respondents on a FSC to purchase return tickets, whilst LCC respondents are more likely to show a more even distribution between purchasing return and one-way tickets. 70.2% of the respondents on a FSC purchased a return ticket versus 29.8% that purchased a one-way ticket. In contrast to this, respondents on a LCC showed that 58.0% purchased return tickets compared to 42.0% that purchased one-way tickets. Clearly a return ticket is the main ticket type (64.45 vs. 35.6%) but the preferences of respondents on each model are noticeably different (*see* appendix A.4).

### 8.3.2 Testing for statistically significant associations/differences between the type of model flown and respondent behaviour when purchasing the air travel ticket

The focus in this section is on testing whether statistical significant associations/differences exist between the type of model flown by the respondents and the activities associated with the purchase of the ticket for travel. In effect, the tests in this case relate to questions 33–38 being tested in terms of question 1 of the questionnaire. Results obtained from the tests conducted will provide insight into the associations/differences between the respondents on the two models and in some cases, provides a basepoint for analysis in section 8.3.5 which analyses the extent of respondent price sensitivity in response to price changes.

In the discussions that follow, the hypotheses used for the testing of the associations/differences between the type of model flown and the various respondent behaviours when purchasing the air travel ticket are formulated and tested. The Pearson chi-square test for independence was used to test if there are statistical significant associations between each set of two nominal variables (items i, ii, v, and vi). The data relating to points (iii) and (iv) is ratio data and was thus tested using the independent *t*-test to determine if statistical significant differences exist between the type of model flown w.r.t. price and the booking period. Appendix B contains the tabulations that were constructed for the tests that were conducted in this section. For the analysis of points (i) and (vi), the response category 'other' has been excluded as the responses were diverse and could not be formed into meaningful categories for analysis. The descriptive findings relating to these topics are discussed in sections 8.2.5.1 to 8.2.5.6 respectively.

The following hypotheses were tested for points (i), (ii), (v), and (vi):

- $H_0$: There is no statistical significant association between the type of model flown by the respondents and
  - (i) the booking method used
  - (ii) whether price comparisons were made prior to ticket purchase
  - (v) whether the decision to undertake the trip was influenced by the fare
  - (vi) who paid for the ticket

- $H_1$: There is a statistical significant association between the type of model flown by the respondents and
  - (i) the booking method used
  - (ii) whether price comparisons were made prior to ticket purchase
  - (v) whether the decision to undertake the trip was influenced by the fare
  - (vi) who paid for the ticket

The following hypotheses were tested for points (iii), and (iv):

- $H_0$: There are no statistical significant differences between the type of model flown by the respondents w.r.t.
  - (iii) how long the ticket was purchased in advance of travel
  - (iv) the price paid for the ticket

- $H_1$: There are statistical significant differences between the type of model flown by the respondents w.r.t.
  - (iii) how long the ticket was purchased in advance of travel
  - (iv) the price paid for the ticket

The results of the testing of the identified hypotheses are tabled in table 8.36 for items (i), (ii), (v) and (vi) and table 8.37 for items (iii) and (iv).

**Table 8.36: Pearson chi square test results for the type of model flown and the identified ticket purchasing behaviours**

| Item | Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|---|
| (i) | Between type of model flown and the booking method used | 36.632[a] | 6 | .000 |
| (ii) | Between type of model flown and whether price comparisons were made prior to ticket purchase | 55.346[a] | 1 | .000 |
| (v) | Between type of model flown and whether the decision to undertake the trip was influenced by the fare | 55.453[a] | 1 | .000 |
| (vi) | Between the type of model flown and who paid for the ticket | 31.200[a] | 3 | .000 |

**Table 8.37: Independent *t*-test results for the type of model flown and the identified ticket purchasing behaviours**

| Item | | Levene's Test for Equality of Variances | | *t*-test for Equality of Means | | |
|---|---|---|---|---|---|---|
| | | *F* | Sig. | *t* | df | Sig. (2-tailed) |
| (iii) | Equal variances assumed | 2.217 | .137 | 1.903 | 632 | .057 |
| | Equal variances not assumed | | | 1.909 | 629.202 | .057 |
| (iv) | Equal variances assumed | 2.901 | .089 | 8.777 | 524 | .000 |
| | Equal variances not assumed | | | 8.574 | 420.170 | .000 |

From table 8.36 and table 8.37 above, the results indicated that:

(i) A statistical significant association, at the 1% level of significance, exists between the **method of booking a ticket** and type of model flown ($p$ = .000). This indicates that the null hypothesis can be rejected and a conclusion drawn that there is evidence of a statistical significant association between the airline model flown and how the booking was obtained. In this case, it can be stated that LCC respondents primarily use the airline's website to book their ticket when purchasing the ticket themselves (48.6%), whilst respondents travelling on a FSC will primarily use either the airlines website (38.5%) or a travel agent (29.1%) to book the ticket (refer to appendix B1). The association to a particular model for the other booking methods is detailed in section 8.2.5.1 of the descriptive analysis.

(ii) A statistical significant association, at the 1% level of significance, exists between **making price comparisons prior to ticket purchase** and type of model flown ($p$ = .000). The null hypothesis can therefore be rejected and a conclusion drawn that there is evidence of a statistical significant association between the airline model flown and the conducting of price comparisons prior to ticket purchase. Referring to the descriptive discussion in section 8.2.5.2 and the cross-tabulation in appendix B.2, this test confirms that respondents that stated 'yes' to conducting price comparisons were more likely to be travelling on a LCC than a FSC (60.7% LCC vs. 39.3% FSC). Similarly, it is shown that respondents that stated 'no' to making price comparisons were more likely to be travelling on a FSC than a LCC (69.1% FSC vs. 30.9% LCC). In this case, it can then be stated that a large percentage of LCC respondents base their ticket purchase decisions on the price of the ticket, whilst FSC respondents have other determinant criteria on which the purchase decision is made. The issue of whether or not price comparisons are made prior to ticket purchase is explored further in section 8.3.5.7 in relation to respondents switching behaviour.

(iii) From table 8.37, the columns labelled 'Levene's Test for Equality of Variances' indicate whether an assumption of the *t*-test has been met. The *t*-test assumes that the variability of each group is approximately equal. If that assumption isn't met, then a special form of the *t*-test should be used. The significance (*p* value) of Levene's test is .137. This value is greater than the $\alpha$ level for the test (.05), which means we can assume that the variability of the two groups is equal, and the top row of the output "Equal variances assumed" is used.

The '*t*' column gives the observed or calculated *t* value. The *t* value is 1.903 (the sign of *t* is ignored for a two-tailed *t*-test). The column labelled 'Sig. (2-tailed)' gives the two-tailed *p* value associated with the test. The *p* value is .057. The decision then needs to be made as to whether $H_0$ can be rejected. The decision rule is given as: If $p \leq \alpha$, then reject $H_0$. .057 is not less than or equal to .05, so we cannot reject $H_0$ at the 5% level of significance. However, in this case, .057 is less than 0.1 so $H_0$ can be rejected at the 10% level of significance. The results thus indicate that there is a statistical significant difference, at the 10% level of significance, between respondents flying on a FSC and a LCC with regard to **how long the ticket was purchased in advance of travel.** The table in appendix B.3 shows that, whilst FSC respondents purchased their tickets on average 42 days prior to the trip, they showed a larger degree of variability in this advance purchasing period compared to LCC respondents. who purchased tickets an average of 35 days prior to the trip - with much less variability around this number of days.

(iv) From table 8.37, the significance (*p* value) of Levene's test is .089. As the *p* value of .089 is larger than $\alpha$, it can be assumed that the variances are equal. The *t* value is 8.777. The column labelled 'Sig. (2-tailed)' gives the two-tailed *p* value associated with the test as .000. In this case, .000 is less than or equal to .05 and therefore $H_0$ can be rejected. This implies that there is a statistically significant difference, at the 1% level of significance, between the types of model flown and the **price paid for the ticket**. From appendix B.4 it is seen that there is over a ZAR 500 difference between the average price paid by respondents travelling on a FSC and a LCC (ZAR 1 538,96 FSC vs. ZAR 1 005,15 LCC). This difference between the two models is highlighted by the higher standard deviation shown in the prices of FSC tickets versus LCC tickets (828.88 vs. 552.69).

(v) A statistical significant association, at the 1% level of significance, exists between the type of model flown and the **influence of price on the decision to travel** ($p$ = .000). This indicates that the null hypothesis can be rejected and a conclusion drawn that there is evidence of a statistical significant association between the airline model flown and the influence of ticket price on the decision to travel. This confirms the discussion in section 8.2.5.5 where it was shown that respondents on a FSC are less influenced by the ticket price when making the decision to travel than respondents on a LCC. This is quantitatively highlighted in appendix B.5. LCC respondents can therefore be seen as being much more price aware and use price as one of the key factors when making travel decisions whilst the majority of FSC respondents are much less price conscious and clearly base their travel decisions on criteria beyond price alone. The issue of whether or not the fare influenced the decision to travel is explored further in section 8.3.5.8 in relation to respondents switching behaviour.

(vi) A statistical significant association, at the 1% level of significance, exists between the **source of ticket payment** and the type of carrier flown ($p$ = .000). The null hypothesis can therefore be rejected and a conclusion drawn that there is evidence of a statistical significant association between the airline model flown and the source of payment for the ticket. This supports the discussion given in section 8.2.5.6, which presented findings that focussed on establishing who paid for the respondents' ticket and if there was a difference between the respondents travelling on a FSC and a LCC. The overall picture showed that a large proportion of the respondents paid for their own tickets but the main differences identified were that FSCs tended to dominate where the payment was made by the respondent's work, whilst LCCs tended to dominate where payment was made by the respondent's parents. This is clearly noticeable from appendix B.6 in terms of payments made by work, parents, and tickets received as a gift.

### 8.3.3 Inferential analysis relating to key criteria utilised by respondents when selecting a carrier

Sections 8.2.7.1 to 8.2.7.3 in the descriptive findings part of this chapter focussed on the analysis of the respondent's criteria for selecting an airline. The bulk of the descriptive discussion focussed on the calculated mean values for each of the 10 criteria and the difference between these mean values for the respondents travelling on the two models. These discussions also considered the differences in mean values between the sexes and the identified age groupings per model type. In this section of analysis, statistical testing is conducted to establish whether there are statistically significant differences w.r.t. the medians of the individual choice criteria between (i) the model travelled on by the respondents, (ii) the gender per model type, and (iii) the age groups per model type.

The independent samples Mann-Whitney U test (for two groups) and the Kruskal Wallis test (for three or more groups) were used to test if there is a statistically significant difference between the categories of the ordinal variables with regard to respondent mean ranks per choice criteria.

#### 8.3.3.1 Testing for statistical significant differences between the type of model travelled on and the individual respondent choice criteria

The table that was constructed for this test is found in figure 8.30 (descriptive) and appendix C.1. The results of the testing are given in table 8.38. The descriptive findings relating to this topic were addressed in section 8.2.7.1.

The hypothesis that follows was tested for each individual choice criterion. In order of testing, the choice criteria tested are (i) Frequent Flyer Programmes (FFP), (ii) fare, (iii) quality, (iv) connections/airport destinations, (v) reliability, (vi) frequency of flight, (vii) safety, (viii) comfort, (ix) service, and (x) company policy.

- $H_0$: There is no difference between the type of model flown w.r.t. the respondents' airline specific choice criteria.
- $H_1$: There is a difference between the type of model flown w.r.t. the respondent's airline specific choice criteria.

**Table 8.38: Mann-Whitney test results for type of model travelled on by respondents and individual choice criteria**

| | Criteria | Sig. | Decision |
|---|---|---|---|
| (i) | FFP | 0.325 | Do not reject the null hypothesis |
| (ii) | Fare | 0.000 | Reject the null hypothesis |
| (iii) | Quality | 0.002 | Reject the null hypothesis |
| (iv) | Connections/ airport destination | 0.127 | Do not reject the null hypothesis |
| (v) | Reliability | 0.174 | Do not reject the null hypothesis |
| (vi) | Frequency of flights | 0.764 | Do not reject the null hypothesis |
| (vii) | Safety | 0.010 | Reject the null hypothesis |
| (viii) | Comfort | 0.134 | Do not reject the null hypothesis |
| (ix) | Service | 0.536 | Do not reject the null hypothesis |
| (x) | Company policy | 0.763 | Do not reject the null hypothesis |

The results of the testing indicated that, at the 5% significance level, the median values are statistically different between the models for three of the choice criteria; **namely fare, quality, and safety.** In these three cases the null hypothesis can thus be rejected. For the remaining seven identified choice criteria, the tests show no statistically significant difference between them and thus the null hypothesis cannot be rejected. The results of this testing can be tied directly back to the discussion around figure 8.29 and appendix C.1, which clearly highlighted the differences between the two model types in terms of consumer ranking of their choice criteria and the mean values – particularly in terms of the fare, quality, and safety. From appendix C.1, the mean ranks indicate that respondents on a LCC tend to rank **fare** (mean rank = 150.85) considerably more important than do respondents flying on a FSC (mean rank = 218.72). In contrast to this, FSC respondents tended to rank **quality** (mean rank = 205.86) and **safety** (mean rank = 184.02) much higher than respondents on a LCC (mean ranks = 242.52 and 213.00

respectively). Clearly, the use of fare as a key factor in selecting a carrier is strongly associated with the LCC model, whilst quality is a key factor in selecting a FSC.

#### 8.3.3.2 Testing if genders within a specific model significantly differ with regard to their individual choice criteria when selecting a carrier

Section 8.2.7.2 presented the tabulations and descriptive discussion relating to respondent choice criteria mean values (Q17) and gender (Q39). The testing in this section uses the Mann-Whitney U test to test if there is a statistical significant difference between male and female respondents w.r.t. each of the individual choice criteria (in terms of the top reasons for choosing a carrier). The choice criterion 'company policy' was excluded from the analysis as this is not a 'choice' made by the respondent but one imposed on them by the employer and thus beyond the respondent's control. Each model is addressed separately. The results relating to respondents travelling on the FSC model are addressed first, followed by the results for respondents travelling on a LCC.

Appendices C.2 (FSC respondents) and C.3 (LCC respondents) show the tables that were constructed for these tests, with the results given in table 8.39.

The following hypothesis was tested for each of the individual choice criterion for the FSC and LCC models respectively. In order of testing, the choice criteria tested are (i) Frequent Flyer Programmes (FFP), (ii) fare, (iii) quality, (iv) connections/airport destinations, (v) reliability, (vi) frequency of flight, (vii) safety, (viii) comfort, and (ix) service.

- $H_0$: There are no statistically significant differences between
  - (i) male and female FSC respondents with regard to each of the individual choice criteria when selecting an airline.
  - (ii) male and female LCC respondents with regard to each of the individual choice criteria when selecting an airline.

- $H_1$: There are statistically significant differences between
  - (i) male and female FSC respondents with regard to each of the individual choice criteria when selecting an airline.
  - (ii) male and female LCC respondents with regard to each of the individual choice criteria when selecting an airline.

**Table 8.39: Mann-Whitney test results for FSC and LCC respondents w.r.t. gender**

| | | Frequent flyer programme | Fare | Quality | Connections airport destination | Reliability | Frequency of flights | Safety | Comfort | Service |
|---|---|---|---|---|---|---|---|---|---|---|
| FSC | Mann-Whitney U | 519.000 | 2244.000 | 6502.500 | 958.000 | 4549.000 | 1816.000 | 4758.500 | 3486.000 | 3588.500 |
| | Asymp. Sig. (2-tailed) | .894 | .832 | .748 | .231 | .239 | .628 | .136 | .059 | .270 |
| LCC | Mann-Whitney U | 144.000 | 4803.500 | 3707.500 | 738.000 | 3757.500 | 1240.000 | 3197.000 | 2775.000 | 3108.500 |
| | Asymp. Sig. (2-tailed) | .746 | .286 | .178 | .594 | .784 | .493 | .872 | .747 | .307 |

From table 8.39 above, the results indicated that:

*(i) FSC respondents (travelling on a FSC)*

At the 5% level of significance there are no statistical significant differences for any of the criteria. However, in the case of **comfort**, $p = .059$ is less than 0.1 so $H_0$ can be rejected at the 10% level of significance (as per section 7.3.9.4 of methodology). In this case, the null hypothesis can therefore be rejected and a conclusion drawn that there is a statistical significant difference, at the 10% level of significance, between males and females that used the FSC airlines with regard to their ranking of comfort as a top reason. From appendix C.2, it is seen that the mean ranks indicate that males (mean rank = 88.79) tend to rank comfort higher than females (mean rank = 103.9). In terms of the remaining nine choice criteria, no statistically significant differences were found, meaning that the null hypothesis could not be rejected. A visual inspection of appendix C.2 shows that the differences between males and females on the FSC carriers are relatively small in terms of the nine criteria with safety and comfort showing the ‘biggest’ of the small differences (although not statistically significant). Fare showed almost no difference between the genders on a FSC.

*(ii) LCC respondents (travelling on a LCC)*

The results of the Mann Whitney U test indicate that there are no statistically significant differences, at the 5 % level of significance, between males and females that used the LCC airlines with regard to any of the 10 choice criteria. This means that in all ten cases the null hypothesis cannot be rejected. From appendix C.3, the mean ranks indicate that males and females are relatively similar to each other, with males ranking some criteria higher than females in some cases, and vice-versa. Fare is the only criterion where the difference between the mean ranks for the two models is noticeable (106.09 vs. 98.987), but as indicated, not statistically significant.

#### 8.3.3.3 Testing if age groups within a specific model significantly differ with regard to each individual choice criteria when selecting a carrier

Section 8.2.7.3 presented the cross tabulations and descriptive discussion relating to respondent choice criteria mean values (Q17) and age group (Q40). The testing in this section uses the Kruskal-Wallis test to establish whether there are any statistical significant differences between the seven defined age groups w.r.t. each of the individual choice criteria when choosing a carrier (in terms of the top reasons for choosing an airline). In some cases, where the number of respondents was too small (below 5), some age groups were combined for the analysis. This applied specifically to combining the 16–18 and 19–24 age groups for the criteria of 'fare' and 'frequent flyer programmes (new grouping = 16–24), and combining the 45–54 and 55–64 age groups for the criterion of 'fare' (new grouping = 45–64). Additionally, in some cases the 65+ category was excluded for analysis for the same reason (refer to the relevant appendices identified). The choice criterion 'company policy' was excluded from the analysis, as this is not a 'choice' made by the respondent but one imposed on them by the employer and thus beyond the respondent's control. Each model is addressed separately. The results relating to respondents travelling on a FSC are addressed first, followed by the results for respondents travelling on a LCC.

Appendix C.4 (FSC respondents) and appendix C.5 (LCC respondents) show the tables that were constructed for these tests, with the results of the test given in table 8.40.

The following hypothesis was tested for each individual choice criterion for the FSC and LCC models respectively. In order of testing, the choice criteria tested are (i) Frequent Flyer Programmes (FFP), (ii) fare, (iii) quality, (iv) connections/airport destinations, (v) reliability, (vi) frequency of flight, (vii) safety, (viii) comfort, and (ix) service.

- $H_0$: There are no statistically significant differences between
    - (i) the age groups for FSC respondents with regard to each of the individual choice criteria when selecting an airline.
    - (ii) the age groups for LCC respondents with regard to each of the individual choice criteria when selecting an airline.

- $H_1$: There are statistically significant differences between
    - (i) the age groups for FSC respondents with regard to each of the individual choice criteria when selecting an airline.
    - (ii) the age groups for LCC respondents with regard to each of the individual choice criteria when selecting an airline.

**Table 8.40: Kruskal Wallis test results for FSC and LCC respondents w.r.t. age groups**

| | | Frequent flyer programme | Fare | Quality | Connections airport destination | Reliability | Frequency of flights | Safety | Comfort | Service |
|---|---|---|---|---|---|---|---|---|---|---|
| FSC | Chi-Square | 5.970 | 3.692 | 8.348 | 8.080 | 12.971 | 4.872 | 9.540 | 8.988 | 3.227 |
| | df | 3 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | Asymp. Sig. | .113 | .595 | .214 | .232 | .043 | .560 | .145 | .174 | .780 |
| LCC | Chi-Square | 1.465 | 11.463 | 6.003 | 3.796 | 5.663 | 4.078 | 3.056 | 4.426 | 6.028 |
| | df | 3 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 |
| | Asymp. Sig. | .690 | .043 | .423 | .579 | .462 | .538 | .802 | .490 | .420 |

From table 8.40 above, the results indicated that:

*(i)* *FSC respondents (travelling on a FSC).*

The results of the Kruskal-Wallis test indicate that there is a statistically significant difference, at the 5% level of significance, between the age groups using a FSC with regard to their ranking of **reliability** as a choice criterion ($p$ = .043). In this case, the null hypothesis relating to reliability can be rejected. From appendix C.4, it is seen that the mean ranks indicate that the various age groups tend to rank reliability quite differently to each other, with the biggest difference observed between the 35–44 age group who had the highest mean rank (95.48) and the 16–18 age group who had the lowest mean rank (145.79). In terms of the remaining nine choice criteria, no statistically significant differences were found meaning, that the null hypotheses could not be rejected.

*(ii)* *LCC respondents (travelling on a LCC)*

The results of the Kruskal-Wallis test indicate that there is a statistically significant difference, at the 5% level of significance, between the age groups using a LCC with regard to their ranking of **fare** as a choice criterion ($p$ = .043). In this case, the null hypothesis relating to fare can be rejected. From appendix C.5, it is seen that, in terms of LCC respondents, the mean ranks indicate that the various age groups tend to rank fare quite differently to each other, with the biggest difference observed between the 25–34 age group who had the highest mean rank (93.36) and the 45–54 age group who had the lowest mean rank (123.37). The 35–45 age group also showed a relatively low mean rank of 121.31 on the criterion of fare to further highlight that the middle-aged groups (35–54) rated fare as less important than the younger and older age groups (16–34 & 55–65+). The 16–18 and 19–24 age groups with regard to the criterion of 'fare' were combined for analysis in this case to make them comparable with the handling of the same age groups in the FSC analysis. In terms of the remaining nine choice criteria, no statistically significant differences were found, meaning that the null hypotheses could not be rejected.

### 8.3.4 Inferential analysis relating to the perceptions of respondents regarding the service and features offered by the two models

Section 8.2.9 of this chapter presented the descriptive findings relating to questions 19–28, which addressed the respondent's perceptions of the two models. In this case, the respondents had to rate the model they were travelling on and then the model they were not travelling on according to a number of service quality dimensions. The resulting respondent mean values were analysed accordingly. These discussions also considered the differences between the sexes as well as the identified age groupings in terms of their mean perception values. In this section of analysis, statistical testing is conducted to establish whether there are statistically significant differences between the mean values of the perception ratings of the respondents in terms of the two models (i.e. the model travelled on and the model not travelled on). Following this, tests are conducted to establish whether the genders differ in terms of the mean values relating to their perceptions of the two models. Finally, testing is done to establish whether the identified age groups differ in terms of their perceptions (mean values) of the two models. The testing regarding gender and age groups is done per model.

#### 8.3.4.1 Respondent's perceptions of the two models – service score creation

In order to facilitate the testing of the differences between respondent perceptions of the features and services offered by the two models, the service-related questions were subjected to an exploratory factor analysis to determine if any clear constructs emerge. A factor analysis results in the identification of one or more factors, which are defined as "a weighted summary score of a set of related variables" (McDaniel & Gates, 2013:561). In this case, factor analysis was used to create a service score from questions 19 to 23 (***lowcostserv***) and a service score from questions 24 to 28 (***fullserv***). Questions 19–23 required all respondents to rate their perception of the features and services offered by a LCC. Questions 24–28 required all respondents to rate their perception of the features and services offered by a FSC.

- ***Factor analysis results***

An explorative factor analysis was conducted for each set of questions, using principal component extraction and varimax rotation. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.880 for questions 19–23 and .895 for questions 24–28) and the Bartlett's Test of Sphericity, which was significant ($p$ = .000 for both sets of questions), both indicate that a factor analysis is appropriate. The results of the testing are summarised in table 8.41.

**Table 8.41: Kaiser-Meyer-Olkin (KMO) and Bartlett's test results**

| KMO and Bartlett's test | | | |
|---|---|---|---|
| | | Q19 – Q23 | Q24 – Q28 |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .880 | .895 |
| Bartlett's Test of Sphericity: | Approx. Chi-Square | 2168.336 | 2199.208 |
| | Df | 10 | 10 |
| | Sig. | .000 | .000 |

The analyses identified a single factor for each set of questions, based on the eigenvalue criterion of eigenvalues above 1, which explains 73.9% of the variance for questions 19–23 (***lowcostserv)*** and 73.6% of the variance for questions 24–28 (***fullserv***). The final factor loadings are shown in table 8.42.

**Table 8.42: Final factor loadings**

| Perceptions of LCCs | | Perceptions of FSCs | |
|---|---|---|---|
| Question | Factor loadings 1 | Question | Factor loadings 1 |
| q20 | .881 | q24 | .878 |
| q21 | .868 | q25 | .869 |
| q23 | .862 | q26 | .863 |
| q22 | .859 | q27 | .863 |
| q19 | .828 | q28 | .815 |

To ensure that the above-mentioned groups of questions are reliable, the Cronbach Alpha coefficient was calculated. Using Cronbach alpha, the internal consistency (reliability) for both factors was found to be high; both had a high value: .911 for items 19 to 23 and .910 for items 24 to 28. The outputs from SPSS are shown in table 8.43 below. In both cases, the values are thus above the threshold of 0.7 and are deemed satisfactory. Factor based scores were subsequently calculated as the mean score of the variables included in each factor for each respondent.

**Table 8.43: Calculation of the Cronbach alpha coefficient for the two groups**

| Reliability Statistics Q 19 – 23 | | Reliability Statistics Q 24 - 28 | |
|---|---|---|---|
| Cronbach's Alpha | N of Items | Cronbach's Alpha | N of Items |
| .911 | 5 | .910 | 5 |

The combined score per individual for each model can now be used to test the following:

1. Testing if there is a statistically significant difference between respondents flying on a FSC and a LCC with regard to their perception of (a) low-cost airline service and (b) full-service airline service (for descriptive discussion see sections 8.2.9.1–8.2.9.3).
2. Testing if there is a statistically significant difference between the respondents of different age groups with regard to the low-cost and full-service scores as defined above (descriptive discussion in section 8.2.9.4).

3. Testing if there is a statistically significant difference between the respondents of the different genders with regard to the low-cost and full-service scores as defined above (descriptive discussion in section 8.2.9.5).

The statistical tests used were the *t*-test (for two groups) or the ANOVA (for three or more groups) to test if the means for the full-service or low-cost service score differ significantly between the groups as defined above in 1, 2, and 3 above. The results that were obtained are addressed in sections 8.3.4.2–8.3.4.4.

#### 8.3.4.2 Testing for statistically significant differences between respondents flying on a FSC and respondents flying on a LCC w.r.t. their perceptions of (a) low-cost airline service and (b) full-service airline service

The focus in this first section is on whether there is a statistically significant difference in the mean perceptions of respondents travelling on a LCC and a FSC regarding their perceptions of (i) a LCC and (ii) a FSC. Appendix D.1 tabulates the mean service scores for each of the models used by the respondents and forms the basis of the calculations. Table 8.44 presents the results of the testing.

The following hypotheses were tested:

- $H_0$: There is no statistically significant difference between respondents flying on a FSC and a LCC with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

- $H_1$: There is a statistically significant difference between respondents flying on a FSC and a LCC with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

**Table 8.44: *T*-test results testing for statistically significant differences in respondent perceptions of LCCs and FSCs**

| | | Levene's Test for Equality of Variances | | *t*-test for Equality of Means | | |
|---|---|---|---|---|---|---|
| | | *F* | Sig. | *t* | df | Sig. (2-tailed) |
| lowcostserv | Equal variances assumed | 21.698 | .000 | -4.327 | 663 | .000 |
| | Equal variances not assumed | | | -4.337 | 637.532 | .000 |
| fullserv | Equal variances assumed | 11.414 | .001 | 3.687 | 693 | .000 |
| | Equal variances not assumed | | | 3.639 | 627.296 | .000 |

From table 8.44 above, the following results were obtained:

(i) The significance ($p$ value) of Levene's test is .000. This value is less than or equal to the α level for the test (.05), implying that the variances are unequal and the bottom row of the output 'Equal variances not assumed' is used.

The $t$ value is 4.337. The column labelled 'Sig. (2-tailed)' gives the two-tailed $p$ value associated with the test. The $p$ value is .000, which is less than or equal to .05, and therefore $H_0$ can be rejected. The results indicate that there exists a statistical significant difference, at the 1% level of significance, between respondents flying on a FSC and a LCC with regard to their perception of a **low-cost airline service** ($p$ =.000). The mean scores (*see* appendix D1) indicate that LCC respondents rated the low-cost service higher (M = 5.10) than those flying on a FSC airline (M = 4.74). It can thus be seen that LCC respondents have a much more favourable perception of the LCC model than FSC respondents.

(ii) The significance ($p$ value) of Levene's test is .001. This value is less than or equal to the α level for the test (.05), implying that the variances are unequal and the bottom row of the output 'Equal variances not assumed' is used.

The $t$ value is 3.639. The column labelled 'Sig. (2-tailed)' gives the two-tailed $p$ value associated with the test. The $p$ value is .000, which is less than or equal to .05, and therefore $H_0$ can be rejected. The results indicated that there exists a statistical significant difference, at the 1% level of significance, between respondents flying on a FSC and a LCC with regard to their perceptions of a **full-service airline service** ($p$ = .000). The mean scores (*see* appendix D.1) indicate that FSC respondents rated the full-service airline service higher (M = 5.83) than the respondents flying on a LCC (M = 5.57).

The results of these two tests confirm the discussion that was given in section 8.2.9.3 of the descriptive analysis. In that section, it was discussed that LCC respondents have a much more favourable perception of LCCs than FSC respondents. It was further shown that FSC respondents have a much more favourable perception of FSCs than do LCC respondents. In addition to all this, it was seen that whilst LCC respondents had a favourable perception of LCCs, they have an even more favourable perception of FSCs – even though they were travelling on a LCC. Finally, the extent of the perceptual difference between the LCC and FSC respondents towards the two models can be seen in the differences between the means in the ratings of the two models (*see* appendix D.1); 4.74 (FSC respondents) versus 5.10 (LCC respondents) with regard to the LCCs, and 5.83 (FSC respondents) versus 5.57 (LCC respondents) with regard to the FSCs. Clear from the analysis is how much higher the FSC respondents rate the FSCs over the LCC model. Refer to section 8.2.9.3 for the complete discussion in this regard.

#### 8.3.4.3 Testing if the genders significantly differ with regard to their perceptions of a low-cost and full-service airline service

Additional testing was conducted relating to the calculated service score in order to ascertain whether the males and females differ significantly with regard to their perceptions of the two models. Section 8.2.9.5 covered the descriptive discussion relating to his topic and showed that, in general, female respondents tended to rate the LCCs (across all five dimensions) higher than male respondents, whilst male respondents tended to rate the FSCs higher than female respondents (across all five dimensions). The t-test (for two groups) was used to determine if statistically significant differences exist between males and females with regard to respondent perceptions of LCCs and FSCs. Appendix D.2 tabulates the mean service scores for each of the models used by the respondents divided according to gender, with table 8.45 showing the results of the testing. The analysis is given firstly in terms of respondent perceptions of the LCC model and then secondly in terms of the FSC model.

The following hypotheses were tested:

- $H_0$: There is no statistical significant difference between male and female respondents with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

- $H_1$: There is a statistical significant difference between male and female respondents with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

**Table 8.45: *T*-test results for respondent perceptions of LCCs and FSCs according to gender**

| | | Levene's Test for Equality of Variances | | *t*-test for Equality of Means | | |
|---|---|---|---|---|---|---|
| | | *F* | Sig. | *t* | df | Sig. (2-tailed) |
| lowcostserv | Equal variances assumed | .230 | .631 | -.351 | 646 | .725 |
| fullserv | Equal variances assumed | 1.601 | .206 | .083 | 676 | .934 |

From table 8.45 above, the following results were obtained:

(i) The significance (*p* value) of Levene's test is .631. As the *p* value of .631 is larger than α, it can be assumed that the variances are equal. The *t* value is .351. The column labelled 'Sig. (2-tailed)' gives the two-tailed *p* value associated with the test as .725. In this case, .725 is not less than or equal to .05 and therefore $H_0$ cannot be rejected. This implies that there is no statistically significant difference in the mean 'low-cost' service score between male and female respondents. From appendix D.2 it is seen that the mean values for male and female respondents when rating LCCs are relatively similar (4.90 vs. 4.93) with standard deviations that are also very similar (1.07198 vs. 1.09935).

(ii) The significance (*p* value) of Levene's test is .206. As the *p* value of .206 is larger than α, it can be assumed that the variances are equal. The *t* value is .083. The column labelled 'Sig. (2-tailed)' gives the two-tailed *p* value associated with the test as .934. In this case, .934 is not less than or equal to .05 and therefore $H_0$ cannot be rejected. This implies that there is no statistically significant difference in the mean 'full-service' service score between male and female respondents. From appendix D.2 it is seen that the mean values for male and female respondents when rating FSCs are relatively similar (5.72 vs. 5.71) with standard deviations that are also very similar (0.87869 vs. 0.95044).

In summary, the results indicated that no statistical significant difference exists between male and female respondents with regard to their perception of:

(i) A low-cost airline service ($p = .725$).

(ii) A full-service airline service ($p = .934$).

Appendix D.2 shows the distinct difference in the service scores for the two models. Immediately noticeable is that FSCs have a mean value much higher than that of LCCs. This applies to the overall mean values and also when sub-divided according to gender.

#### 8.3.4.4 Testing if the identified age groups significantly differ with regard to their perceptions of a low-cost and full-service airline service

A further test to be conducted relating to the calculated service score is to ascertain whether the different age groups differ significantly with regard to their perceptions of the two models. Section 8.2.9.4 addressed the descriptive analysis of this topic. The one-way analysis of variance (ANOVA) was used to determine if statistically significant differences exist between the age groups with regard to respondent perceptions of LCCs and FSCs. For the purposes of analysis, the 55–64 and 65+ age groups were combined due to the small number of respondents in the 65+ grouping. Appendix D.3 tabulates the mean service scores for each of the models used by the respondents divided according to age groups, with table 8.46 showing the results of the testing. The analysis is given firstly in terms of respondent perceptions of the LCC model and then of the FSC model.

The following hypotheses were tested:

- $H_0$: There is no statistical significant difference between the respondents' age group with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

- $H_1$: There is a statistical significant difference between the respondents' age group with regard to their perception of
  - (i) a low-cost airline service
  - (ii) a full-service airline service

**Table 8.46: Anova test results for respondent perceptions of LCCs and FSCs according to age group**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **df** | **Mean Square** | ***F*** | **Sig.** |
| **lowcostserv** | Between Groups | 11.109 | 5 | 2.222 | 1.929 | .087 |
| | Within Groups | 748.561 | 650 | 1.152 | | |
| | Total | 759.670 | 655 | | | |
| **fullserv** | Between Groups | 8.262 | 5 | 1.652 | 2.010 | .075 |
| | Within Groups | 559.159 | 680 | .822 | | |
| | Total | 567.421 | 685 | | | |

From table 8.46 above, the following results were obtained:

(i) The *F* value is 1.929 and the *p* value is .087. Although .087 is not less than or equal to .05, it is smaller than 0.1. We can thus reject the null hypothesis at the 10% level of significance. This indicates that a statistical significant difference exists between the age groups with regard to their mean 'low-cost' service score at the 10% level of significance. With reference to appendix D.3 the tabulation shows that the 16–18 and 55+ age groups have noticeably higher mean scores (5.26 and 5.14 respectively) when compared to the rest of the age groups when rating their perceptions towards the LCCs (4.95 to a low of 4.82). The 35–44 and 25–34 age groups had the lowest mean score of all age groups (4.822 and 4.823 respectively) closely followed by the 45–54 age group (4.89). This is not surprising as these groups showed a preference to the FSC model and had the largest number of business travellers who, as was shown in section 8.2.4.3, flew mainly on FSCs (*see* also figure 8.16 and table 8.9).

(ii) The *F* value is 2.010 and the p value is .075. Although .075 is not less than or equal to .05, it is smaller than 0.1. We can thus reject the null hypothesis at the 10% level of significance. This indicates that a statistical significant difference exists between the age groups with regard to their mean 'full-service' service score at the 10% level of significance. With reference to appendix D.3 the tabulation shows that, whilst the differences in mean values between the age groups is not as big as they are for the mean perception values for LCCs, there are still some significant differences. The age groups over 55 years showed the highest mean values in terms of their perceptions of FSCs (5.94), whilst the 25–34 and 35–44 age groups had the lowest mean values (5.58 and 5.67 respectively). That being said, even the lowest mean values were higher than any of the mean perception values for the LCCs. Section 8.2.9.4 in the descriptive discussions provides a breakdown of the respondent perceptions on each dimension divided per age group.

In summary, the results indicated that statistically significant differences do exist between the age groups, at a 10% level of significance, with regard to their perception of:

(i) A low-cost airline service ($p$ = .087).
(ii) A full-service airline service ($p$ = .075).

A final review of appendix D.3 highlights the distinct difference between the respondent perceptions of the two models. All age groups show a higher perception mean value in favour of the FSCs over the LCCs. As was identified in section 8.2.9.4, the youngest age group (16–18) shows the smallest gap between the two models. This generation has grown up with the LCC and FSC models as standard offerings, and whilst probably still inexperienced in flying, represent the future frequent flyers. This suggests that airline operators must consider that the younger generations perceive the two models as being relatively similar.

### 8.3.5 Inferential analysis relating to the extent of price sensitivity by respondents in response to air ticket price changes

The testing in this section considers respondent loyalty to a particular model as well as the switching behaviours at varying levels of fare increases or decreases. Attention is firstly given to establishing whether a statistically significant association exists between the type of carrier and the loyalty to a model shown by the respondents in the light of a proposed price increase or decrease (Q29 and Q31). In this case, the analysis specifically looks at:

- whether FSC respondents remain loyal (don't switch) to the FSC model in the light of a potential fare increase by the FSCs or whether they switch to a LCC.
- whether LCC respondents remain loyal (don't switch) to the LCC model in the light of a potential fare decrease by the FSCs or whether they switch to the FSCs.

The analysis in this section further considers whether there is a statistically significant association between switching behaviours of the respondents according to (i) their gender and (ii) the identified age groupings. The data is also tabulated with the respondent's reasons for selecting a particular carrier (question 17). In this case, an attempt is being made to establish whether there are statistically significant differences between the choice criteria of respondents and their loyalty to a model. In a similar vein, the data is also tabulated with the respondent's perception ratings of the two models (service score mean values) (Q19 – Q28). The analysis in this case attempts to establish whether there is a statistically significant difference between the respondents' perceptions of the two models and their loyalty to their chosen model. Testing is also done to establish whether there is a statistically significant association between the price sensitivity of the respondents and the conducting of price comparisons prior to the purchase of the air travel ticket. Finally, testing is conducted to establish whether there is a statistically significant association between the respondent's loyalty to a model and whether or not the decision to undertake the trip was influenced by the fare.

#### 8.3.5.1 Testing to determine if a statistically significant association exists between the model flown and respondent's loyalty to a model

In this section, a test is performed to determine if a statistically significant association exists between the model travelled on and the respondent's loyalty to a model. The Pearson chi-square test for independence was used to test if there is a statistically significant association between these two nominal variables. In order to perform this test a number of steps were taken. Firstly, two variables (called *'Loyalty FSC'* and *'Loyalty LCC'*) were created. For *'Loyalty FSC'*, a '0' indicated that respondents will switch (at the 10%, 20% and 30% marks) and a '1' indicates loyalty to FSCs. For *'Loyalty LCC'*, a '0' also indicated switching and a '2' indicated loyalty to the LCC. The two variables were then combined into a 'loyalty variable' with codes 0, 1, and 2, which were then used for the testing. Appendix E.1 shows the table that was constructed for this test, with the result of the test given in table 8.47. The descriptive findings relating to this topic were addressed in sections 8.2.10.1 and 8.2.10.2 of the descriptive analysis.

The following hypotheses were tested:

- $H_0$: There is no statistical significant association between the model flown by the respondents and their loyalty to the model flown.
- $H_1$: There is a statistical significant association between the model flown by the respondents and their loyalty to the model flown.

**Table 8.47: Pearson Chi-square test results for the model flown and respondent loyalty to a model in response to price increases/decreases**

| Chi-Square Tests | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 229.495[a] | 2 | .000 |
| Likelihood Ratio | 312.791 | 2 | .000 |
| Linear-by-Linear Association | 13.415 | 1 | .000 |
| N of Valid Cases | 729 | | |

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.78.

The result of the testing indicates that a statistically significant association, at the 1% level of significance, does exist between type of model flown and loyalty ($p$ = .000). The null hypothesis can therefore be rejected. Viewing the percentages in appendix E.1 it is shown that FSC respondents are substantially more loyal to the FSC model than LCC respondents are to the LCC model, which thus confirms the observations in the descriptive analysis in sections 8.2.10.1 and 8.2.10.2, which stated that FSC respondents are more loyal than LCC respondents. This is particularly apparent with the LCCs where it is seen that 86.1% of the LCC respondents will switch at some point, whilst only 13.9% indicated that they would remain loyal. In contrast to this it is seen that only 55.9% of the FSC respondents indicated that they would switch (across all three increase levels), whilst 44.1% indicated that they would remain loyal to the FSCs.

#### 8.3.5.2 Testing for a statistically significant difference between respondent mean service scores and the loyalty groupings (switch/not switch) with regard to their perception of (a) low-cost airline service and (b) full-service airline service

The analysis in this section takes the loyalty variables generated in the previous section further by exploring whether the respondent mean service scores (*see* section 8.3.4.1) differ between the various loyalty groupings. The loyalty variables are tested separately, that is, per *'Loyalty LCC'* and then *'Loyalty FSC'* variable. The results of this analysis will show whether there are statistically significant differences between respondents in terms of how they perceive the models (service score) and their corresponding loyalty to a model (loyalty variable) in the light of proposed price increases/decreases by the alternative model (as per the questionnaire). Specifically, an attempt is being made to establish whether respondents that stated they would switch model had different perception scores to those that stated that they would not switch model. The statistical test used was the t-test (for two groups) to test if there are statistically significant differences in the mean service scores between the loyalty groupings. A significance level of 5% was used. LCC respondents are addressed first followed by the FSC respondents.

**a. *Loyalty LCC* variable**

This section focuses on the '*loyalty LCC'* variable by testing whether there are statistically significant differences between the mean service scores of **LCC respondents** and whether or not they would switch to a FSC should the FSCs decrease their fares.

Appendix E.2 shows LCC respondents and their mean service score relating to their perceptions of LCCs and then FSCs. This is firstly divided into LCC respondents and their mean service score relating to LCCs sub-divided into those that would switch from a LCC to a FSC (.00) and those that would not switch (2.00) and then secondly, into LCC respondent mean service scores relating to FSCs sub-divided again into those that would switch from a LCC to a FSC (.00) and those that would remain loyal to the LCC (2.00).

Looking firstly at the LCC respondent's mean service score relating to the **LCC model**, a comparison of respondent mean service scores shows that LCC respondents that said they would switch to a FSC had a service score of 4.91 compared to those that would not switch at 5.06 (a relatively small difference). That is, the LCC respondents that said they would not switch had a slightly higher mean service score for LCCs than the LCC respondents who said they would switch. This makes sense in that it would be expected that those that remained loyal would rate the model higher than the non-loyal respondents. This statistic needs to be considered in terms of the earlier finding in appendix E.1 that a cumulative 86.1% of the LCC respondents indicated that they would switch to a FSC should the FSCs reduce their fares with only 13.9% indicating that they would not switch.

Secondly, for their mean service scores when rating **FSCs**, the LCC respondents that stated that they would switch to a FSC showed a mean service score of 5.73 whereas those that said they would not switch showed a mean service score of 5.43. In other words, LCC respondents that indicated they would not switch to a FSC (i.e. stay loyal) showed a lower service score compared to the LCC respondents that said they would switch to a FSC. This also makes sense, because it shows that those that did switch rated FSCs higher than those that did not switch, which shows a stronger affinity towards the FSC model and thus would be more easily enticed to switch to the FSC model. The gap between the two mean service scores in this case is 0.3 which is higher than the gap identified in the previous paragraph.

Looking at all four means, LCC respondents, when rating FSCs and indicated that they would switch, had the highest service score which gives an indication of the extent to the lack of loyalty to the LCC model. It is clearly noticeable that in rating the LCCs, the service scores of LCC respondents who would switch or stay loyal are both lower than their corresponding service scores when rating the FSCs. In other words, those LCC respondents that indicated that they are loyal to the LCCs still rated LCCs and their service features lower than those of FSCs.

Appendix E.2 shows the table that was constructed for this test, with the results of the test given in table 8.48. This section is a combination of the issues addressed in sections 8.2.10.2 (questions 19–28) and 8.2.9 (question 31) of the descriptive findings.

The following hypotheses were tested:

- $H_0$: There are no statistical significant differences in the mean service scores between the loyalty groupings for the *Loyalty LCC* variable of LCC respondents when rating the
  - (i) LCCs.
  - (ii) FSCs.

- $H_1$: There are statistical significant differences in the mean service scores between the loyalty groupings for the *Loyalty LCC* variable of LCC respondents when rating the
  - (i) LCCs.
  - (ii) FSCs.

**Table 8.48: *T*-test results testing for statistically significant differences between the *Loyalty LCC* variable and mean service score for LCC respondents relating to the two models**

| Independent Samples Test – LCC respondents | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | *t*-test for Equality of Means | | |
| | | ***F*** | **Sig.** | ***t*** | **df** | **Sig. (2-tailed)** |
| (i) lowcostserv | Equal variances assumed | .706 | .401 | -.911 | 663 | .363 |
| | Equal variances not assumed | | | -.992 | 53.482 | .326 |
| (ii) fullserv | Equal variances assumed | 3.413 | .065 | 2.128 | 693 | .034 |
| | Equal variances not assumed | | | 1.753 | 49.159 | .086 |

From table 8.48 above, the following results were obtained:

(i) The significance (*p* value) of Levene's test is .401. As the *p* value of .401 is greater than α, it can be assumed that the variances are equal. The *t* value is .911. The column labelled 'Sig. (2-tailed)' gives the two-tailed *p* value associated with the test as .363. In this case .363 is not less than or equal to .05 and therefore $H_0$ cannot be rejected. This implies that there is no statistically significant difference, at the 5% level of significance, in the mean service scores between the loyalty groupings for the *Loyalty LCC* variable of LCC respondents when rating the LCC model. This can be seen in appendix E.2, which shows that the mean service values for the LCC respondents (when rating LCCs) that would switch and the mean service values for the LCC respondents that would remain loyal are similar. In this case LCC respondents that would remain loyal showed a slightly higher mean score than LCC respondents that stated they would switch (5.06 vs. 4.91 respectively).

(ii) The significance ($p$ value) of Levene's test is .065. As the $p$ value of .065 is greater than α, it can be assumed that the variances are equal. The $t$ value is 2.128. The column labelled 'Sig. (2-tailed)' gives the two-tailed $p$ value associated with the test as .034. In this case, .034 is less than .05 and therefore $H_0$ can be rejected. This implies that there is a statistically significant difference, at the 5% level of significance, in the mean service scores between the loyalty groupings for the *loyalty LCC* variable of LCC respondents when rating FSCs. Appendix E.2 shows that the LCC respondents (rating FSCs) that indicated they would switch have a higher mean value (5.73) than those that would remain loyal to the LCCs (5.43). It can be stated that LCC respondents that show a particularly high service rating of the FSC model tend to show a high propensity to switch to the FSC model in the face of fare increases on a LCC or decreases on the FSCs.

**b. *Loyalty FSC* variable**

This section focuses on the *Loyalty FSC* variable by testing whether there are statistically significant differences between the mean service scores of **FSC respondents** and whether or not they would switch to a LCC should the FSCs increase their fares.

Appendix E.3 shows FSC respondents and their mean service score relating to their perceptions of LCCs and then FSCs. This is firstly divided into FSC respondents and their mean service score relating to LCCs sub-divided into those that would switch from a FSC to a LCC (.00) and those that would not switch (1.00), and then secondly, into FSC respondent mean service scores relating to FSCs sub-divided again into those that would switch from a FSC to a LCC (.00) and those that would remain loyal to the model (1.00). A brief discussion is given on each issue as it has not been explored previously in the chapter.

Considering the FSC respondent's mean service score relating to the **LCC model** first, the FSC respondents that stated they would switch to a LCC showed a mean service score of 4.90 compared to those that stated that they would not switch at 4.99 (a negligible difference of 0.09). That is, those FSC respondents that stated they would not switch had a negligibly higher service score for LCCs than those FSC respondents who stated they would switch. This seems to indicate that, in this case, there is no real difference between FSC respondents who indicated that they would switch and those that would stay loyal to the FSC model. Comparing data from the table, it is clear that both groups rated the LCC model lower than they did the FSC model. It also needs to be remembered that in the table in appendix E.1 it was seen that cumulatively (across all three price reduction levels) only 55.9% of the FSC respondents would consider switching to a LCC if the FSCs increased their fares, with 44.1% choosing to remain loyal to the FSC model.

Secondly, for their service scores when rating **FSCs**, the FSC respondents that stated that they would switch to a LCC showed a service score of 5.62 whereas those that said they would not switch showed a mean service score of 5.99. In other words, FSC respondents that indicated they would not switch to a LCC (i.e. loyal) showed a higher mean service score compared to the FSC respondents that said they would switch to a LCC (a difference of 0.37). This is logical and shows that those FSC respondents that would not switch to a LCC, at any level of price increase by the FSC, have a very strong affinity towards the FSC and as long as the airline continues to provide them with good value they will remain loyal. Even those FSC respondents that said that they would switch still had a high mean service score, indicating that, whilst they have a strong affinity towards the model, there is a price level at which the FSC model is too expensive and are forced to look at the LCC option.

Looking at all four means, when rating FSCs, FSC respondents who indicated that they would not switch had the highest mean service score, which gives an indication of the extent of loyalty to the model. As was established earlier, those FSC respondents that indicated that they would switch still showed a high mean service score relative to the FSC model, but it was lower than the service score of those that would remain loyal. The fact that these FSC respondents would switch to the LCC model, even though they rate the FSCs higher than the LCCs on the service features (5.62 vs. 4.90) shows that price definitely plays a role in this instance. Given the discussion in section 8.2.10.1 relating to figure 8.35, and the relatively low level of defections to the LCCs across all three price increase levels, the adding of value to the offering or even personalised marketing communications exploiting the strong FSC affinity could snatch these ‘defectors’ back to the FSCs. It is acknowledged that the addition of value does not make the product more affordable; just more attractive. Clearly price is an issue for these ‘defectors’. This needs to be carefully managed in a competitive market like the South African domestic airline market, as no airline can afford to concede these passengers to competitors.

Appendix E.3 shows the table that was constructed for this test, with the results of the test given in table 8.49. This section is a combination of the issues addressed in sections 8.2.10.2 (questions 19–28) and 8.2.9 (question 29) of the descriptive findings.

The following hypotheses were tested:

- $H_0$: There are no statistical significant differences in the mean service scores between the loyalty groupings for the *Loyalty FSC* variable of FSC respondents when rating the
    - (i) LCCs.
    - (ii) FSCs.

- $H_1$: There are statistical significant differences in the mean service scores between the loyalty groupings for the *Loyalty FSC* variable of FSC respondents when rating the
  - (i) LCCs.
  - (ii) FSCs.

**Table 8.49: *T*-test results testing for statistically significant differences between the *Loyalty FSC* variable and mean service score for FSC respondents relating to the two models**

| Independent Samples Test – FSC respondents | | | | | | |
|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | *t*-test for Equality of Means | | |
| | | ***F*** | **Sig.** | ***t*** | **df** | **Sig. (2-tailed)** |
| (i) lowcostserv | Equal variances assumed | 9.446 | .002 | -.922 | 663 | .357 |
| | Equal variances not assumed | | | -.850 | 213.410 | .396 |
| (ii) fullserv | Equal variances assumed | 9.005 | .003 | -4.523 | 693 | .000 |
| | Equal variances not assumed | | | -5.030 | 341.919 | .000 |

From table 8.49 above, the results indicated that:

(i) The significance ($p$ value) of Levene's test is .002. As the $p$ value of .002 is less than $\alpha$, it can be assumed that the variances are not equal. The t value in this case is .850. The column labelled 'Sig. (2-tailed)' gives the two-tailed $p$ value associated with the test as .396. In this case, .396 is not less than or equal to .05 and therefore $H_0$ cannot be rejected. This implies that there is no statistically significant difference, at the 5% level of significance, in the mean service scores between the loyalty groupings for the *Loyalty FSC* variable of FSC respondents when rating LCCs. This can be seen in the table in appendix E.3, which shows that when rating LCCs, the mean service values for the FSC respondents that would switch and the mean service values for the FSC respondents that would remain loyal, are similar. The table shows that FSC respondents that would remain loyal to FSCs showed a slightly higher mean score than FSC respondents who would switch (4.99 vs. 4.90).

(ii) The significance ($p$ value) of Levene's test is .003. As the $p$ value of .003 is less than $\alpha$, it can be assumed that the variances are not equal. The t value in this case is 5.030. The column labelled 'Sig. (2-tailed)' gives the two-tailed $p$ value associated with the test as .000. In this case, .000 is less than .05 and therefore $H_0$ can be rejected. This implies that there is a statistically significant difference, at the 1% level of significance, in the mean service scores between the loyalty groupings for the *Loyalty FSC* variable of FSC respondents when rating FSCs. The table in appendix E.3 shows that the FSC respondents (rating of FSCs) that indicated they would switch to a LCC have a lower mean service value (5.62) than those that would remain loyal to the FSCs (5.99). It can therefore be stated that there are differences between the FSC respondents that would switch to a LCC and those that would remain loyal. In this section of analysis, the differences are seen in terms of their mean service ratings where FSC respondents that show a particularly high service rating of the FSC model will tend to remain loyal to the FSC model in the face of fare increases on a FSC or decreases on the LCCs. Further differences between the FSC respondents that would switch and those that would remain loyal are addressed in sections 8.3.5.3, 8.3.5.6, 8.3.5.7, and 8.3.5.8.

#### 8.3.5.3 Testing to determine if statistically significant differences exist between the 'switching level' groups w.r.t. their mean perception service score for LCCs and FSCs.

In conjunction with the testing done in section 8.3.5.2, the testing in this section further considers issues revolving around the respondent's (both LCC and FSC) mean perception service scores and the switching levels. The key point considered in this case is to identify which 'switching level' groups differ from each other with regard to their mean perception service scores. The respondents for the two models are analysed separately, with FSC respondents having answered question 29 and LCC respondents answering question 31. The same approach was followed for both sets of respondents. Commentary is given on appendices E.4 and E.5 as these tabulations were generated based on the services scores developed in the inferential section and thus not addressed under the descriptive analysis section. For the initial analysis, a one-way analysis of variance test (ANOVA) was used to determine if statistically significant differences exist between the 'switching level' groups with regard to their mean perception service score for LCCs and FSCs. The Scheffe multiple comparison test (generally used in conjunction with an ANOVA) was used to determine which specific groups differ from each other with regard to the findings of the ANOVA test (*see* section 7.3.9.4. for the conditions for the use of the Scheffe multiple comparison test). The results of the testing in this section will firstly consider the results of the FSC respondents, followed by the LCC respondents.

- **FSC respondents (Q29 vs. service score)**

In the case of FSC respondents, a one-way analysis of variance test (ANOVA) was used to determine if statistically significant differences exist between the 'switching level' groups with regard to their mean perception service score for LCCs and FSCs. It needs to be kept in mind that question 29 asked <u>FSC respondents</u> to indicate at what level of fare increase by the <u>FSCs</u> (10%, 20%, 30%, or 'not switch') they would consider switching to a LCC. Appendix E.4 shows the table that was constructed for this test, with the result of the test given in table 8.50. The table in appendix E.4 is constructed firstly showing FSC respondent's mean perception service scores for LCCs at each switching level, and then secondly, showing FSC respondent mean perception service scores for FSCs at each switching level.

Before presenting the results of the ANOVA analysis, a number of comments can be made on the contents of the table in appendix E.4. In terms of the mean perception service scores, the difference between the FSC respondent's mean scores for FSCs and LCCs was relatively high across all four 'switching levels'. This ranged from a low of 0.85 at the switch at 10% increase level to 1.2 at the switch at 30% increase level. Interestingly, as the fare increase level increased from 10% to 20% to 30%, the FSCs respondent's mean score relating to their perceptions of LCCs decreased at each level. This highlights the influence of price on these respondents and their general preference towards the FSC model. Clearly, each of the switching levels has 'differentiated' between respondents, with respondents at each higher 'switching level' showing an overall lower level of liking of the LCC model, but still switching to the LCC model because for those respondents a particular level where price is an important factor has been reached. Basically, it takes a higher fare increase by the FSCs to cause some FSC respondents to switch to a LCC as their level of liking for the LCCs decreases. It is also clear to see that the highest mean perception service score was 6.00, which was for FSC respondents rating FSCs who indicated that they would not switch at all. The level of loyalty and liking in this case seems to be very strong.

The following hypotheses were tested in the case of the **FSC** respondents:

- $H_0$: There are no statistical significant differences between the 'switching level' groups with regard to the FSC respondent's mean perception service score for
  - (i) low-cost carriers
  - (ii) full-service carriers

- $H_1$: There are statistical significant differences between the 'switching level' groups with regard to the FSC respondent's mean perception service score for
  - (i) low-cost carriers
  - (ii) full-service carriers

**Table 8.50: ANOVA test results for FSC 'switching level' groups w.r.t. their mean perception service score for LCCs and FSCs**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **df** | **Mean Square** | ***F*** | **Sig.** |
| (i) lowcostserv | Between Groups | 17.682 | 3 | 5.894 | 4.702 | .003 |
| | Within Groups | 485.122 | 387 | 1.254 | | |
| | Total | 502.804 | 390 | | | |
| (ii) fullserv | Between Groups | 11.257 | 3 | 3.752 | 5.651 | .001 |
| | Within Groups | 277.585 | 418 | .664 | | |
| | Total | 288.843 | 421 | | | |

From table 8.50 above, the following results relating to FSC respondents were obtained:

(i) The *F*-value is 4.702 and the p value is .003. The decision rule when deciding whether $H_0$ can be rejected or not is given as: if $p \leq \propto$, then reject $H_0$. In this case, the *p*-value for the low-cost service score is .003, which means that we can reject the null hypothesis at the 5% level of significance. This indicates that there is evidence of statistical significant differences between the 'switching level' groups (as defined in Q29) with regard to the FSC respondent's mean perception service score for LCCs.

(ii) The *F*-value is 5.651 and the p value is .001. The decision rule when deciding whether $H_0$ can be rejected or not is given as: if $p \leq \propto$, then reject $H_0$. In this case, the *p*-value for the 'full-service' service score is .001, which means that we can reject the null hypothesis at the 5% level of significance. This indicates that there is evidence of statistical significant differences between the 'switching level' groups (as defined in Q29) with regard to the FSC respondent's mean perception service score for FSCs.

Given that statistically significant results were found, post-hoc tests were conducted w.r.t. both the lowcostserv and the fullserv service scores.

**Table 8.51: Post hoc testing determining which specific groups differ from each other w.r.t. Anova findings – FSC respondents**

**Multiple Comparisons**

Scheffe

| Dependent Variable | If a FSC increased its fare, at what increase interval would you consider switching to a LCC? | If a FSC increased its fare, at what increase interval would you consider switching to a LCC? | Mean Difference (I-J) | Std. Error | Sig. |
|---|---|---|---|---|---|
| lowcostserv | 10% increase | 20% increase | .24218 | .18480 | .633 |
| | | 30% increase | .46927 | .20216 | .147 |
| | | Not switch | -.11572 | .15573 | .907 |
| | 20% increase | 10% increase | -.24218 | .18480 | .633 |
| | | 30% increase | .22710 | .19927 | .730 |
| | | Not switch | -.35789 | .15196 | .138 |
| | 30% increase | 10% increase | -.46927 | .20216 | .147 |
| | | 20% increase | -.22710 | .19927 | .730 |
| | | Not switch | -.58499* | .17266* | .010 |
| | Not switch | 10% increase | .11572 | .15573 | .907 |
| | | 20% increase | .35789 | .15196 | .138 |
| | | 30% increase | .58499* | .17266* | .010 |
| fullserv | 10% increase | 20% increase | .14524 | .12857 | .735 |
| | | 30% increase | .10847 | .14465 | .905 |
| | | Not switch | -.22954 | .10878 | .218 |
| | 20% increase | 10% increase | -.14524 | .12857 | .735 |
| | | 30% increase | -.03677 | .14214 | .995 |
| | | Not switch | -.37478* | .10542* | .006 |
| | 30% increase | 10% increase | -.10847 | .14465 | .905 |
| | | 20% increase | .03677 | .14214 | .995 |
| | | Not switch | -.33800 | .12452 | .063 |
| | Not switch | 10% increase | .22954 | .10878 | .218 |
| | | 20% increase | .37478* | .10542* | .006 |
| | | 30% increase | .33800 | .12452 | .063 |

From table 8.51, the only statistically significant differences detected (at the 5% level of significance) were between the 30% increase switching group and the 'not switch' group ($p$ = .010) for the low-cost service score, and between the 20% increase switching group and 'not switch' group ($p$ = .006) for the 'full-service' service score. Statistically significant differences, at the 10% level of significance, were detected between the 30% increase switching group and 'not switch' group for the 'full-service' service score. From the table in appendix E.4, it is seen that for the 'not switch' **FSC respondents** the mean for the low-cost service score (5.04) is 0.59 higher than the mean low-cost service score of those that indicated that they would switch to a LCC at the 30% increase mark (4.45). Clearly, they have a lower level of liking towards the LCC product, but have been 'forced' to switch due to price-related reasons.

- **LCC respondents (Q31 vs. service score)**

In the case of LCC respondents, a one-way analysis of variance test (ANOVA) was used to determine if statistically significant differences exist between the 'switching level' groups with regard to their mean perception service score for LCCs and FSCs. It needs to be kept in mind that question 31 asked LCC respondents to indicate at what level of fare decrease by the FSCs (10%, 20%, 30%, or 'not switch') they would consider switching to a FSC. Appendix E.5 shows the tabulation that was constructed for this test, with the result of the test given in table 8.52. The table in appendix E.5 is constructed firstly showing LCC respondent's mean perception service scores for LCCs at each switching level and then secondly, showing LCC respondent mean perception service scores for FSCs at each switching level.

A number of observations from the table in appendix E.5 will be highlighted before the results of the ANOVA analysis are presented. In terms of the mean perception service scores, the difference between the LCC respondent's mean scores when rating the FSCs and LCCs was much lower across all four 'switching levels' compared to that of the FSC respondents (see previous sub-section). The differences ranged from a low of 0.15 (5.37–5.22) at the switch at 10% increase level to 0.77 at the 30% increase level. The highest number of respondents that indicated that they would switch to a FSC was at the 30% fare decrease level (as indicated in the descriptive discussion in section 8.2.10.2).

In terms of the four switching levels when rating LCCs, the low-cost respondents' mean perception service scores were all very similar, with a difference of only 0.11 between the highest and lowest score. It was somewhat paradoxical to note that those LCC respondents that indicated that they would switch to a FSC at the 10% decrease switching level had the highest mean perception service score and those that stated they would switch at the 30% decrease switching level had the lowest. In other words, those that had the slightly higher mean perception service score for the LCCs chose to switch earlier than those that had an overall lower mean perception service score.

The pattern of findings for these LCC respondents in terms of their mean perception service score when rating the FSCs was also slightly different to what would be expected. In this case, the LCC respondents that indicated that they would switch to a FSC at a 10% fare decrease level (by the FSCs) had a lower mean perception service score than respondents that indicated that they would switch at a 20% fare reduction, who in turn had a lower mean perception service score than respondents that indicated that they would switch at a 30% fare reduction. In this instance, many LCC respondents still required a relatively large price decrease by the FSCs before switching over to the FSC model, despite their relatively high rating of the FSC model. Possible reasons for this were addressed in section 8.2.10.2. Price, and the perception of a FSC's price, seems to be a distinctive consideration in the decision-making of the LCC respondents and that they are aware of the difference between the pricing of the two models. They therefore realise that a relatively large fare decrease on the part of the FSCs is required for it to be cheaper than a LCC.

The following hypotheses were tested in the case of the **LCC** respondents:

- $H_0$: There are no statistical significant differences between the 'switching level' groups with regard to the LCC respondent's mean perception service score for
  - (i) low-cost carriers
  - (ii) full-service carriers

- $H_1$: There are statistical significant differences between the 'switching level' groups with regard to the LCC respondent's mean perception service score for
  - (i) low-cost carriers
  - (ii) full-service carriers

**Table 8.52: ANOVA test results for LCC 'switching level' groups w.r.t. their mean perception service score for LCCs and FSCs**

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **Df** | **Mean Square** | ***F*** | **Sig.** |
| (i) lowcostserv | Between Groups | .553 | 3 | .184 | .211 | .889 |
| | Within Groups | 329.663 | 377 | .874 | | |
| | Total | 330.215 | 380 | | | |
| (ii) fullserv | Between Groups | 8.806 | 3 | 2.935 | 2.975 | .032 |
| | Within Groups | 370.015 | 375 | .987 | | |
| | Total | 378.821 | 378 | | | |

From table 8.52 above, the following results relating to LCC respondents were obtained:

(i) The *F*-value is 0.211 and the *p* value is .889. The decision rule when deciding whether $H_0$ can be rejected or not is given as: if $p \leq \propto$, then reject $H_0$. In this case, the *p*-value for the low-cost service score is .889, which means that there is no statistically significant difference, at the 5%

level of significance, between the 'switching level' groups as defined in Q31 with regard to LCC respondents mean perception service score for LCCs. The hypothesis ($H_0$) can therefore not be rejected.

(ii) The *F*-value is 2.975 and the *p* value is .032. The decision rule when deciding whether $H_0$ can be rejected or not is given as: if $p \leq \propto$, then reject $H_0$. In this case, the *p*-value for the 'full-service' service score is .032, which means that there is a statistically significant difference, at the 5% level of significance, between the 'switching level' groups as defined in Q31 with regard to LCC respondents mean perception service score for FSCs. We can thus reject hypothesis ($H_0$).

Given that statistically significant differences were found between the 'switching level' groups with regard to their mean perception service score for FSCs only (fullserv), post-hoc tests can be conducted for this combination only.

**Table 8.53: Post hoc testing determining which specific groups differ from each other w.r.t. Anova findings – LCC respondents**

| Dependent Variable | (I) Q31_S1: 31. If a FSC reduced its fare, at what decrease interval would you consider switching to a FSC? | (J) Q31_S1: 31. If a FSC reduced its fare, at what decrease interval would you consider switching to a FSC? | Mean Difference (I-J) | Std. Error | Sig. |
|---|---|---|---|---|---|
| fullserv | 10% decrease | 20% decrease | -.31648 | .20423 | .494 |
| | | 30% decrease | -.51550* | .18221* | .047 |
| | | Not switch | -.36942 | .20378 | .351 |
| | 20% decrease | 10% decrease | .31648 | .20423 | .494 |
| | | 30% decrease | -.19903 | .13611 | .545 |
| | | Not switch | -.05294 | .16386 | .991 |
| | 30% decrease | 10% decrease | .51550* | .18221* | .047 |
| | | 20% decrease | .19903 | .13611 | .545 |
| | | Not switch | .14608 | .13543 | .762 |
| | Not switch | 10% decrease | .36942 | .20378 | .351 |
| | | 20% decrease | .05294 | .16386 | .991 |
| | | 30% decrease | -.14608 | .13543 | .762 |

From table 8.53, the only statistically significant differences detected, at the 5% level of significance, were between the 10% decrease switching group and the 30% decrease switching group ($p$ = .047) for the full-service service score. The table in appendix E.5 shows that in terms of the fullserv service score for FSC respondents, these respondents had a mean value of 5.37 at the 10% decrease switching point and 5.88 at the 30% decrease switching point. This finding highlights the earlier point, that even though these LCC respondents might rate the FSC model highly, it will take a large price decrease on the part of the FSCs to attract a large portion of the LCC passengers because they still perceive the price of the FSC ticket to be substantially higher than that of the LCCs.

#### 8.3.5.4 Testing for a statistically significant association between respondent loyalty to a model and (i) their gender (ii) their age group

This section focuses on the test performed to determine if there is a statistically significant association between respondent loyalty to a model and their (i) gender and (ii) age group. The tests were conducted using the Loyalty variable described in section 8.3.5.1. Zero (0.00) indicated that respondents will switch (10%, 20% and 30% marks aggregated for both LCC and FSC respondents), 1.00 indicates loyalty to FSCs by the FSC respondents, and a 2.00 indicated loyalty to the LCCs by the LCC respondents. Appendix E.6 (gender) and appendix E.7 (age groups) show the tables that were constructed for the tests, with the results of the tests given in table 8.54. The descriptive findings relating to this topic were addressed in sections 8.2.10.4 (gender) and 8.2.10.3 (age groups).

The following hypotheses were tested:

- $H_0$: There is no statistical significant association between respondent loyalty to a model and
  - (i) their gender.
  - (ii) their age group.

- $H_1$: There is a statistical significant association between respondent loyalty to a model and
  - (i) their gender.
  - (ii) their age group.

**Table 8.54: Pearson Chi-square test results**

| Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Loyalty to a model and gender | 2.566[a] | 2 | .277 |
| Loyalty to a model and age group | 38.275[a] | 12 | .000 |

From table 8.54 above, the results of the testing indicated that:

(i) There is no statistically significant association, at the 5% level of significance, between the loyalty to a model and **gender** of the respondents ($p = .277$). The null hypothesis can therefore not be rejected. In essence this means that the loyalty behaviour between males and females are similar for both models. The table in appendix E.6 highlights this point by showing that 68.8% of male respondents would switch models, 25.1% males would remain loyal to the FSCs, and 6.1% males would remain loyal to the LCC model. This is similar to the pattern exhibited by the female respondents, which shows that 72.1% of the female respondents would switch model, 20.2% females remain loyal to the FSCs, and 7.6% of the female respondents indicated loyalty to the LCC model.

(ii) There is a statistically significant association, at the 1% level of significance, between the loyalty behaviours w.r.t. the two models and **age groups** of the respondents ($p$ = .000). The null hypothesis can therefore be rejected. In essence this means that the loyalty behaviour differs across the age groups. The table in appendix E.7 clearly highlights that there are differences between the age groups and that the loyalty behaviour differs across the age groups. Particularly noticeable are the differences between the 16–18 age group compared to the 35–44 and 45–54 age groups. In this case, the tabulation shows that 67.9% of the 16–18 age group would switch models, 15.1% would remain loyal to the FSCs, and 17.0% would remain loyal to the LCCs. Contrasting this, 64.3% of the 35–44 age group indicated that they would switch model, 31.8% would remain loyal to the FSCs, and 3.8% would remain loyal to the LCCs. Similarly, 61.7% of the 45–54 age group indicated that they would switch model, 33.9% would remain loyal to the FSCs, and 4.3% would remain loyal to the LCCs.

#### 8.3.5.5 Testing for a statistically significant association between respondent switching behaviours within each model and (a) gender (b) age group

This section focuses on the test performed to determine if there is a statistically significant association between respondent switching behaviour level per model and their (a) gender and (b) age group. In essence, this analysis is a refinement of the analysis conducted in section 8.3.5.4 where the focus now moves to the specific behaviour levels. The four switching behaviour categories include: switch at a 10% increase/decrease in fare, switch at a 20% increase/decrease in fare, switch at a 30% increase/decrease in fare, and not switch at all. Appendix E.8 (gender) and appendix E.9 (age groups) show the tables that were constructed for the tests, with the results of the tests given in table 8.55. The descriptive findings relating to this topic were addressed in sections 8.2.10.4 (gender) and 8.2.10.3 (age groups).

The following hypotheses were tested:

- $H_0$: There is no statistical significant association, per model, between respondent switching behaviour and
    - (i) their gender (FSC respondents).
    - (ii) their gender (LCC respondents).
    - (iii) their age group (FSC respondents).
    - (iv) their age group (LCC respondents).

- $H_1$: There is a statistical significant association, per model, between respondent switching behaviour and
    - (i) their gender (FSC respondents).
    - (ii) their gender (LCC respondents).

(iii) their age group (FSC respondents).

(iv) their age group (LCC respondents).

**Table 8.55: Pearson Chi-square and Cramer V test results**

| | Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|---|
| a | (i) Switching behaviour and **gender** – FSC respondents | 9.811 | 3 | .020 |
| | (ii) Switching behaviour and **gender** - LCC respondents | 4.921 | 3 | .178 |
| | **Association tested** | **Cramer V value*** | | **Approximate sig.** |
| b | (iii) Switching behaviour and **age group** – FSC respondents | 0.153 | | .127 |
| | (iv) Switching behaviour and **age group** – LCC respondents | 0.139 | | .492 |

From table 8.55, the results of the testing indicated that:

(i) There is a statistical significant association, at the 5% level of significance, between the switching behaviour and **gender** of the **FSC respondents** ($p$ = .020). The null hypothesis can therefore be rejected. Male and female FSC respondents are therefore associated with their own distinct switching behaviour pattern across the different switching levels. The table in appendix E.8 as well as figure 8.41 in the descriptive analysis highlights this point by showing that male respondents that would switch to a FSC are evenly spread out over each of the switching categories with a large percentage indicating that they would not switch at all. The pattern for female respondents is different to the male respondents, where it is seen that female respondents that indicate that they would switch would be tempted to do so at a much lower overall level of price increase by the FSCs, with 44.9% indicating that they would not switch at all. It is at the 20% fare increase level where the greatest difference is seen between the two sexes.

(ii) There is no statistical significant association, at the 5% level of significance, between the switching behaviours across the switching groups and **gender** of the **LCC respondents** ($p$ = .178). The null hypothesis can therefore not be rejected. Male and female LCC respondents exhibit a very similar pattern of switching behaviour at the various switching categories. The table in appendix E.8 highlights this point as does figure 8.42 in the descriptive analysis. The switch at the 30% fare decrease by the FSCs was the largest category for both sexes on the LCCs.

(iii) There is no statistical significant association, at the 5% level of significance, between the switching behaviours across the switching groups and **age group** of the **FSC respondents** ($p$ = .127). The null hypothesis can therefore not be rejected. As stated in the descriptive analysis, apart from a few minor variations, no particular age group can be seen to be associated with a particular switching pattern. The table in appendix E.9 highlights this point, as does the visual representation in figure 8.39.

(iv) There is no statistical significant association, at the 5% level of significance, between the switching behaviours across the switching groups and **age group** of the **LCC respondents** ($p$ = .492). The null hypothesis can therefore not be rejected. As per the descriptive analysis, apart from minor variations, no particular age group can be associated with a specific switching behaviour. The table in appendix E.9 and figure 8.40 highlight this point by showing that for all age categories the respondents display remarkably similar switching behaviours at each switching level.

#### 8.3.5.6 Testing if there are statistically significant differences between respondent choice criteria and the loyalty groupings (switch/not switch) with regard to the model flown

The analysis in this section further explores the nature of respondent price sensitivity by looking at the loyalty to model of the respondent in relation to their individual_choice criteria and the model flown. More specifically, questions 29 and 31 are tabulated with question 17. With reference to questions 29 and 31, which asked respondents to indicate at which level they would switch to the other model, the analysis is conducted using the *'Loyalty variables'* formulated in section 8.3.5.1. As was established in previous sections, zero (0.00) indicated that respondents will switch (10%, 20% and 30% marks aggregated for both LCC and FSC respondents), 1.00 indicates loyalty to FSCs by the FSC respondents, and a 2.00 indicated loyalty to the LCCs by the LCC respondents.

The test was conducted using the Kruskal-Wallis test in order to determine if there were any statistically significant differences between the individual choice criteria mean rankings of the respondents that indicated that they would switch model and those that would not switch. Appendix E.10 contains the tabulation that was constructed for this test, with the results of the test given in table 8.56.

**Table 8.56: Kruskal Wallis test results for respondent choice criteria mean rankings and their loyalty to model.**

**Test Statistics[a,b]**

| | Frequent flyer programme | Fare | Quality | Connections airport destination | Reliability | Frequency of flights | Safety | Comfort | Service | Company policy |
|---|---|---|---|---|---|---|---|---|---|---|
| Chi-Square | .524 | 35.250 | .893 | 1.414 | 1.003 | .237 | 8.664 | 4.780 | .701 | .019 |
| df | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .769 | .000 | .640 | .493 | .606 | .888 | .013 | .092 | .704 | .990 |

a. Kruskal Wallis Test b. Grouping Variable: Loyalty

The following hypothesis was tested for each of the ten individual choice criteria for the tabulation. In order of testing, the choice criteria tested are (i) Frequent Flyer Programmes (FFP), (ii) fare, (iii) quality,

(iv) connections/airport destinations, (v) reliability, (vi) frequency of flight, (vii) safety, (viii) comfort, (ix) service, and (x) company policy.

- $H_0$: There are no statistical significant differences between the respondent choice criteria mean rankings and their loyalty to model with regard to the model flown.

- $H_1$: There are statistical significant differences between the respondent choice criteria mean rankings and their loyalty to model with regard to the model flown.

The results of the Kruskal-Wallis test firstly indicate that there is a statistically significant difference, at the 1% level of significance, between the loyalty groups with regard to their ranking of '**fare'** as a choice criterion. In this case, the null hypothesis relating to fare can be rejected. From the table in appendix E.10, looking specifically at the mean ranks for fare, it is seen that the LCC loyalty group tends to rank fare as a much more important choice criteria (mean rank = 160.84) than the FSC loyalty group (mean rank = 251.32). It can also be seen that the group that will switch (mean rank = 166.76) tend to rank fare much higher than the FSC loyalty group (mean rank = 251.32). Overall it can thus be clearly seen that fare plays a significant role for consumers when purchasing an air travel ticket, particularly for LCC respondents. Additionally, for respondents travelling on the FSCs and LCCs that indicated that they would switch model in the light of fare increases, it is seen that fare is a very important choice criteria (mean rank = 166.76). It is important for the airlines to take note of these passengers as they rank price as an important choice criteria and have indicated a level of price sensitivity by stating that they would switch models when faced with price increases or decreases by either of the models. From the perspective of both models, it is important to understand this group of respondents so as to know at what price levels they will remain loyal to the current airline and at the same time know at what price levels passengers can be attracted from the opposing models.

The results, secondly, indicate that there is a statistical significant difference, at the 5% level of significance, between the loyalty groups with regard to their ranking of '**safety'** as a choice criterion. From appendix E.10 the mean ranks indicate that the FSC loyalty group tend to regard 'safety' as a more important choice criterion (mean rank = 170.63) than the group that will switch (mean rank = 208.3). The same principle applies to the LCC loyalty group where it is seen that these respondents also tend to regard safety as a more important choice criterion (mean rank = 189.64) than do the group that will not switch. This table reinforces previous discussions from section 8.2.9, which showed that 'safety' was more important for the FSC respondents than for the LCC respondents. In addition to this, it shows that safety is not as important for respondents that indicate that they will switch models when faced with price increases, compared to respondents (both FSC and LCC) that indicated that they would remain loyal. This can be linked back to the previous paragraph where it was shown that a 'fare' as a choice criterion was a more important factor for the respondents that indicated that they would switch model.

In terms of the remaining eight choice criteria, no statistically significant differences were found at the 5% level of significance meaning that the null hypotheses could not be rejected. Taken at the 10% level of significance, it can be seen that a statistically significant difference exists for the choice criterion of **'comfort'**. In this case, it is seen that LCC loyal respondents view comfort as more important than FSC loyal respondents (mean ranks of 150.11 vs. 163.10) with those that would switch showing the lowest mean rank (183.77) indicating that 'comfort' is not a key criterion for those that would be enticed to switch models. The interesting point here is that the LCC loyal respondents rank comfort as more important than do the loyal FSC respondents. Referring back to figure 8.30 in the descriptive analysis, it is seen that the mean values relating to the reasons for selecting an airline show that FSC respondents overall had a higher mean value than the LCC respondents for 'comfort' (3.18 vs. 3.42 – remembering that a lower value indicates higher importance to the respondents). This switch around, when looking only at the loyal respondents (both FSC and LCC), gives an indication that the LCC loyal respondents gave 'comfort' a much higher importance ranking than the LCC respondents that would switch. A review of appendix E.10 shows that, whilst there are some differences between the remaining choice criteria of the respondents and their switching levels, they were not identified as statistically significant.

#### 8.3.5.7 Testing whether there is a statistically significant association between respondent's loyalty to model and whether they made price comparisons prior to ticket purchase

The analysis in section 8.3.2 showed that LCC respondents are more likely to make price comparisons prior to ticket purchase than FSC respondents. The analysis in this section attempts to take the earlier finding further by testing for a statistical significant association between the respondent's loyalty to a model and whether price comparisons were made prior to ticket purchase (question 34). In essence, the testing is looking to determine whether respondents that made price comparisons showed a higher tendency to switch (or not) and whether respondents that did not make price comparisons were more likely to remain loyal (or not). Each model is addressed separately (FSC respondents answered question 29 and LCC respondents answered question 31).

The Pearson chi-square test for independence was used to test if there is a statistically significant association between these two nominal variables. In the analysis, use was made of the *'Loyalty variables'* that were described in section 8.3.5.1. As was established previously, zero (0.00) indicated that respondents will switch (10%, 20% and 30% marks aggregated for both FSC and LCC respondents), 1.00 indicates loyalty to FSCs by FSC respondents, and 2.00 indicated loyalty to the LCCs by LCC respondents. The results relating to respondents travelling on the FSC model are addressed first, followed by the results for respondents travelling on a LCC. Appendices E.11 (FSC respondents) and E.12 (LCC respondents) show the tabulations constructed for the tests, with the results of the test given in table 8.57.

The following hypotheses were tested:

- $H_0$: There is no statistical significant association between the
  - (i) FSC respondent loyalty to model and whether or not price comparisons were made prior to the purchase of the ticket.
  - (ii) LCC respondent loyalty to model and whether or not price comparisons were made prior to the purchase of the ticket.

- $H_1$: There is a statistical significant association between the
  - (i) FSC respondent loyalty to model and whether or not price comparisons were made prior to the purchase of the ticket.
  - (ii) LCC respondent loyalty to model and whether or not price comparisons were made prior to the purchase of the ticket.

**Table 8.57: Pearson Chi-square test results for respondent loyalty to model and whether price comparisons were made**

| | Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|---|
| (i) | Between FSC respondent loyalty to model and whether price comparisons were made | 14.447 | 1 | .000 |
| (ii) | Between LCC respondent loyalty to model and whether price comparisons were made | 1.494 | 1 | .222 |

From table 8.57, the results indicated that:

(i) A statistical significant association, at the 1% level of significance, exists between the FSC respondents' loyalty to model and whether they made price comparisons prior to ticket purchase ($p$ = .000). This indicates that the null hypothesis can be rejected and a conclusion drawn that there is evidence of an association between the identified variables. From the table in appendix E.11 it can be seen that FSC respondents that indicated that they did make price comparisons prior to purchase were more likely to switch to the other model (67.9%) than those that said they would not switch and remain loyal (32.1%). FSC respondents that indicated that they did not make price comparisons were more likely to remain loyal to the model (53.1%) with a slightly lower percentage indicating that they would switch (46.9%), especially when compared to respondents that stated that they did make price comparisons. In effect, FSC respondents that did make price comparisons showed a higher likelihood of switching model than those that did not make price comparisons. Similarly, those that did not make price comparisons showed a higher likelihood of not switching (remain loyal) compared to those that did. Again, the point is made that FSC respondents show a greater deal of loyalty to the FSC model but there is a level of passengers that are price sensitive and will eventually switch model when faced with a high fare increase (20% – 30%). It is interesting to note that of the FSC respondents that stated they would remain loyal to the FSC model, 30.6% of them made price comparisons prior to ticket purchase, whilst 69.4% stated that they did not.

(ii) There is no statistical significant association, at the 5% level of significance, between the LCC respondent's loyalty to model and whether they made price comparisons prior to ticket purchase ($p$ = .222). This indicates that the null hypothesis cannot be rejected and a conclusion drawn that there is no evidence of a statistically significant association between the identified variables. From the table in appendix E.12 it can be seen that LCC respondents that indicated that they did make price comparisons prior to purchase were more likely to switch to the other model (88.9%) than those that said they would not switch (11.1%). LCC respondents that indicated that they did not make price comparisons were also more likely to switch to the other model (83.7%) compared to those that stated that they would not switch (16.3%). In effect, for LCC respondents, whether or not they made price comparisons, showed a high tendency to switch if a price incentive was offered. This serves to highlight the point that has been made on many occasions in this chapter, which is that the LCC passengers are more price sensitive and will look for the best offer, and in the process, show a lack of loyalty to the LCC model itself.

#### 8.3.5.8 Testing whether there is a statistical significant association between the respondent's loyalty to model and whether the decision to undertake the trip was influenced by the fare

The analysis in section 8.3.2 showed that LCC respondents are more influenced by the ticket price when making the decision to travel than are FSC respondents. The analysis in this section attempts to take the earlier finding further by testing for a statistically significant association between the respondent's loyalty to model and whether the decision to undertake the trip was influenced by the fare (question 37). In essence, the testing is looking to establish whether respondents that stated that the decision to undertake the trip was influenced by the fare showed a higher tendency to switch (or not) and whether respondents that stated the trip decision was not influenced by the fare tended to remain loyal (or not). Each model is addressed separately (FSC respondents answered question 29 and LCC respondents answered question 31).

The Pearson chi-square test for independence was used to test if there is a statistically significant association between these two nominal variables. In the analysis, use was made of the *'Loyalty variables'* that were described in section 8.3.5.1. As was established previously, zero (0.00) indicated that respondents will switch (10%, 20% and 30% marks aggregated for both FSC and LCC respondents), 1.00 indicates loyalty to FSCs by FSC respondents, and 2.00 indicated loyalty to the LCCs by LCC respondents. The results relating to respondents travelling on the FSC model are addressed first, followed by the results for respondents travelling on a LCC. Appendices E.13 (FSC respondents) and

E.14 (LCC respondents) show the tabulations constructed for the tests, with the results of the test given in table 8.58.

The following hypotheses were tested:

- $H_0$: There is no statistical significant association between
  - (i) the FSC respondent loyalty to model and whether or not the decision to undertake the trip was influenced by the fare.
  - (ii) the LCC respondent loyalty to model and whether or not the decision to undertake the trip was influenced by the fare.

- $H_1$: There is a statistical significant association between
  - (i) the FSC respondent loyalty to model and whether or not the trip was influenced by the fare.
  - (ii) the LCC respondent loyalty to model and whether or not the trip was influenced by the fare.

**Table 8.58: Pearson Chi-square test results for respondent loyalty to model and whether the trip was influenced by the fare**

| | Association tested | Pearson Chi-Square Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|---|
| (i) | Between FSC respondent loyalty to model and whether the trip was influenced by the fare | 13.711 | 1 | .000 |
| (ii) | Between LCC respondent loyalty to model and whether the trip was influenced by the fare | .431 | 1 | .512 |

From table 8.58 above, the results indicated that:

(i) The results indicated that a statistical significant association, at the 1% level of significance, exists between the FSC respondent's loyalty to model and whether the decision to undertake the trip was influenced by the fare ($p$ = .000). This indicates that the null hypothesis can be rejected and a conclusion drawn that there is evidence of an association between the identified variables. From the table in appendix E.13 it can be seen that **FSC respondents** that indicated that the decision to undertake the trip was influenced by the fare were more likely to switch to the other model (75.3%) than those that said they would not switch (24.7%). FSC respondents that indicated that the decision to undertake the trip was not influenced by the fare showed a lower level of switching behaviour, with 51.5% indicating that they would switch and 48.5% indicating that they would remain loyal to the model. Isolating FSC respondents that remained loyal to the FSC model, 13.1% of those that remained loyal made price comparisons, whilst 86.9% of those that remained loyal did not make price comparisons. In effect, FSC respondents that indicated that the decision to undertake the trip was influenced by the fare were more likely to switch model than respondents who said the decision to travel was not influenced by the fare. Similarly, respondents that indicated that the decision to undertake the trip was not influenced by the fare were more likely to remain loyal to the model than respondents that indicated that the trip was influenced by the fare. In terms of actual respondents, the point is made that FSC respondents show a greater deal of loyalty to the FSC model. There is however, a group of passengers that are price sensitive and, when making the decision to travel, they will consider the LCC model in order to gain a cheaper price or even decide not to travel if an affordable option is not found on either model.

(ii) The results indicated that there is no statistical significant association, at the 5% level of significance, between the LCC respondent's loyalty to model and whether they made price comparisons prior to ticket purchase ($p$ = .512). This indicates that the null hypothesis cannot be rejected and a conclusion drawn that there is no evidence of an association between the identified variables. From the table in appendix E.14 it can be seen that **LCC respondents** that indicated that the decision to undertake the trip was influenced by the price were more likely to switch to the other model (87.2%) than those that said they would not switch (12.8%). LCC respondents that indicated that the decision to undertake the trip was not influenced by the price were also more likely to switch to the other model (84.6%) compared to those that stated that they would not switch (15.4%). In effect, LCC respondents, whether or not the decision to undertake the trip was influenced by the price of the ticket, showed a high tendency to switch if a price incentive was offered. The results shown in appendix E.14 for LCC respondents clearly highlight this point, especially when looking at the values of $n$.

Overall, whilst the analysis in this section approaches loyalty to model from a different angle to the analysis in section 8.3.5.7, the outcome is the same - LCC respondents are more price sensitive and will look for the best offer, and in the process, show a lack of loyalty to the LCC model itself. The overall distinction between LCC respondents and FSC respondents in terms of loyalty to model and price comparisons, as discussed throughout this section, is readily apparent in appendices E13 and E14 when looking down the columns.

### 8.3.6 The identification of statistical significant predictors of the odds of selecting a LCC: Binary Logistic Regression

The analysis addressed in this section relates to the primary objective identified in section 1.5.1 in the introductory chapter of the study and uses binary logistic regression to identify the statistical significant predictors of whether passengers will select a LCC to travel on. Included in this analysis were questions 9 (purpose of travel), 19–28 (perceptions of the two models across service dimensions), 34 (price comparisons), 37 (trip influenced by fare), 39 (gender), and 40 (age group).

**Statistical significant predictors of the odds of selecting a LCC**

A binary logistic regression was conducted as described in section 7.3.9.4. The logistic regression model was statistically significant, with the chi square = 131.171 ($p < .000$ with df = 19). This indicates that with the inclusion of the dependent variables the model is an improvement over the base model (which excludes the independent variables) and that the predictors, as a set, reliably distinguish between whether respondents would select a LCC or not. The *Hosmer & Lemeshow* test of the 'goodness of fit' was not statistically significant ($p = .647$) meaning that the logistic regression model provided an adequate fit (see table 8.59).

**Table 8.59: Model summary and Hosmer & Lemeshow test results (LCC)**

| Model Summary | | | |
|---|---|---|---|
| **Step** | **-2 Log likelihood** | **Cox & Snell R Square** | **Nagelkerke R Square** |
| 1 | 554.909[a] | .233 | .311 |
| | | | |
| **Hosmer and Lemeshow test** | | | |
| **Step** | **Chi-square** | **df** | **Sig.** |
| 1 | 6.005 | 8 | .647 |

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

The model's overall prediction success was 70.6%. This represents an overall classification improvement from model 0 to model 1 of 18.4% (52.2% to 70.6%).

When considering the contribution of the individual predictors to the model, the *Wald test* was used to test for statistical significance. The results of the testing are shown in table 8.60. From this table, it can be seen that the Wald criterion demonstrated that the following variables made a statistical significant contribution to the prediction (5% level of significance):

- For each one unit increase in the rating of the LCC's '*willingness to help customers and provide prompt service*', passengers are 1.421 times more likely to select a LCC ($p = .019$).
- For each one unit increase in the rating of the LCC's '*knowledge and courtesy of the airline's employees and their ability to convey trust and confidence'*, passengers are 1.391 times more likely to select a LCC ($p = .017$).
- For each one unit increase in the rating of the FSC's '*overall perception of the service offered by the FSCs*', passengers are 1.473 times more likely not to select a LCC ($p = .012$).
- For the variable '*did you make price comparisons before booking the ticket*', passengers are 3.285 times more likely to travel on a LCC ($p = .000$) when they indicated a yes answer.
- For the variable '*the trip is influenced by the fare'*, which indicates a 'yes' answer, passengers are 2.032 times more likely to travel on a LCC ($p = .003$) when they indicated a yes answer.
- Females are 1.5649 times more likely to travel on a LCC ($p = .041$) compared to males.

Age, as a categorical variable, is a statistical significant predictor (5% level of significance) of whether a passenger will travel on a LCC ($p$ = .041).

- The 16–18 years age group ($p$ = .091 – statistically significant at the 10% level of significance) are 2.599 times more likely to travel on a LCC in reference to the oldest group (55+).
- Passengers travelling for the purposes of business ($p$ = .071 – accepted as statistically significant at the 10% level of significance) are 1.502 times more likely to travel on a LCC compared to leisure (travellers).

**Table 8.60: Variables in the equation (LCC)**

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|---|
| Step 1 | Q19 – (LCC) ability to perform promised service dependably and accurately | -.014 | .133 | .010 | 1 | .919 | .987 |
| | Q20 – (LCC) willingness to help customers and provide prompt service | .352 | .150 | 5.477 | 1 | .019 | 1.421 |
| | Q21 – (LCC) knowledge and courtesy of airline employees and ability to convey trust and confidence | .330 | .138 | 5.741 | 1 | .017 | 1.391 |
| | Q22 – (LCC) the caring, individualised attention the airline provides customers | -.101 | .134 | .569 | 1 | .451 | .904 |
| | Q23 – (LCC) overall perception of the service offered by the LCCs | .001 | .129 | .000 | 1 | .995 | 1.001 |
| | Q24 – (FSC) ability to perform promised service dependably and accurately | -.221 | .151 | 2.140 | 1 | .144 | .802 |
| | Q25 – (FSC) willingness to help customers and provide prompt service | -.234 | .166 | 1.989 | 1 | .158 | .791 |
| | Q26 – (FSC) knowledge and courtesy of airline employees and ability to convey trust and confidence | -.009 | .159 | .003 | 1 | .956 | .991 |
| | Q27 – (FSC) the caring, individualised attention the airline provides customers | .162 | .162 | .998 | 1 | .318 | 1.176 |
| | Q28 – (FSC) overall perception of the service offered by the FSCs | -.388 | .155 | 6.241 | 1 | .012 | .679 |
| | Q39 – Gender | -.448 | .219 | 4.190 | 1 | .041 | .639 |
| | Q37 – Trip influenced by fare | .709 | .238 | 8.907 | 1 | .003 | 2.032 |
| | Q34 – Price comparisons | 1.189 | .230 | 26.741 | 1 | .000 | 3.285 |
| | Q40 – Age* | | | 13.563 | 5 | .019 | |
| | Q40 – Age 16–18 (1) | .955 | .566 | 2.849 | 1 | .091 | 2.599 |
| | Q40 – Age 19–24 (2) | .549 | .437 | 1.576 | 1 | .209 | 1.731 |
| | Q40 – Age 25–34 (3) | -.033 | .433 | .006 | 1 | .939 | .968 |
| | Q40 – Age 35–44 (4) | -.291 | .438 | .442 | 1 | .506 | .747 |
| | Q40 – Age 45–54 (5) | -.262 | .467 | .315 | 1 | .575 | .769 |
| | Q 9 – Purpose of travel (business vs leisure) | .407 | .225 | 3.260 | 1 | .071 | 1.502 |
| | Constant | .169 | .870 | .038 | 1 | .846 | 1.184 |

* The 55+ age group is the reference category.

## 8.4 SUMMARY

The contents of this chapter focussed on the presentation of the findings of the research. The descriptive findings were set out according to the main questions asked in the questionnaire. In the descriptive analysis, the basic analysis was discussed and then supplemented with a number of cross-tabulations to provide more insight into the relevant issues. The descriptive analysis was followed by the inferential analysis, which tested for statistical significance amongst the key issues described in the research objectives. The structure of the inferential analysis was according to the key secondary objectives and presented numerous tests to address the variables from a number of perspectives in order to understand the associations or differences that exist for the collected data.

In the next chapter, the findings and discussions in this and the preceding chapters are brought together in the form of a summary of the key findings to provide a concise overview of how the objectives for the research have been achieved.

# CHAPTER 9

# CONCLUSIONS AND RECOMMENDATIONS

> *There is nothing like looking, if you want to find something. You certainly usually find something, if you look, but it is not always quite the something you were after.*
>
> *- J.R.R. Tolkien*

The previous chapter focussed on the reporting of the analysis of the data collected during the interview process. A distinction was made between the descriptive analysis and the inferential analysis, with the result that an abundance of insights into the perceptions and behaviours of the respondents were obtained. In some cases, the insights that were obtained were different to what would have been expected – thus proving Tolkien's above quote to be true. This chapter takes the process a step further by synthesising the important findings into a format that addresses the set objectives for the research.

## 9.1 INTRODUCTION

The changes in the South African domestic air transport sector over the past decade can only be described as dramatic. Problems at SAA, the sudden demise of 1time, new low-cost carriers like Velvet Sky arriving and departing, new airlines like FlySafair initially battling to get operating licenses, and market saturation, to name but a few, have made the job of the airline marketer extremely challenging. As outlined in chapters 2–6, the complexities in the South African market mean that these challenges will continue into the future. To be competitive, it is essential that any airline have an in-depth understanding of their customer's perceptions and behaviours regarding airlines and air travel. At the core of this is the distinction between FSC and LCC businesses.

A review of chapters 2–6 reflects the situation that exists in the industry and the reality facing the individual operators (secondary objective 1). It was established that the main thrust behind this study was the emergence of the LCC sector in the South African domestic air transport sector. It must be noted that in the period under review, the new entrants (successful or unsuccessful) to the South African domestic air transport market have all been LCCs, with no hint of any additions from the FSC model. The introduction of the low-cost model changed the industry, and as a result, had an effect on consumer behaviour in the industry. From the airline marketer's perspective, the literature review highlighted the need for airlines to understand the new paradigm in terms of passenger behaviour that arose as a result of the appearance of the low-cost model. What is clear, is that the old consumer typologies that applied to the traditional FSCs are not relevant to the emerging LCC passenger market and any airline that does not reconsider its segmentation and targeting approaches will be at a complete disadvantage.

The literature review also outlined the difficult market environment that prevailed from around 2008 to the end of 2016. Specific attention was given to the economic conditions and the competitiveness within the industry. It was emphasised that in these tumultuous times airlines should take the opportunity to look at their business structures, costs, and operational activities and identify where cuts and improvements should be made. This specifically refers to addressing their competitive position in terms of competing with the different models in order to identify how strategies should be adapted to address the new reality.

The literature review highlighted that the airline market is becoming more fragmented and that there are numerous reasons for this increasing fragmentation *(see* section 1.2.3 and section 6.4). Chief amongst these reasons is the rapid growth of technology and the resultant changes in consumer behaviour. Consumers want instant gratification and have access to a lot more information that can be used to find ways to obtain this gratification. Social media in particular is identified as having played a large role in affecting how consumers have changed the way in which they make decisions. This applies not only to Generation Z and the Millennials, but to the baby-boomers and 'silver economy' as well. Differences between males and females are also emerging in terms of how information is used and decisions made. The identification of the important influence of age and gender in the literature review formed part of the rationale to give specific attention to these two characteristics in the descriptive and inferential analysis in chapter 8. It is therefore important that the airline marketer consider the entire travel experience of the passenger when looking to understand what motivates the consumer to travel and not just at the air travel component of the trip. The literature takes this further by emphasising the need to consider the consumer's desire to personalise their experiences and the responsibility of the airlines to carefully manage these customer experiences (as discussed in section 6.4). Further complicating the airline marketer's task is the need to manage expectations. In markets traditionally dominated by FSCs, the consumers develop expectations related to the FSC product. The introduction of the LCC, which has a modified product offering, required that customer expectations be adjusted. The analysis of the data in chapter 8 showed that many respondents still had FSC expectations from the LCC product. Viewing all these points together, the need to gain greater insights into the consumer and their behaviours is apparent.

As identified in section 1.6.1 of the study, this research made use of a quantitative research design and is descriptive in nature. The primary research objective identified for this study was to conduct an analysis of the domestic commercial air travel passenger in South Africa in order to establish their behaviour patterns and perceptions relating to travel on a LCC and a FSC. In order to achieve this objective, numerous secondary objectives were developed. These all contributed towards obtaining a greater understanding of the consumer and included collecting data on the travel profile of the respondents (secondary objective 2), ticket purchase behaviours (secondary objective 3), key choice criteria (secondary objective 4), perceptions of the models (secondary objective 5), and price sensitivities of respondents related to each model (secondary objective 6). The data was collected via 732 intercept interviews using a structured questionnaire at ORTIA and CTIA. The analysis of the data was divided into descriptive analysis and inferential analysis with numerous relationships explored across a number of variables culminating in the identification of variables that are statistical significant predictors for predicting the odds that a passenger will select a LCC (as opposed to a FSC) (*see* primary objective).

This chapter presents the conclusions drawn from the analysis and provides relevant recommendations. This introductory section of the chapter focusses on re-establishing the objectives of the study to provide a context for the conclusions and recommendations that are made. In the sections that follow, the conclusions relating to the data analysis are set out according to the relevant secondary objectives (secondary objectives 2–6), followed by the identification of a number of recommendations. The limitations associated with the study are then highlighted to ensure that the results are viewed in the correct context. Finally, a number of suggested research areas that arose out of the analysis are listed (secondary objective 7). These proposed research areas are aimed at exploring important issues that will provide greater insight into the consumer's needs in order to enhance the strategy development activities of the airlines.

## 9.2. CONCLUSIONS AND RECONCILIATION WITH STATED RESEARCH OBJECTIVES

The section is structured around the set objectives, although there are overlaps, with some sections containing discussions that relate to the achievement of multiple objectives. The core of the discussions revolves around the differences or similarities between the two models.

### 9.2.1 Passenger and trip characteristics (secondary objective 2)

The key topics addressed in this section include the age and gender of the passengers, their purpose of travel, the type of flight, and the non-flight related activities.

**9.2.1.1** The collected data shows that, in terms of **gender,** the LCC model tends to attract more female passengers than male passengers, who tend to prefer the FSC model. The inferential testing shows that this association, between the model travelled on and gender, is significant at the 10% level of significance.

**9.2.1.2** The data analysis showed that there was a significant association between the model travelled on and the **age** of the respondents. It is concluded that:

- The LCCs are the preferred model for passengers under the age of 25 (60.9%).
- Passengers in the age grouping of 25–34 are split between the two models.
- The FSCs are the preferred model for the age groups 35–64 (61.9%).
- The 65+ age groups tend to prefer the FSC but to a lesser degree than the 35–64 group.
- The average age of passengers travelling on a FSC was 37.1 compared to passengers travelling on a LCC at an average 32.6 years of age.

These points are in line with the passenger life cycle phases particularly in terms of economic activity and income generation. The model preference for the key age groups is distinct.

**9.2.1.3** A cross tabulation of the **gender and age groups** divided per model showed some insights into the preferences of the passengers. The analysis in this case showed that:

- Males have an overall preference towards the FSC model, but at the low age groups (16–24) the LCC is the preferred option, but only by a small margin.
- The general picture for female passengers is mixed with the overall slight preference for LCCs based largely on the 16–24 age group.

In terms of gender and age, males have a more consistent pattern of model preference. They show a preference switch over from LCCs to FSCs at the 25+ level and then maintain this preference through all age groups. A consistent model preference by females is only evident at the lower age groups (strongly LCC). From the 25+ ages, females show no distinct pattern of model preference with each subsequent age group preferring a different model.

**9.2.1.4** There is a significant association between the **type of ticket purchased** and the model travelled. When travelling on a FSC the majority of passengers will more than likely purchase a return ticket. Passengers on a LCC do still slightly favour a return ticket (58.0% vs. 42%), but are more likely to purchase a one-way ticket than FSC passengers.

Passengers on **connecting flights** were largely travelling on a FSC as opposed to a LCC. This is largely due to the nature of the alliances to which the FSCs belong. This will change in the future as some of the LCCs have since entered into codeshare agreements with larger FSCs in the big alliances (kulula.com with Air France which is part of the Skyteam Alliance).

**9.2.1.5** The vast majority of air travellers **travel to the airport** via motor vehicle. Taxis, including airport shuttle services and other airport transfer shuttles, are the second most popular method (also all considered a motor vehicle). This applies to both models. The findings reflect the underdeveloped and underutilised nature of the public transport system in South Africa. The Gautrain provides the option of a train to ORTIA.

**Distances travelled** by the passengers to get to the airport showed that FSC passengers on average travelled slightly longer distances than LCC passengers. This is not particularly meaningful in the South African context given that Lanseria airport near Johannesburg is the only real alternative used by the airlines in South Africa. Future research focussing on ORTIA and Lanseria and the behaviours of passengers when they do have a choice of a secondary airport might provide interesting insights. This is however beyond the scope of this study.

**9.2.1.6** Regarding the choice of **accommodation** at the destination for passengers that stayed for one or more nights, staying with family/friends is the dominant choice for passengers travelling of a LCC, distantly followed by hotels. Staying at a hotel is the main choice for passengers travelling on a FSC, closely followed by family/friends. FSC passengers were more likely to stay at a Bed-&-Breakfast than LCC passengers, whilst LCC passengers were more likely to stay at a hostel than FSC passengers. These findings highlight the cost-conscious nature of LCC passengers in relation to FSC passengers. Many LCC passengers did still make use of hotels and bed-and-breakfasts (albeit at a lower rate than FSC passengers). The O'Connell (2007) study suggested that LCC passengers saved money by flying on a LCC and then used the savings to stay at more luxurious accommodation.

**9.2.1.7** There is a significant association between the **purpose of travel** and the model flown. It is concluded that the FSC is the preferred model for passengers flying for business purposes. Passengers on a LCC are largely travelling for leisure purposes. FSCs and LCCs both attract large numbers of passengers flying for the purposes of leisure.

In terms of the ***leisure travel sub-purposes*** the following conclusions can be drawn:

- LCCs tend to be the model of choice for passengers travelling for the purposes of visiting friends/relatives and travelling for the purposes of studying.
- FSCs tend to be the model of choice for passengers travelling for the purposes of a weekend break and a holiday. LCCs do not lag too far behind the FSCs in this segment.
- FSCs and LCCs both tend to attract equal number of passengers travelling for the purposes of sports.

It is noted that the LCCs are favoured by passengers engaging in leisure activities that have an underlying cost minimisation component (VFR and studying), whilst FSCs are favoured where more expensive leisure activities are pursued (weekend breaks and general holidays).

In terms of the ***business travel sub-purposes*** the following conclusions can be drawn:

- FSCs tend to be the model of choice for passengers travelling for the purposes of attending a business meeting, attending a conference, for the purposes of training (marginally), and for the purposes of employment seeking.
- This FSC domination is across all business travel sub-purposes. Business travel is normally paid for by the passenger's employer, who is less price sensitive than individuals, who generally have to fund the flight themselves.

***Purpose of travel subdivided according to age groups***

The key conclusions drawn in terms of the various business and leisure travel sub-purposes analysed in terms of **age** groups per model, are summarised in table 9.1.

**Table 9.1: Summarised conclusions relating to travel sub-purposes and age group**

| | | LCC passengers | FSC passengers |
|---|---|---|---|
| **Business travel** | Overall | • Clustered around the 25–34 and 35–44 age groups | • Clustered around the 35–44 and 45–54 age groups.<br>• 25–34 group fairly highly represented. |
| | Meeting | • Younger than FSC business meeting travellers | • Older than LCC respondents travelling for a meeting |
| | Conference | • Tend to be around the 35–44 age group | • Tend to be around the 35–44 age group |
| | Training | • Younger passengers than other business travel purposes.<br>• Clustered around the 19–34 age range | • Younger passengers than other business travel purposes.<br>• Clustered around the 19–34 age range |
| | Employment | • Clustered around the 19–44 age range.<br>• Overall, younger than FSC passengers travelling for the same sub-purpose. | • Clustered around the 25–54 age range |
| **Leisure travel** | Overall | • Clustered mainly around the 16–54 age range.<br>• 19–24 is the biggest age segment<br>• Attracts a larger number of younger leisure travellers than FSCs | • Clustered mainly around the 19–44 age range.<br>• 45–54 group also strongly represented<br>• Tend to attract more passengers than LCCs at the 45+ age groups |
| | Sports | • Mainly clustered in the 16–24 age range<br>• 25–34 age group also important<br>• No distinct differences between models | • Mainly clustered in the 16–24 age range<br>• 25–34 age group also important |
| | Visiting friends/family | • Clustered around the younger age groups (19–24 to 25–34 followed by the 35–44 age group) | • Clustered around the younger age groups (19–24 to 25–34 followed by the 35–44 age group) |
| | Weekend break | • Clustered around the 25–54 age range | • Clustered round the 25–54 age range |
| | Holiday | • Well spread across the age groups<br>• Mainly 16–44 age range<br>• Younger on average than FSC holiday travellers | • Well spread across the age groups<br>• Mainly 19–64 age range<br>• Older on average than LCC holiday travellers |
| | Studying | • Predominantly from the 19–24 group | • Predominantly from the 19–24 group |
| | Cultural/religious | • Predominantly over the age of 45<br>• (Small sample size - conclusions risky) | • Sample size too small for any conclusions to be drawn) |

The overall findings seem to be in line with the passenger's life cycle and family life cycle stages. Many younger passengers are engaged in leisure activities that are more active and are engaged in more visiting friends/relatives than the pricier holidays or weekend breaks. The younger passengers seek to reduce costs by utilising a LCC. Many older passengers are shown to engage in leisure pursuits that might cost a bit more and provide a more intellectually stimulating experience. In these cases, the FSC is the model of choice. The analysis outlined clear segments that each model needs to build and defend, as well as those that they need to penetrate in order to grow their markets.

***Purpose of travel subdivided according to gender***

The key conclusions drawn in terms of the various business and leisure travel sub-purposes analysed in terms of **gender** per model, are summarised in table 9.2.

**Table 9.2: Summarised conclusions relating to travel sub-purposes and gender**

| | | | **Males** | **Females** |
|---|---|---|---|---|
| **Business travel** | **FSC** | Main travel purpose | • Predominantly Meeting | • Predominantly Meeting |
| | | Other notable segments | • Employment | • Employment/conference |
| | | Other purposes | • Minor - similar to females | • Minor - similar to males |
| | **LCC** | Main travel purpose | • Predominantly Meeting | • Predominantly Meeting |
| | | Other notable segments | • Training/ conference/ employment similar | • Training/ conference/ employment similar |
| | | Other purposes | • Negligible | • Negligible |
| **Leisure travel** | **FSC** | Main travel purpose | • Predominantly holiday | • Predominantly holiday |
| | | Other notable segments | • VFR followed by sports | • VFR followed by sports |
| | | Other purposes | • Minor - similar to females | • Minor - similar to males |
| | **LCC** | Main travel purpose | • VFR largest segment | • VFR largest segment |
| | | Other notable segments | • Weekend break and sports with holidays being noticeable | • Weekend break and holiday with sports close behind |
| | | Other purposes | • Minor - similar to females | • Minor - similar to males |

It is concluded that there are no distinctive differences between male and female passengers in terms of the model travelled on and their purpose of travel – for either business or leisure purposes. The only minor observable difference is where male LCC passengers differ slightly from male FSC passengers in that there seems to be a more even spread across the minor purposes of travel (greater alternative segment penetration).

**9.2.1.8** There are no noticeable pattern differences between the two models in terms of the group sizes. Passengers travelling on their own or in a group of two are the most popular group sizes. The vast majority of passengers are travelling in groups of four or less (87.3% of all respondents). The key conclusions drawn in terms of the **various business and leisure travel sub-purposes analysed** in terms of **group size** per model, are summarised in table 9.3.

**Table 9.3: Summarised conclusions relating to travel sub-purposes and group size**

| | Purpose | Group size comment |
|---|---|---|
| Business travel | Overall | • Average group size for both models similar (3.65 FSC vs. 3.47 LCC) |
| | Meeting | • The average groups size is larger on a FSC (2.88 FSC vs. 1.58 LCC) |
| | Conference | • The average groups size is larger on a FSC (5.09 FSC vs. 1.44 LCC) |
| | Training | • The average groups size is larger on a LCC (2.46 FSC vs. 4.00 LCC) |
| | Employment | • The average groups size is larger on a LCC (1.83 FSC vs. 3.38 LCC) |
| Leisure travel | Overall | • Average group size larger for LCCs than FSCs (5.24 vs. 3.63) |
| | Sports | • Average group size high on both models (15.64 LCCs vs. 13.18 FSCs) |
| | Visiting friends/family | • Average group size is larger for LCCs 2.33 LCCs vs. 1.97 FSCs)<br>• VFR passengers are younger and cost influences the choice of model |
| | Holiday | • Average group size is noticeably larger on a LCC (6.40 LCC vs. 2.26 FSC)<br>• As families get larger, air travel becomes more expensive making the LCC an attractive (cheaper) group travel option |
| | Cultural/ religious | • Average group size high for both models (10.33 LCCs vs. 40.00 FSCs)<br>• FSC high due to large groups travelling on Hajj pilgrimage on connecting flights |

**9.2.1.9** The analysis of **short haul travel frequency** shows that respondent short haul travel frequency (past 12 months) is primarily at the 1–2 flights per year and 3–4 flights per year. From the analysis, the following conclusions can be stated:

- Passengers that travelled 1–2 times per year fly predominantly on a FSC.
- At all travel frequency levels, there is a high percentage of passengers that only fly on the FSC model (indicating high levels of loyalty to the FSC model)
- Passengers that fly frequently during the year (five or more flights) fly predominantly on the FSC model, with many only flying on the FSC model (loyal to the FSC model).
- There were no passengers that flew on the LCC model only, indicating that the levels of loyalty to the LCCs are much lower than towards the FSCs. This suggests that the choice criteria used by passengers when selecting a carrier differs for LCC and FSC passengers.
- LCC passengers at the higher travel frequencies do show some level of loyalty to the LCC model, but nowhere as high as the level shown by the FSC passengers to the FSC model.

### 9.2.2 Ticket purchasing behaviour (secondary objective 3)

This section addresses the important findings in terms of the way in which tickets are booked.

**9.2.2.1** There is a significant association between the **method used to book the ticket** and the model travelled on by the passenger. Ticket purchases for passengers travelling on both models are predominantly made via the Internet on the airline's website or a third-party travel website. For the FSCs, this represents a shift from the travel agent as the primary source of ticket sales, to the Internet. The key conclusions drawn in terms of the ticket booking method and the two models are summarised in table 9.4.

**Table 9.4: Summarised conclusions relating to method use to book the ticket**

| Method | Booking method comments |
|---|---|
| Travel agent | • Strong likelihood that the passenger will be travelling on a FSC.<br>• Still a substantial source of ticket sales for the FSCs (close 2nd behind internet). |
| Friend/ family | • Strong likelihood that the passenger will be travelling on a LCC. |
| Airline website | • LCC passengers will primarily use the airline's website when purchasing the ticket.<br>• FSC passengers are split between the use of the internet or travel agent channels. A small percentage use the airline's website over travel agents.<br>• South Africa noticeably lags behind Europe and Asia in terms of internet ticket bookings (South Africa 44.8% vs. up to 77.0% in Europe) |
| Office booked ticket | • Strong likelihood that the passenger will be travelling on a FSC. |
| Airline call centre | • Small proportion of ticket sales across both models. No difference between models. |
| Purchased at airport | • Small proportion of ticket sales across both models. No difference between models. |

The balance between the various booking methods will continue to change, with the Internet as a booking portal growing in importance. Travel agents must not be discounted, particularly with some LCCs gravitating to the hybrid model and turning to the travel agents to tap into the premium traveller markets. Some LCCs are establishing code-sharing agreements with larger international FSCs, who utilise travel agents, and thus are exposing more of their inventory for sale via this channel. In this case, the local LCC is exposed to a global audience by an international travel agency when the connecting leg of the flight is booked on the local LCC.

**9.2.2.2** There is a significant association between **whether or not price comparisons were made prior to purchase** and the model travelled on by the passenger. The following conclusions can be drawn:

- Passengers travelling on a LCC are highly likely to make many price comparisons prior to deciding on a ticket purchase. 71.5% of the LCC passengers did make price comparisons.
- Passengers travelling on a FSC are less prone to make price comparisons prior to the purchase of their air ticket. 57.8% of the FSC passengers did not make price comparisons.

The group of passengers that travel on a LCC largely base their ticket purchase decision on the fares of competing airlines. This indicates a relatively high level of price sensitivity, with loyalty to a particular airline being price based. The behaviour of the FSC respondents in terms of making price comparisons prior to purchase is more complex and identifies two broad segments of passengers. Firstly, there is a segment for whom price is an important choice criteria and thus do conduct price comparisons prior to purchase (42.2%). The second segment is the 57.8% that do not conduct price comparisons prior to purchase. These passengers would seem to be loyal to a particular model and base their purchase decisions on criteria other than price alone (*see* point 9.2.5). The fact that LCC passengers place such heavy emphasis on price comparisons in their decision-making process places pressure on the LCCs in terms of pricing strategies and yield management systems.

**9.2.2.3** There is a statistically significant difference, at the 10% level of significance, between the length of **time prior to the departure date** that the ticket was purchased and the model travelled on. On average, FSC passengers purchase their tickets 42 days prior to travel, whilst LCC passengers purchase their tickets 35 days prior to travel. More LCC passengers purchased their ticket on the day prior to the flight than did FSC passengers. Importantly, the analysis shows that 33.0% of the LCC passengers purchased their ticket in the seven days prior to travelling. Purchases for both models are the highest at the 30 days in advance period, with the largest portion of tickets purchased between two weeks and one month in advance. Purchases between two and three months in advance of travel are strong for both models, with the FSCs showing a higher percentage than the LCCs at his level.

**9.2.2.4** Significant differences were found between the **fare paid** for a ticket on a LCC and a FSC. The average fare for a ticket on a LCC is shown at 53.1% cheaper than on a FSC. The FSC fares have a higher standard deviation (R828,88 vs. R552,69) implying that the FSCs have a bigger variety of fares compared to the LCCs, which cluster much closer to the mean fare. As outlined in sections 6.3.4 and 6.3.5 of the study, FSCs have a more complex pricing structure with many categories of tickets, whilst LCC have a more simplified approach with limited price levels. For both FSCs and LCCs, the median price is lower than the mean price, highlighting the point that fares tend to get more expensive as the date of departure draws closer. On numerous instances, a LCC ticket was more expensive than a FSC ticket (on a route for route comparison). This is ascribed to promotions and other events on the part of the FSCs, as well as issues of supply and demand relating to the time of day and day of the week.

The difference between the two models applies to whether a return or one-way ticket was purchased. In terms of one-way tickets the difference between the two models is in the standard overall ratio. In terms of return tickets, the price differential between the two models is substantial, with tickets on a FSC on average costing double that on a LCC. Return tickets on a FSC are marginally more expensive than one-way tickets. One-way tickets on a LCC were on average more expensive than a return ticket (average R317,40 higher). Return fares for the FSCs show the greatest dispersion of fares. This is possibly due to the high number of pricing categories and the tendency for FSC passengers to be less price sensitive which allows the airline to aggressively manage yields in order to extract maximum revenue. FSCs seem to have more flexibility in their pricing of one-way fares, which may be ascribed to the nature of the model and resultant consumer perceptions and expectations.

**9.2.2.5** A significant association, at the 1% level of significance, was found to exist between the **influence of ticket price on the decision to travel and the model flown**. The data showed that 67.0% of the passengers that indicated that the decision to travel is influenced by the price of the ticket were travelling on a LCC. 63.6% of the passengers that indicated that the decision to travel was not influenced by the price of the ticket were travelling on a FSC. This provides further evidence that LCC passengers are more price sensitive than FSC passengers and that there are differences in the decision criteria when deciding on which carrier to travel. There is a segment of FSC passengers that are price sensitive (33.0% of those that indicated yes). Overall this represented 22.8% of the FSC passengers and presents opportunities for the LCCs to attract them to their service offering. This group also represents a segment of their passengers that the FSCs need to understand in order to retain them.

**9.2.2.6** An association exists between the **source of payment** and the model flown. Payment by self is the main method of payment by passengers travelling on both models with over 57% of payments for tickets being made this way. Customers that have their ticket paid for by their company are more likely to be flying on a FSC. Customer whose parents pay for the ticket or customers who received the ticket as a gift are more likely to be flying on a LCC. It is concluded that the business market is an important segment for the FSCs that needs to be protected and grown in the face of the rapidly expanding number of LCCs in the market.

It was observed that, in the case of both models, the source of payment cross tabulated with the age groups showed exactly the same pattern. Payment made by self was predominantly from the ages of 25 and older. Where the employers make payment, the passengers are predominantly in the 25–54 age range. Where payment is made by parents, the passengers are dominantly in the 16–24 age groups. These patterns are in line with the passenger's life- and family life cycle stages. From a per model perspective, there is a tendency for passengers under the age of 24 whose ticket is being paid for by their parents to be flying on a LCC. Passengers in the age range of 25–55, travelling for the purposes of business, and whose ticket was paid for by the company, predominantly travel on a FSC.

### 9.2.3 Key carrier selection criteria (secondary objective 4)

Establishing the choice criteria that are important to passengers when selecting a carrier was a key objective established for this study. The analysis was divided into identifying the choice criterion identified as most important to passengers (ranked 1st) and then the mean values calculated from the overall ranking of the individual choice criterion.

**9.2.3.1** In terms of the criteria that were **ranked first** by the passengers as the most **important choice criteria**, there are distinct differences between the LCCs and the FSCs.

- **Fare** is identified as the most important choice criterion by a large proportion of the LCC passengers (48.9%). The choice criteria of safety, quality, and reliability are identified as the most important choice criterion by a substantially smaller number of passengers (11.2%, 7.3%, and 6.4% respectively).
- In terms of the FSC passengers, 20.8% of the passengers identify **quality** as the most important choice criterion. Safety, fare, and reliability were identified as the most important criteria by a

slightly smaller percentage of the FSC passengers (17.2%, 15.4%, and 8.5% respectively). No individual criterion dominates for FSC passengers.

**9.2.3.2** Tests for significant differences between the **model flown** and the **mean values per criterion** showed that significant differences only exist between models for the choice criteria of fare, quality, and safety. The following conclusions can be drawn:

- LCC passengers as a whole rank fare as significantly more important when deciding on a carrier than do FSC passengers.
- FSC passengers as a whole rank safety and quality as significantly more important when deciding on a carrier than do LCC passengers.
- The mean values for the FSC passengers are located within a very narrow band indicating that these passengers utilise a wide variety of criterion when selecting an airline.
- For FSC passengers, fare has the lowest overall mean value[1], which shows that whilst fare is not identified as the most important criterion, it is consistently ranked by many as the 2nd, 3rd, or 4th most important criterion.
- Whilst usually a point of complaint for airline passengers, service shows the lowest mean value of all choice criteria for FSC and LCC passengers.

Whilst frequent flyer programmes had a relatively low overall first mention rate, they did have relatively low mean values. This means that FFPs were ranked as 2nd, 3rd, or 4th in terms of importance quite a lot to see them as identified as one of the more important overall choice criterion. FFPs are traditionally associated with the FSCs and LCCs have traditionally spurned these programmes as they are a cost that raises the cost base in contradiction to the principles of the LCC model. Interestingly, LCC passengers valued a FFP more than the FSC passengers. It can be inferred that LCC passengers have a need for LCCs to offer a FFP as it is an important choice criteria in their minds and see it as being something that offers them value in terms of earning a free flight or other discounted offers. Globally, many LCCs have added a FFP or aligned with another loyalty programme to offer their passengers the benefits of loyalty programmes. This is seen locally in South Africa with the dual brand operators (SAA with Mango and Comair with kulula.com).

**9.2.3.3** The findings relating to the South African domestic market passenger show differences and similarities to the passengers in the European and Asian markets (as per the O'Connell (2007) study. The following statements can be made:

- South African LCC passengers are similar to European and Asian LCC passengers in that a significant number of them rank **fare** as the most important choice criteria. The key difference is

[1] A low mean value implies that they ranked the criterion higher and thus as more important.

that substantially more European and Asian passengers rate fare as the most important criteria than do South Africans (75.0% and 84.0% respectively vs. 48.9%).

- South African FSC passengers show similar choice criteria to their European and Asian passengers. The patterns of the rankings are very similar (an even spread across the criteria). In all three cases, fare is identified as important but not as the most important, with passengers preferring quality and other peace of mind attributes (safety and reliability).

The traditional FSC market is well-established in South Africa and the South African consumer knows what features and services to expect from FSCs. The LCC model is still a newcomer to the South African market (only ± 15 years) and the consumer is still relatively inexperienced with this model. The results suggest that, whilst the LCC passengers are seeking out the LCC option based largely on price, they but do still have a level of FSC expectations from the LCC product. The relative 'newness' of the LCC product to the South African market, coupled with the under-educated nature of the consumer with regard to the LCCs, explains the difference between the extent of importance placed on 'fare' by the South African consumer and the mature European and Asian LCC consumers, who place higher levels of importance on fare. South African consumers do not seem to have a discerning taste for 'no-frills' services and tend to take the view that cheap is 'nasty' and a higher price represents luxury or status.

**9.2.3.4** Inferential testing was performed to test for significant differences between the **genders** regarding the ten **choice criteria**. It is concluded that there are no significant differences between male and female passengers on either of the models except on the criterion of 'comfort' for passengers on a FSC, where male passengers on a FSC rank 'comfort' as significantly more important than female passengers. A general review of the individual models shows that in terms of **FSC** passenger's choice criteria, male passengers tend to rank 'comfort', 'reliability', and 'safety' as more important than female passengers, whilst female passengers tend to rank 'connections' and 'service' as more important than male passengers. For **LCC** passengers, male passengers tend to rank 'quality' more highly than female passengers, whilst female passengers tend to rank 'service' more highly than males.

On a gender-to-gender comparison between the two models, **male passengers** show greater variation in their ranking of the ten choice criteria, with the biggest difference being in terms of 'fare'. Male FSC passengers tend to rank 'comfort' and 'safety' as more important than males on a LCC, who tend to rank 'fare' and 'connections' as more important than males on a FSC. **Female passengers** on a FSC tend to rank 'quality' as more important than females on a LCC, who in turn tend to rank 'fare' as more important than females on a FSC. Overall, it is concluded is that there are no real differences between the genders and their choice criteria when selecting an airline.

**9.2.3.5** Inferential testing was performed to test for significant differences between the **age groups** regarding the ten **choice criteria**. It is concluded that there are no significant differences between the age groups on either of the models except on the criterion of 'reliability' for FSC passengers and 'fare' for LCC passengers. Regarding **FSC passengers**, the 35–44 and 65+ age groups rank 'reliability' more highly than the younger and 45–64 age groups. 'Fare' is ranked as important by all FSC age groups and thus no difference is seen between the age groups. 'Safety' and 'comfort' tend to be ranked as more important by the younger FSC age groups. 'FFPs' tend to be ranked as more important by the older FSC age groups. This is in line with the discussion in section 6.4 of chapter six, which highlighted that millennials are unimpressed with current loyalty programmes and are quick to switch providers. **LCC passengers** ranked 'fare' as the most important criterion overall, but the 16–34 and 55+ age groups rank it more important than the 35–54 age groups. 'Quality' is ranked as more important by the 25–54 age groups than the younger and older age groups. The remaining choice criteria relating to LCC passengers are erratic with no pattern or differences emerging.

On an age category-age category comparison between the two models it is seen that younger LCC passengers (18–34) tend to rank 'FFPs' more highly than younger FSC passengers. All LCC passenger age groups tend to rank 'fare' more important than the FSC passenger age groups. This reinforces the point that is 'fare' is the overall most important criteria for LCC passengers across all age categories and all ten criteria. Reinforcing the point that 'quality' is an important choice criterion for FSC passengers is the finding that FSC passengers across all but the oldest age group tend to rank 'quality' more highly than LCC passengers. FSC passengers across all age categories (except the 45–54 group) tend to rank 'safety' more highly than LCC passengers. For the remainder of the choice criterion no distinct differences emerged. Overall, it is concluded that there are no real differences between the age groups of the two models and their choice criterion.

### 9.2.4 Understanding and perception of the two models (secondary objective 5)

The conclusions in this section address the questions relating to passenger understanding and perception of the two models. In many cases, respondents have only flown the one model type so their answers relating to the other model were based purely on perceptions.

**9.2.4.1** Questioning regarding passenger **understanding of the two models** reveals that there is a limited and superficial understanding of the two concepts and the differences between them. Cost is recorded as the biggest perceived difference between the two models. **LCCs** are understood to be 'low-fare carriers' instead of a model that is based on the reduction of costs. The concepts of 'price' and 'cost' are seen as interchangeable in the mind of the consumer, which makes it difficult for LCCs to penetrate the market further on dimensions other than this one key criterion. Beyond price, most consumers see the difference between the two models as lying in the differences in basic product features. **FSCs** are viewed as more luxurious, offer meals, more comfortable, everything is included, and offer better service; whilst LCCs offer the basic product and you have to pay extra for everything else. The high number of mentions of 'service' as a difference between the models highlights that it is an important criterion for the consumer, but based on the previous discussion in this section, it is not a determinant criterion. Overall, many of the identified differences were at a basic level and in some cases even ridiculous, which served to highlight the relative lack of understanding of the nature of the LCC model. Only 12.7% of the respondents admitted that they did not know the differences between the models.

**9.2.4.2** Conclusions relating to the **respondent's perceptions of the two models** and how their perceptions differed for each of the two models are set out with reference to (i) the perceptions of the FSC and LCC passengers relating to the LCCs (lowcostserv) and (ii) the perceptions of the FSC and LCC passengers relating to the FSCs (fullserv). Conclusions relating to the perceptions of the two models according to age and gender are also given.

***(a) Passenger perceptions of LCCs:***

- There is a significant difference (1% level of significance) between passengers travelling on a FSC and passengers travelling on a LCC with regard to their perceptions of LCCs.
- LCC passengers have a much higher positive perception rating of LCCs than FSC passengers across all five of the service quality dimensions. The lowest rated dimension by the LCC passengers is higher than the highest rated dimension by the FSC passengers.

***(b) Passenger perceptions of FSCs:***

- There is a significant difference (1% level of significance) between passengers travelling on a FSC and passengers travelling on a LCC with regard to their perceptions of FSCs.
- The mean values relating to the perceptions of the service dimensions of FSCs are relatively high for both FSC and LCC passengers. Overall, FSC passengers have a much higher perception rating of FSCs than the LCC passengers. This applies to all five of the service quality dimensions.

***(c) General combined conclusions***

An important observation from the conclusions highlighted in (a) and (b) above is that, whilst LCC passengers have a favourable perception of LCCs, they have an even 'higher' favourable perception of FSCs (on all five service quality dimensions) – even though they were travelling on a LCC. With this in mind, the following conclusions can be drawn from the analysis:

- The gap between FSC passengers mean values (scale of 1–7) relating to their perceptions of the service features of FSCs and LCCs is much greater than the gap between LCC passengers mean values relating to their perceptions of the service features of FSCs and LCCs. FSC passengers showed mean values of 4.74 (rating LCCs) vs. 5.83 (rating FSCs). LCC passengers showed mean values of 5.10 (rating LCCs) vs. 5.57 (rating FSCs).

- FSC passengers see a greater difference between the two models in terms of the quality of the service offering than do LCC passengers who view the quality of service offering as being relatively similar on many dimensions. There is a clear difference between LCC and FSC passengers in terms of their service expectations of the two models and their perception of each model's ability to deliver a product matching their service expectations.
- A comparison of FSC passenger's perceptions relating to the two models shows that they are less likely to think that the LCCs are able to provide anywhere near the level of service as the FSCs on most of the five dimensions. FSC passengers view the FSC product as vastly superior and many tend to have a perceptual block against the LCCs.
- In this case, the FSC passenger's mean rankings relating to their perceptions of the FSCs and LCCs on the dimension of 'the airlines ability to perform the promised service dependably and accurately' shows the largest gap (5.90 FSC vs. 4.76 LCC). This clearly highlights the FSC passenger's level of confidence in the models to deliver a service offering to match their expectations.
- Passengers perceive that LCCs do experience service problems and are not as dependable as the established FSCs. FSCs are seen by passengers as being much more reliable than LCCs (despite some of these FSCs experiencing financial problems). The airline failures in the South African market have all been LCCs (Skywise, 1time, Velvet Sky, and Flightstar). These airline collapses left passengers stranded and financially out of pocket leading to the perception that LCCs are riskier. New LCC market entrants are subject to the same consumer perceptions and are thus seen as a risky option.
- The fact that LCC passengers rate the service dimensions lower for LCCs than FSCs indicates that they are willing to accept the perceived lower service level and make a voluntary trade-off in order to gain the fare reduction. As a form of post-purchase behaviour, the LCC respondents accept this situation and lower their service expectations to the extent that they are accepting of the basic service offering of the LCCs and are therefore still relatively satisfied. This clearly indicates that LCC passengers base their decision-making largely on price and not service related comforts or features; as per point 9.2.3.1, which concluded that the main choice criterion of LCC passengers is fare.
- The large difference between the FSC passenger's ratings of the two models suggests that many will not accept the perceived lower service level of the LCCs. This is confirmed under point 9.2.5 where it is shown that many FSC passengers are loyal to the model and are not readily influenced by price changes to switch model. FSC passengers have a distinct need for the added services and benefits associated with the FSC product and they are willing to pay a premium in order to ensure they receive these benefits. In this case safety, quality and comfort have greater influence on the decision-making for FSC passengers than fare.

- The relative strength of service perceptions of the FSC passengers towards the FSCs poses a challenge to LCC operators who will face difficulties in attracting these feature and quality demanding consumers to a product offering that does not offer all these features and benefits. Whilst there is a level at which some FSC passenger might be enticed with fare reductions, the bulk of the market will not be swayed to switch by price alone.

***(d) Model perception ratings and age groups***

The importance of age in the context of the study findings necessitated a focus on this aspect. In terms of the age groups, the older and younger age groups tend to rate the models more favourably than passengers in the 25–54 age range. The following conclusions can be drawn:

- Statistical significant differences exist between the respondent's age group and their **perceptions of the LCCs**. The 16–18 and 55+ age groups, who have lower disposable income, perceived the LCCs more favourably than the 19–54 age groups. This is in line with earlier findings, which showed that the economically active 19–54 age groups had a preference towards the FSCs (especially the business travellers).
- Statistical significant differences exist between the respondent's age group and their **perceptions of the FSCs**. It is concluded that the 55+ and 19–24 age groups have an overall more favourable perception of the FSCs than do the 25–54 age groups.
- LCC passengers show a more favourable perception of the LCC model than do FSC passengers – across all five dimensions. The exception was the 16–18 age group where the FSC passengers rated the LCCs higher than the LCC passengers in this age group for all five service dimensions. This suggests that the younger generations, who are generally relatively inexperienced in terms of flying, potentially perceive that the LCC model is offering a good product and could be seeing the two models as direct substitutes when deciding on an airline to fly. The implication of this finding needs to be understood by the airlines if they are to attract the loyalty of these consumers as they mature.
- The 55–65 age group is more accepting of the LCCs, as passengers in this age grouping show overall higher mean values indicating a more positive perception of the LCC model.
- The service scores relating to the rating of the FSCs showed that the younger (16–24) and older age groups (55+) rated the model higher than the middle-aged groups in between. The service scores relating to the FSCs showed smaller differences between the age groups compared to the service scores relating to the LCCs. When considering the differences between the LCC and FSC passenger ratings of the FSC model, it is seen, across all age groupings, that the FSC passengers have a noticeably higher mean value – across all five service dimensions. This clearly indicates the FSC passenger's preference for the FSC model over the LCC model and shows that this applies to all age groups.

***(e) Model perception ratings and gender***

In terms of the two genders, it is concluded that very little differences exist between male and female passengers with both rating the FSCs substantially higher than the LCCs. The analysis of the mean values associated with each service dimension for the individual genders shows:

- No significant difference exists between the genders in terms of their **perception ratings of the LCCs.** The analysis shows that males and female passengers perceive the LCCs in the same manner with very little differences between them.
- No significant difference was found between the genders in terms of their **perception ratings of the FSCs.** The analysis shows that males and female passengers perceive the FSCs in the same manner with very little differences between them.
- Female passengers (travelling on both models) tend to rate each service dimension higher than male passengers. Female passengers travelling on a LCC rate LCCs higher than any other grouping. Male passengers travelling on LCCs show the lowest overall ratings of any group or model.
- The findings suggest that male passengers on LCCs have a desire to rather be travelling on the FSCs. Male LCC passengers dominantly rate 'fare' as the most important criteria when deciding on a carrier followed by 'FFPs', 'connections', 'quality' and 'frequency'. This suggests that they remain at the LCCs due to the perceived lower fares (financial limitations), but their service preferences are for features offered by the FSCs. They are prime targets to 'upgrade' to the FSC model using the appropriate incentives.
- Male passengers show higher perception mean values towards the FSCs than female passengers for all five service perception dimensions. Overall, the difference between male and female respondent's perception ratings of the two models is very small with no clear pattern between the service dimensions. For all five service dimensions, male passengers travelling on a LCC rated FSCs higher than did female passengers travelling on a FSC. This observation reconfirms that male passengers have a strong preference for the FSCs and the product features and benefits associated with the FSC product.
- Male passenger's perception ratings of the two models show a clear distinction between the models and thus suggests that the models have distinctiveness in the male passenger's mind. This suggests that the positioning of the models relatively effective.
- The perceived differences between the models for female passengers is much smaller suggesting that the current positioning might not be optimal for the female passenger segment. This suggests that female passengers perceive the two models as overlapping and that the appropriate decision-making criteria for females have not been targeted. This is a threat to FSCs, as female passengers are more accepting of the LCCs and thus willing to switch to the LCC model. The evolution of the larger LCCs into hybrid carriers, which offer perceived lower fares with some FSC features, makes this threat even greater.

### 9.2.5 Price sensitivities and associated switching behaviour (secondary objective 6)

This sub-section focusses on outlining the key findings relating to the price sensitivities of the passengers to potential increases or decreases in the ticket prices on the two models.

**9.2.5.1** A significant association was detected between the type of carrier flown and passenger switching behaviour. Clear evidence emerged that FSC passengers are a lot more loyal to the FSC model than LCC passengers are to the LCC model. The analysis showed that a total of 86.1% of LCC passengers would consider switching to a FSC, compared to a total of only 55.9% of the FSC passengers that would consider switching to a LCC.

**9.2.5.2** When considering passenger **choice criteria** and their **switching behaviour** (loyalty variables), significant differences are only found in terms of fare (1% level), safety (5% level), and comfort (10% level). The key conclusions drawn in terms of the choice criteria and switching behaviour are summarised in table 9.5.

**Table 9.5: Conclusions relating to switching behaviour and choice criteria**

| Criterion | Summarised conclusions arising from analysis |
|---|---|
| Fare | • Passengers that are loyal to the FSCs rank **fare** as much less important than passengers that are loyal to the LCCs<br>• Passengers that indicate that they would switch models rank fare as much more important than FSC loyal passengers and as important as the LCC loyal passengers. |
| Safety | • Passengers that are loyal rank **safety** as a choice criterion much higher than passengers that indicated that they would consider switching models.<br>• Loyal passengers are more accepting of the prices (less price sensitive) and look to other important choice criteria whereas switchers find fare more important than safety. |
| Comfort | • Passengers that are loyal to the FSCs rank **comfort** as an important choice criterion when deciding on the carrier to fly with.<br>• Passengers that are loyal to the LCCs also show that they rate comfort as an important criterion, but not at the level of the FSC passengers.<br>• Passengers that indicate that they will switch model place the lowest overall importance on comfort of the three groups reflecting that other choice criteria are more important for switchers. |

***Full-service carrier passengers (9.2.5.3 – 9.2.5.8)***

The conclusions for points 9.2.5.3–9.2.5.8 relate to **FSC passengers** and the identified variables.

**9.2.5.3** FSC passengers show a great deal of **loyalty** to the FSC model, which makes sense in terms of their favourable perceptions of the model as established in under point 9.2.4.2. The analysis in the case of FSC passengers focussed on their switching behaviour if the FSCs increased their fares by 10%, 20%, or 30%. The key conclusions drawn in terms of the switching behaviour of FSC passengers are summarised in table 9.6.

**Table 9.6: Summarised conclusions - switching behaviour of FSC passengers**

| | Summarised conclusions arising from analysis |
|---|---|
| Overall loyalty | • FSC passengers show a relatively high degree of loyalty to the FSC model even when faced with a fare increase of 30% on the FSCs.<br>• Approximately 50% of the passengers would remain loyal to the FSC even if it means that the ticket price would be substantially higher than if they switched to a LCC.<br>• Reconfirms that price is not the key criterion influencing FSC passenger decision-making. |
| Switching pattern | • Fewer FSC passengers consider switching at the 30% increase rate than at the 20% and 10% fare increase rate.<br>• Highly price sensitive passengers would switch at the lower levels of fare increase with some resisting for as long as possible before deciding to switch for pure monetary reasons.<br>• An overall lower level of price sensitivity exists for FSC passengers, but for about 50% of these passengers, a threshold is reached where the FSC becomes too expensive. |
| Reasons for switching | • Fare is the most frequently identified reason for switching (88.6% of recorded responses).<br>• Other reasons for switching include 'no real difference being perceived between models' and 'no great sacrifice in terms of quality of experience'. |
| Reasons for staying loyal | • FSC passengers have a wide variety of reasons for not switching to a LCC.<br>• Most common reasons for not switching revolve around issues of satisfaction with airline, comfort, loyalty, higher service levels, luxury, and 'ticket paid by company/family'. |
| Implications for airlines | • FSC passengers are willing to pay more for the perceived enhanced features and benefits associated with travel on a FSC and many will remain loyal in the face of fare increases.<br>• FSCs therefore have a relatively high level of fare flexibility due to the relatively low number passengers that would defect at the smaller fare increases by the FSCs and the high percentage of passengers that would remain loyal despite fare increases by the FSCs.<br>• FSC passengers can be divided into two distinct categories: those that are extremely loyal and will not switch, and those that are price sensitive (to differing degrees) but do prefer the FSC model. |
| Comparison to O'Connell (2007) study | • South African FSC passengers shows a greater degree of loyalty to the FSCs than do their European and Asian counterparts.<br>• South African FSC passengers are less price sensitive and will tolerate greater levels of fare variability than the European and Asian passengers.<br>• South African FSCs have more fare flexibility than the European and Asian operators. |

**9.2.5.4** There is no statistical significant association between passenger **loyalty to a particular model** and their **gender.** This means that the overall loyalty behaviour for males and females is similar for both models and thus a particular loyalty behaviour is not associated with a specific gender.

Refining the analysis to the individual switching levels for respondents on each model, it is concluded that there is a statistically significant association between the switching behaviour across the switching groups and gender of the FSC passengers. In this regard, conclusions drawn for FSC passengers are summarised in table 9.7.

**Table 9.7: Conclusions relating to FSC passenger switching behaviour and gender**

| | Summarised conclusions arising from analysis |
|---|---|
| Overall conclusion | • Male and female FSC passengers are associated with their own distinct switching behaviour pattern across the different switching levels |
| Switching pattern differences | • FSC female passengers that would switch to a LCC would do so at the lower percentage fare increase levels compared to the male passengers.<br>• More male FSC passengers indicate an intention to switch at the 30% fare increase level, indicating a higher tolerance of high fare increases than female passengers.<br>• These two points support the earlier conclusion that males tend to prefer the FSCs whilst females tend to prefer the LCCs (point 9.2.1.1) |
| Similarities | • Male and female passengers show similar levels of loyalty to the FSC model in terms of those that indicated that they will not switch to the LCC model (48.9% and 44.9% respectively). |

| | |
|---|---|
| Implications for airlines | • FSCs have more fare flexibility with the male segment than the female segment of the market.<br>• From the LCC perspective, it will require greater price incentives to attract the male passenger from the FSCs than for female passengers.<br>• From the FSC perspective, it will be easier to retain the male passenger's loyalty than the female passenger's loyalty. |

**9.2.5.5** There is a statistical significant association between passenger **loyalty to a particular model** and their **age group.** This means that the overall loyalty behaviour differs between the age groups and therefore a particular loyalty behaviour is associated with specific age groups.

Refining the analysis to the individual switching levels for respondents on each model, it is concluded that there is no statistically significant association between the switching behaviour across the switching groups and age group of the FSC passengers. In this regard, conclusions drawn for FSC passengers are summarised in table 9.8.

**Table 9.8: Conclusions relating to FSC passenger switching behaviour and age group**

| | **Summarised conclusions arising from analysis** |
|---|---|
| Overall conclusion | • Each age grouping seems to follow a similar pattern in terms of the levels at which passengers would switch to the LCC when faced with a price increase on the FSCs |
| Switching pattern differences | • Three age categories did show a slight difference to the overall pattern but were not significant to represent a distinctive difference (i.e. not associated with a particular switching pattern).<br>• It is suggested that the younger age groups (<34) would switch to a LCC at a lower FSC fare increase level than the older age groups (35+).<br>• It is suggested that 35+ age groups show a higher level of non-switching behaviour (loyalty) to the FSC model than the 34 and younger age groups. |
| Implications for airlines | • FSCs tend to have more fare flexibility with the older passengers than with the younger passengers.<br>• The younger FSC passengers are amenable to change behaviour and therefore offer an opportunity for the LCCs to penetrate this segment with targeted strategies focussing on their price sensitivities. |

**9.2.5.6** From the perspective of the FSC passenger, a cross analysis of their **mean service scores** (when rating LCCs and FSCs) and their **loyalty to the model** (loyalty variables) it was determined that a significant difference only exists in the case where the FSC passengers were rating the FSCs. Conclusions drawn in this regard for FSC passengers are summarised in table 9.9.

**Table 9.9: Conclusions relating to FSC passenger loyalty to model and service scores**

| | **Summarised conclusions arising from analysis** |
|---|---|
| Overall conclusion | • FSC passengers that rate the FSCs highly on the service quality dimensions will be more likely to remain loyal to the FSCs in the face of a FSC price increase than would FSC passengers who show overall lower ratings in terms of the service quality dimensions. |
| Specific conclusions | • FSC passengers have a strong affinity towards the FSC model and that the higher level of liking towards the FSC model, the less likely a passenger will switch model.<br>• FSC passengers that indicate that they would switch also rate the FSCs highly in terms of the service dimensions, but at a level slightly lower than the loyal FSC passengers.<br>• The decision to switch by the switching FSC passengers is one that is not made willingly but taken purely from a price related perspective (given the strong level of FSC model liking). |
| Rating LCCs | • FSC passengers that indicate that they would remain loyal to the FSCs and those that would not remain loyal show no discernible difference in terms of their ratings of the LCCs on the service quality dimensions (and is at a level much lower than their rating of the FSCs). |

Refining the analysis to focus on the individual switching levels and the service scores (lowcostserv and fullserv) for the FSC passengers, statistical significant differences (5% level) exist between FSC passenger's switching level groups and their mean perception service score with regard to both the FSCs and the LCCs. The following supporting conclusions relating to the nature of FSC passenger switching behaviour can be drawn in this regard:

- For FSC passengers rating the LCCs it is apparent that as the mean service score decreases (perception rating) it takes a greater fare increase on the part of the FSC to result in the FSC passenger deciding to switch to a LCCs (*see* appendix E4).
- In this case, each FSC fare increase level distinctly distinguishes between levels of passengers and their pricing thresholds, with FSC passengers essentially holding on to travelling on the FSC model as long as possible until the proposed FSC fare increase becomes too much and they have to switch to a LCC.
- The highest mean values are linked to passengers that will remain loyal to the FSC model and it can be concluded that these passengers have a high level of liking of the FSC model and will tolerate a broad range of price increases before considering switching to LCC.

**9.2.5.7** For the FSC passengers, there is a statistical significant association between **loyalty to model** and whether **price comparisons** were made prior to ticket purchase. From this analysis, the following conclusions can be drawn:

- The majority of FSC passengers that do make price comparisons prior to ticket purchase are more likely to switch to the LCCs (when faced with high price increases on the FSCs) than stay loyal to the FSCs.
- The FSC passengers that do not make price comparisons prior to purchasing their ticket are more likely to remain loyal to the FSCs.
- Whilst FSC passengers show an overall great degree of loyalty to the FSC, there is a component of the FSC passenger market that is price sensitive and will ultimately be 'forced' to switch to the LCCs should the FSC fare increase beyond their price threshold. Analysis showed this to be from the 20% fare increase point for FSC passengers.

**9.2.5.8** For the FSC passengers, there is a statistical significant association between **loyalty to model** and whether **the decision to undertake the trip was influenced by the fare**. From this analysis, the following conclusions can be drawn:

- The majority of FSC passengers that state that the decision to make the trip is influenced by fare are more likely to switch to the LCCs (in the face of high FSC fare increases) than stay loyal to the FSCs.

- The FSC passengers that state that the decision to travel is not influenced by the fare, show a much lower tendency to switch model; indicating higher loyalty to the FSC model.
- An indication of the price sensitivities of some FSC passengers is seen where not only will they consider looking to the LCCs for the best ticket price if the FSC become too expensive, but they will also consider not undertaking the trip if they cannot find a fare that is within their budget or price threshold.

***Low-cost carrier passengers (9.2.5.9 – 9.2.5.14)***

Conclusions for points 9.2.5.9–9.2.5.14 relate to **LCC passengers** and the identified variables.

**9.2.5.9** LCC passengers show **little loyalty** towards the LCC model when faced with fare reductions on a FSC. This makes sense in terms of their perception ratings of the LCC and FSC models as established for point 9.2.4.2. The key conclusions drawn in terms of the switching behaviour of LCC passengers are summarised in table 9.10:

**Table 9.10: Summarised conclusions - switching behaviour of LCC passengers**

| | Summarised conclusions arising from analysis |
|---|---|
| Overall loyalty | • LCC passengers show limited loyalty to the LCC model especially when a potential fare reduction by the FSCs is perceived to be sufficient to overcome their price threshold.<br>• Less than 20% of the LCC passengers would remain loyal to the LCC model when faced with proposed fare reductions (up to 30%) by the FSCs.<br>• Reconfirms that price is the key criterion influencing LCC passenger decision-making. |
| Switching pattern | • As the extent of the price decrease by the FSCs grows, so does the number of LCC passengers that indicate they will switch to the FSC model (more than double to each level).<br>• Most LCC passengers would switch to a FSC at the 30% fare reduction level by FSC (50%).<br>• Over 80% of the LCC passengers would consider switching to a FSC if the fare was right. |
| Reasons for switching | • Fare is the most frequently identified reason for switching (58.9% of recorded responses).<br>• Other notable reasons for switching include comfort, service, and a wide variety of reasons that reflect the FSCs as being a better product in terms of quality, reliability, high value, and reputation. |
| Reasons for staying loyal | • The two main reasons cited by LCC passengers for not switching are that the LCCs still offer a cheaper fare and they are happy with their current carrier (59.1% of recorded responses).<br>• Beyond this, LCC passengers that would not switch generally perceive the two models as being the same or see the LCCs possibly offering better service than the FSCs. |
| Implications for airlines | • The concept of 'perceived price' plays a large role in the switching behaviour of the LCC passengers than does the actual price.<br>• The average fare of the FSCs reduced by 30% is still higher than the average LCC fare. The willingness of 80% of the LCC passengers to switch to the FSCs shows that they tend to prefer the FSC product and are willing to trade up if their price threshold is addressed in order to receive the perceived FSC product features and benefits.<br>• FSCs have a fair degree of fare flexibility with regard to attracting the LCC passenger. It was shown that FSCs have the fare flexibility to lower their fares by as little as 10% to attract up to 10% of the LCC market who are 'aspiring' to the FSC product offering.<br>• These aspirational tendencies for the FSC by the LCC passenger are supported by the conclusions drawn in point 9.2.4 where it was shown that LCC passengers rate FSCs higher than the LCCs in terms of the service quality dimensions.<br>• Given that a total of 84.5% of the LCC passengers indicated that they would consider switching to a FSC in the face of the FSCs reducing their fares, it is suggested that LCC passengers are 'loyal' to lower fares as opposed to a model.<br>• LCCs have a lot less fare flexibility than FSCs when pricing their services.<br>• LCCs have to defend their positioning on two distinct fronts by: (i) ensuring that their fares are not perceived to be as high as a FSCs and (ii) watching that the FSC fares are not declining to a level where they are perceived as, on average, being as cheap as a LCC. |

| | |
|---|---|
| Comparison to O'Connell (2007) study | • The key difference between this South African study and the European and Asian study is the extent of switching at each fare decrease level.<br>• At each of the proposed FSC fare decrease levels more South African LCC passengers are willing to switch to the FSC than for the European and Asian passengers.<br>• From a loyalty perspective, the South African LCC passenger is less loyal than the European or Asian passengers to the LCC model and therefore more price sensitive. |

**9.2.5.10** As stated earlier, there is no statistical significant association between passenger **loyalty to a particular model** and their **gender.** This means that the overall loyalty behaviour between males and females are similar for both models and thus a particular loyalty behaviour is not associated with a specific gender.

Refining the analysis to the individual switching levels for respondents on each model, it is concluded that there is no statistically significant association between the switching behaviour across the switching groups and gender of the LCC passengers. In this case, male and female passengers show similar switching behaviours at the three levels of fare change. So, whilst a particular gender can't be specifically associated with a switching level, it is clear from the frequency tables that more female passengers tend to switch at the 20% fare change level than males, whilst male passengers tend to switch mostly at the 30% fare change level.

**9.2.5.11** As shown under the FSC respondent's section, there is a statistical significant association between passenger **loyalty to a particular model** and their **age group.** This means that the overall loyalty behaviour differs across the age groups and therefore a particular loyalty behaviour is associated with specific age groups.

Refining the analysis to the individual switching levels for respondents on each model, it is concluded that there is no statistically significant association between the switching behaviour across the switching groups and age group of the LCC passengers. In this regard, conclusions drawn for LCC passengers are summarised in table 9.11:

**Table 9.11: Conclusions relating to LCC passenger switching behaviour and age**

| | **Summarised conclusions arising from analysis** |
|---|---|
| **Overall conclusion** | • Each age grouping seems to follow an extremely similar pattern in terms of the levels at which passengers would switch to the FSCs when the FSCs decrease their prices. |
| **Switching pattern differences** | • Two age groups did show a slight difference to the overall pattern but were not significant to represent a distinctive association.<br>• The age 24 and younger groups show a low switching tendency to the FSCs at the prospect of only a 10% fare reduction suggesting that their price tolerance threshold had not been lowered sufficiently at this level for them to consider the FSC product.<br>• The 16–18 group showed the highest level of non-switchers. Their tickets are mainly purchased by their parents (80.4%) and thus they have limited say in the ticket purchase process. |
| **Implications for airlines** | • It is suggested that young groups are a lot more 'fare aware' due to their more limited financial resources and thus it will be difficult for FSCs to attract them will small fare reductions.<br>• Where parents pay for the young passenger's ticket, they are focussed on trip cost reduction. Fare incentives will be most effective to retain (LCCs) or attract (FSCs) passengers. |

**9.2.5.12** From the perspective of the LCC passenger, a cross analysis of their **mean service scores** (when rating LCCs and FSCs) and their **loyalty to the model** (loyalty variables) it was determined that a significant difference only exists in the case where the LCC passengers were rating the FSCs. Conclusions drawn in this regard for FSC passengers are summarised in table 9.12:

**Table 9.12: Conclusions relating to LCC passenger loyalty to model and service scores**

| | Summarised conclusions arising from analysis |
|---|---|
| Overall conclusion | • LCC passengers that rate the FSCs highly on the service quality dimensions will be more likely to switch to the FSCs in the face of a FSC price decrease than would LCC passengers who show overall lower ratings for the FSCs in terms of the service quality dimensions. |
| Specific conclusions | • LCC passengers that indicate that they would switch to a FSC if the FSC reduced their fares rate the FSCs higher on the service quality dimensions than the LCC passengers that indicate that they would not switch to a FSC.<br>• These LCC passengers have a higher affinity towards the FSC model which present the FSCs with opportunities to entice these LCC passengers that are seeking the perceived benefits and luxuries associated with the FSC model.<br>• For LCCs, retaining these passenger's patronage requires that they remain competitive in terms of price compared to other LCCs and the FSCs. |
| Rating LCCs (not sig.) | • LCC passengers that indicate they would not switch to a FSC if the FSC reduced their fares, rate the LCCs higher on the service quality dimensions than the LCC passengers that indicate that they would switch. |

Refining the analysis to focus on the individual switching levels and the service scores (lowcostserv and fullserv) for the LCC passengers, statistical significant differences (5% level) exist between LCC passenger's switching level groups and their mean perception service score with regard to the FSCs only (and not the LCCs). The following supporting conclusions relating to the nature of LCC passenger switching behaviour can be drawn in this regard:

- LCC passengers, when rating the LCCs, show approximately the same service score at all four switching levels (including 'not switch').
- LCC passengers that switch to the FSCs at a lower level fare decrease (10%) by the FSCs have lower 'fullserv' service scores than those that switch at the higher percentage fare decrease (30%).
- From earlier evidence, this can be ascribed to LCC passenger price sensitivity and their resultant price awareness in determining that a relatively large price decrease is required on the part of the FSCs for the fare to be comparable or even cheaper than the LCC fares.

**9.2.5.13** For the LCC passengers, there is no evidence of a statistical significant association between **loyalty to model** and whether **price comparisons** were made prior to ticket purchase. From the analysis, the following conclusions can be drawn:

- The vast majority of LCC passengers (80%+), whether they made price comparisons prior to ticket purchase or not, would consider switching model if the FSCs decrease their fares.
- In either case, LCC passengers show a high propensity to switch model when offered a viable price incentive, are more price sensitive, and open to special deals.

**9.2.5.14** For the LCC passengers, there is no evidence of a statistical significant association between **loyalty to model** and whether **the decision to undertake the trip was influenced by the fare**. From the analysis, the following conclusions can be drawn:

- The vast majority of LCC passengers (84%+), whether they indicated that the decision to travel was influenced by the fare or not, would consider switching model if the FSCs decrease their fares.
- In either case, LCC passengers, who show a high propensity to switching model when they are offered a viable price incentive, are price sensitive to the extent that they might even decide not to travel if no acceptable price option can be identified.

### 9.2.6 The need for the next-generation operating model in South Africa

The evolution of many LCCs into the hybrid model, as described in section 6.3.6, is a strategic decision taken by the LCCs in an effort to retain the segment of the market that wants the FSC features but at the LCC price. The simple addition of a premium economy ticket or a FFP is in many cases sufficient to tap into this price sensitive and fickle segment that, dependant on the fare on offer, hovers between travelling on a LCC or a FSC. The case for actively pursuing the hybrid model in the South African market is repeatedly indirectly highlighted by the findings and conclusions outlined in chapters 8 and 9. Key points in this regard are summarised below:

- The extent of loyalty shown by the FSC passengers to the FSC model does provide the business case for the hybrid model. The price sensitive FSC passenger was shown to want to pay the LCC fare but receive the benefits and features offered by the FSCs. The hybrid carrier, which is not encumbered by the legacy costs of the FSCs, is in a position to cater to this segment of passengers. Similarly, the lack of loyalty shown by the LCC passenger to the LCC model and their requirement for FSC type features and benefits at the LCC fare further strengthens the case for the operation of a hybrid carrier.
- The extent to which the LCC passengers are seeking the FSC experience at the LCC price was seen where some LCC passengers would switch to a FSC at a 10% fare decrease even though the FSC fare would still be substantially more expensive than the LCC fare. This also applies at the 30% fare decrease level where the FSC fare would still be slightly higher than the LCC fare. The willingness of many LCC passengers to seek out FSC features indicates that, whilst these LCC passengers do display levels of price sensitivity, they will switch to the FSC product if they feel their price threshold has been overcome.
- The analysis clearly showed that consumers view the concepts of 'cost' and 'price' as interchangeable. The represents a dilemma for the LCCs in that they are perceived by the consumer to be a low-fares airline instead of a low-cost airline, which has cost reduction and control as its main strategic driver and extends well beyond just low fares. As a means of overcoming this limiting perception, airlines could move towards positioning themselves as a hybrid carrier in an attempt to

escape the label of 'low-cost' or 'low-fares' and thus create more manoeuvrability for themselves in terms of their pricing flexibility and the focus of their differential advantages and positioning approach. In this way, the airline opens up new vistas to introduce a new service model with new marketing opportunities.

#### 9.2.7 Identification of statistical significant predictor variables for the odds of whether passengers will select a LCC (primary objective)

This sub-section focusses on outlining the key findings relating to the identification of variables that predict the odds of passengers selecting a LCC.

**9.2.7.1** From the perspective of identifying individual variables that make a statistical significant contribution to **predicting the odds of a passenger selecting a LCC**, the following variables were identified:

- Passenger favourable ratings of LCCs on the service quality dimension of '*willingness to help customers and provide prompt service*' (increases odds of selecting a LCC).
- Passenger favourable ratings of LCCs on the service quality dimension of '*knowledge and courtesy of the airline's employees and their ability to convey trust and confidence'*' (increases odds of selecting a LCC).
- Passenger favourable ratings of FSCs on the service quality dimension of '*overall perception of the service offered by the FSCs*' (decreases odds of selecting a LCC).
- Price comparisons made prior to booking (A 'yes' answer increases the odds of selecting a LCC).
- Influence of fare on the decision to travel (A 'yes' answer increases the odds of selecting a LCC).
- Gender (a response of 'Female' increases the odds of selecting a LCC).
- Passengers in the 16–18 age group in reference to the oldest groups increases the odds of selecting a LCC.
- Passengers travelling for the purposes of business increase of the odds of flying on a LCC compared to passengers travelling for leisure purposes.

## 9.3 RECOMMENDATIONS

Flowing from the conclusions that were addressed in the previous section, there are a number of recommendations that can be put forward for consideration. These include:

**9.3.1** There are distinct differences between the identified age groups and this difference applies across the two airline models. On the superficial level, it is seen that LCCs are stronger on the younger age groups, whilst FSCs dominate the 25–60 age range. Analysis of the age groups with other variables point to the need for the airlines, the LCCs in particular, to determine how to penetrate the age group segments they are currently not reaching. *In the case of the LCCs it is recommended that they explore ways in which to further penetrate the 25–60 markets with particular reference to the consumers that might currently fly on the FSCs but are prone to price sensitivity and represent a segment that could be encouraged to switch*.

*It is crucial that the youth market (16–24) be given greater attention in order to gain insights into their preferences and behaviours.* This age group has grown up with the development of the LCC model and has not been biased by a 'FSC only' environment like the older age groups. This study has shown that this age group cluster has behaviours and perceptions that differ from the other age groups and this will influence their behaviours and perceptions as they grow older. This group showed the smallest difference between models in terms of service performance/quality ratings. They were also shown to be less loyal than the older passengers and this represents an area to be addressed. These are essentially inexperienced travellers that can still be moulded according to the nature of the two models and thus the appropriate expectations created. It is crucial that this evolving market segment be understood because they will be the airline's staple passenger in the future. Not only are they the future leisure travellers, but they are also future business travellers and potential business decision-makers that decide which airline is used. Key areas to be considered are this age cluster's bases of decision-making, price sensitivities, preferences, values, and motivations. *Specific attention needs to be given by the FSCs to this segment, given that the FSC passengers in this age cluster rated the LCCs higher than did the LCC passengers.* This highlights the point that this age cluster is more accepting of the LCC product and understand the nature of the two models better than the other groups. Given that the younger cluster is less loyal, the opportunity exists, for LCCs in particular, to offer price incentives in conjunction with value adding options to these younger travellers to persuade them that the LCCs offer a product of quality at an affordable price. *In the light of the changing characteristics of these younger generations, it is recommended that airlines follow a content marketing approach, including the use of stories which have been shown to be more powerful than FFPs at retaining loyalty (see section 6.4), to address this segment of the market. These young groups require a highly-personalised and innovative product experience that is available to them via the different mobile technology platforms. Attention needs to be given to managing the entire 'customer journey' and ensuring that the experience is managed at all touchpoints.* The characteristics of the millennials and Generation Z outlined in chapter 6 provide credence to these points.

**9.3.2** The analysis did not identify significant differences between the male and female passengers. However, it was seen that females were more accepting of the LCC model than males, who showed a noticeable preference for the FSC model. This was particularly seen where males rated FSCs in terms of the service quality dimensions much higher than LCCs, whilst females showed a much narrower gap between the two models. *It is crucial for the LCCs to fully understand the behaviours of the male passenger in order to identify the reasons behind their strong FSC preference and low LCC liking.*

*Clearly the LCCs need to develop strategic approaches to reposition themselves in the minds of the male passenger in order to penetrate this segment further*. It is also clear that for the male FSC passenger price is an important choice criterion but other criteria that need to be considered are FFPs, destination options, quality and other value adding features. From the female passenger perspective, there is an indication that the airline models are not optimally positioned to attract particular female segments given that they rate both models relatively similar. *It is recommended that this female segment be reviewed (by both FSCs and LCCs) in terms of their choice criteria and repositioned in order to appeal to the unique characteristics of this segment. The marketing strategies aimed at this segment need to be refined beyond the broad generic market and focus on addressing their needs at each touchpoint using a personalised approach. Based on the analysis of gender switching behaviour, it is essential that the ways in which male and female passengers perceive price be analysed further.* By obtaining a deeper knowledge of the genders, the airlines will be able to more effectively segment their markets and deliver a personalised customer experience. A simplified and seamless travel process is essential.

**9.3.3** In terms of travel for leisure purposes, LCCs need to clarify the segments which they currently reach and those where they need to devote further attention if they are to become more competitive in these segments in relation to the FSCs. The LCC segment is essentially seeking a value-based product that is delivered at a relatively low price to match their price sensitivities. *Segments that need to be explored by the LCCs include the sports group travel segment that is seeking to minimise the overall cost of travel. Specific attention needs to be given to the behaviours and activities of the 16–24 and 25–34 age groups in this regard. Visiting friends/relatives is a strong segment for the LCCs and needs to be fortified and grown taking the price sensitivities of this segment into account. Other segments where the LCCs need to improve performance include the weekend break segment and the holiday segment.* Personalised weekend packages and holiday packages developed around the LCCs should appeal to these price sensitive, yet quality seeking, segments. It is important that the services offered are perceived as beneficial to the travel experience and that the entire customer journey is simplified through continuous customer engagement.

The FSCs also need to focus attention on the segments where the LCCs are seen to be attracting attention and customers from them. A review of available data is required to identify where airlines can improve performance and expand. *Key segments that FSCs need to focus attention on include the visiting friends and relatives segment, as well as the younger travellers, which are both identified as being primary areas where they are losing out to the LCCs.* This will require a personalised approach to each segment to meet their specific needs, but at the same time caution needs to be taken to avoid individual segments feeling that they are being disadvantaged by other segments or being treated as less important.

**9.3.4** Business travel is a crucial segment for the LCCs to develop further if they are to become a strong competitive force in the South African business travel market. In complex business environments, where cost saving is a big concern for most businesses, LCCs have a definite opportunity to make inroads into the FSCs dominant market share of this segment. *In this context, the LCCs need to use their low-cost base to continue attracting the price sensitive bargain seeker, whilst offering add-on features to attract the business segment. This includes pre- and post-travel features like paid lounge access and inclusive airport transfers. Important in this case is to offer a seamless and hassle-free travel process that enables the business traveller's needs.* In this regard, staff training on their role in understanding business customers is essential. Complementing this, airlines need to use location-based content to address the location-based needs and problems of the business traveller as a value-added service. *Two particular sub-segments where the LCCs could seek to penetrate is the meetings segment and the conference and training segment.* Whilst it is recognised that the market dynamics of the South African commercial air transport market are strongly impacted upon by political influences, the governmental and parastatal market is one that needs to be further explored by the LCCs in an effort to benefit from this lucrative segment.

**9.3.5** *Airlines need to explore additional innovative channel options for the distribution of their services with the aim of reaching consumers that do not have credit cards, debit cards, or convenient Internet access*. Basic examples include retailer outlets, mobile phone payment, and third party loyalty programme redemptions (airline and non-airline). FSCs have work to do in terms of catching up with the LCCs in this regard. *More focus needs to be given to developing the use of cellular and mobile technology as a way of accepting payments and making bookings, as this technology is one where market penetration is high amongst all citizens of the country.* Accommodating these innovative channels requires flexible booking platforms and detailed customer knowledge.

**9.3.6** *There is a clear need for both models to review their current positioning and adjust consumer perceptions by 'educating' the consumer on what to expect from the respective models.* This need not be an overt education message but one where the strategies of the airline, particularly the LCCs, clearly portray what is to be expected from the service offering and thereby creates an acceptable positioning that distinguishes it in a positive manner from the FSCs. Part of this 'education' should be to change the perception that 'low-cost' or 'no-frills' represents cheap and nasty, and that expensive does not always mean luxury and status. Key to this is the management of perceptions, specifically where both LCC and FSC passengers might have unrealistic or inaccurate expectations of the LCC and/or the FSC model. *The starting point is to conduct an audit of the current product positioning from the consumer's perspective in order to clarify the airline's situation regarding current consumer expectations and perceptions.* An understanding of these issues will enable the airlines to better differentiate themselves from each other. This is achieved through refining expectations and taking measures to ensure that the delivered service matches the expected service.

- *From the LCC perspective, improvements need to be made in terms of the ratings on the service quality perception dimensions. This will happen by either improving the service offering or by adjusting service expectations to match the service on offer.* In this context, even though the LCCs offer a more basic unbundled product, the LCC's rating score on all five service quality dimensions should still be high if they are delivering a service that matches or exceeds the passenger's expectations associated with the LCC model (which should be different to what is expected from the FSC model). When looking to attract FSC passengers, *LCCs need to clearly establish the determinant factors of the FSC passenger in an effort to understand what would motivate them to switch to the LCCs.* The low-cost base of the LCCs offers room for flexibility, particularly on some of the service quality dimensions, which can be improved without any additional cost element (dependable, willingness to help, and individualised attention for example). A clear positioning strategy for the LCCs requires that they consistently deliver on performance, communicate clear and consistent messages, and provide staff with training on appropriate brand behaviour in terms of their passenger interactions. *A key consumer perception for the LCCs to overcome, is that the add-on's (e.g. seat reservations, extra baggage) for the LCC product are not seen as penalties but service enhancing features.* LCCs need to continuously strive for cost reductions, but at the same time they need to identify where there are points of flexibility that would allow the addition of relevant service enhancing features; including innovative ancillary offerings. Central to this customer-centric approach is ensuring that the service is personalised across all contact points for the entire customer journey.
- From the FSC perspective, *FSCs need to focus on the need of FSC passengers to experience the added benefits associated with the FSC product by ensuring that they provide these benefits in a cost-effective manner in order to achieve an advantage over the LCCs.* FSCs are theoretically already offering the product that all passengers indicate that they want, but in some cases, it is at a price that is too high, which causes them to switch model or not fly. Retention is crucial for the FSCs and this means finding innovative ways to offer value-enhancing services within the consumer price threshold. *FSCs need to identify the value dimensions that are important to the consumers and then consistently deliver on their brand promises across the entire customer experience.* Staff training on the brand image they need to portray through their customer interactions is crucial, as is the integration of appropriate technologies to increase staff productivity and spread workload to allow them to focus on their core task of managing passengers across multiple touchpoints. As part of the positioning process, it is crucial that airlines make use of technology to develop an effective content marketing strategy to provide consumers with relevant and valuable content on the service offering.

**9.3.7** Closely linked to 9.3.6 is *the need of the airlines to gain greater insight into consumer understanding and perceptions of issues relating to price.* Price has been shown to be a crucial component of the passenger's decision making throughout the study. *This is particularly important* *from the LCC's perspective where they need to understand how their prices are viewed in terms of their LCC competitors and in terms of the prices charged by the FSCs.* If the LCC fares are seen as too high, even because of economic factors beyond their control resulting them being unable to further drop prices, then they risk being viewed negatively as 'ripping the customer off' because they are no longer 'low cost' or they are 'being greedy but offering less service'. If the prices are too low, then they are sacrificing revenue. LCCs need to go beyond emphasising price and identify the criteria that will correctly communicate the nature of the model and correctly position it. *They need to avoid a position where they are only seen as a model that 'has service features missing compared to the FSCs' or one that 'makes you pay extra for everything and is actually not really cheaper than the FSCs'.* Additionally, it is essential that the LCCs monitor the pricing actions of the FSCs to identify whether a point is being reached where the FSCs are competing with them directly on price. *In this case, the LCCs need to defend their positioning and points of differentiation by focussing on their strengths in terms of the low-cost model that exist beyond pricing.* Customer data needs to be utilised to gain a deeper understanding of their price behaviours.

**9.3.8** *LCCs should further explore the role of loyalty programmes and/or linkages to third party loyalty programmes.* This is particularly important in the context of the findings relating to the price sensitivities of **LCC passengers**, which indicated that they are largely loyal to price and not the airline and will readily switch to another operator if a better price is offered. It was further shown that LCC passengers (particularly males) are seeking affordable air travel but do also desire FSC service features. By adding the option of loyalty programmes, airlines can make the cost-conscious traveller feel like they are receiving a monetary 'discount' as well as receiving a benefit traditionally only offered on a FSC. Key to this is ensuring it is done in keeping with the low-cost focus of the LCC model. This means ensuring that it is easy and simple to administer and easily understood by the passenger. Linking in with a third-party benefits programme (airline or non-airline) removes the complexity of managing this programme and offers the consumer more redemption options. The loyalty programme needs to connect with the passengers and be seen to add real benefits. Customer knowledge is crucial. *Given that the Millennials and Generation Z are generally unimpressed with loyalty programmes, airline marketers need to understand how these generations perceive loyalty and then design a programme that matches their behaviours and experience expectations.*

**9.3.9** In the light of the **FSC passenger's** affinity towards the FSC model and the resultant hesitancy to switch to the LCCs when faced with price increases on the FSCs, the *FSCs should attempt to reduce the importance of price in the targeted consumer's decision-making process and raise the importance attached to the other FSC-related features and benefits.* In this instance, the aim is to ensure that the current FSC passengers remain with the airline and that passengers who defected to the LCCs (due to affordability issues) are 'retrieved'. This is however complicated by the fact that the FSC passengers that would switch did rate the FSCs highly in terms of service quality dimensions and remained loyal for as long as possible before being forced to switch due to the price threshold being reached. Thus, when attempting to 'retrieve' these defecting passengers it will be difficult to convince them to return based on improved features or desirable benefits only, as this does not overcome the original reason for them switching to the LCC (i.e. the fare). FSCs will be faced with deciding to what extent the defecting passengers should be pursued given the income sacrifices that might need to be made. *For airlines operating a dual brand strategy (i.e. operate both models), the use of predictive and prescriptive analysis will be of great benefit in assessing which consumers would be more profitable to them on the LCC and which on the FSC.*

The affinity of LCC passengers towards the FSC model present the FSCs with opportunities to entice them to switch to the FSCs. Whilst a fare reduction might be a strong influencer in convincing these passengers to switch to the FSC model, it is important to consider that these passengers are seeking the perceived benefits associated with the FSC model. *Instead of only using price incentives to entice them to switch, consideration could be given to lowering their price threshold by incentivising them with added benefits that will be seen as overcoming the price differential.* In other words, make price seem a little less important to some of the LCC passengers and thereby encourage them to switch based on features and not fare.

*FSC passengers that show high levels of loyalty to the FSC model and do not switch in the light of proposed price increases should be nurtured and efforts made by the carriers to move them up the price/capacity curve in order to maximise the revenue gained from these passengers.* This involves reviewing yield management activities and efforts to up-sell and cross-sell value adding services. Staff selling skills and webpage 'selling efficiency' are crucial in this regard. Airlines need to take advantage of the premium seeking consumers and focus on offering solutions and not just a service product. Airlines therefore need to look at the entire travel experience to ascertain what motivates these travellers. Content marketing strategies coupled with relationship building strategies are essential for customer retention.

**9.3.10** Given the relative lack of loyalty to the LCC model by LCC respondents, it is essential that the LCCs actively seek to understand the nature of the needs and demands of the LCC passenger – particularly their FSC aspirations and pricing thresholds that determine whether they stay loyal to the LCC or switch to a FSC. This needs to be extended to the FSC passengers that display price sensitivity. *In this regard, the LCCs need to attempt to attract the price sensitive FSC passenger with the offer of a better fare on the LCC, but coupled with the perception that they are receiving additional value that will 'compensate' for the features and benefits they perceive they would be receiving on the FSC had they not switched.* In essence, the LCC has to provide the FSC passenger with the justification for switching to the LCC by devising a personalised experience that the passenger perceives as satisfactory. *A key element of the LCC strategy is to ensure that they do not make price the only focus of their* *marketing campaigns.* By making price the only focus of their attempts to persuade LCC passengers to remain loyal and FSC passengers to switch, LCCs run the risk of being associated solely with low price and that will be what the market expects from them at all times. This will make it difficult for them to compete on any other points of differentiation. This lack of a point of differentiation will easily be exposed if the FSCs drop their prices to counteract this strategy. With price as the main focus, the product essentially becomes a commodity, which makes building relationships and gaining customer loyalty difficult. In the context of price sensitivity and the influence of ticket price on the decision to travel, airline marketers from both models need to consider that (i) there are consumers that might want to travel but do not because an acceptable price is not available, and (ii) there are consumers that had no plans to travel but did because an attractive offer was identified. *Each of these present opportunities for the airline to grow their markets and should be explored.*

**9.3.11** The linking of choice criteria with price sensitivity behaviours coupled with characteristics such as age, gender, purpose of travel, influence of price on the decision to undertake the journey, and other relevant variables will provide invaluable insights into the appeals that can be utilised when developing marketing strategies aimed at the different segments. Essential in this case is the collection of customer data and its use to perform predictive and prescriptive analysis. *Airlines need to use the extensive customer data in their possession to gain intensive customer knowledge that can be used to predict behaviours and model choices so that a uniquely personalised customer experience can be delivered to the customer and problems and opportunities can be immediately addressed (i.e. increase organisational velocity to create a differential advantage).* This entails the airlines using the appropriate enabling technology to offer the consumer a product that meets their specific needs.

**9.3.12** *South African LCCs need to evaluate their options in terms of remaining a pure LCC or evolving their product offering into a hybrid carrier.* Evidence is clear that LCCs need to either be a true LCC or they need to innovatively realign their strategy to focus on the hybrid approach. Justification for the hybrid approach has been seen throughout the findings of this study. The hybrid model revolves around an airline (a LCC) maintaining and using its low-cost base as a launching pad to add benefits and features that appeal to price sensitive business and leisure FSC travellers that strongly want the features of a FSC but at the price of a LCC. *When considering how to penetrate the business segment further, the LCCs need to evaluate whether this should be done following the low-cost approach or the hybrid approach.*

## 9.4 LIMITATIONS

Any research project is conducted within a set of certain limitations that may or may not have an influence on the findings arising from the analysis. Cognisance was taken of the following main limitations surrounding the study:

**9.4.1** The sheer size of the air transport industry and its interconnectedness with other industries made this project a massive undertaking. This made it impractical to attempt to address all the components of the industry that influence its operation and strategic approach. Therefore, only selected issues of key importance to the South African air transport industry were selected for analysis and discussion. Issues that were not explored in the context of this study should be explored in subsequent studies and will be indicated in the section that follows on future research.

**9.4.2** The highly competitive nature of the commercial air transport market in South Africa placed some limitations on the amount of data that could be obtained from the operators in the industry. In addition to this, the cost associated with some types of information is prohibitively high (e.g. industry databases). The time lag between the release of some types of data by industry bodies limited the analysis in some cases.

**9.4.3** The research relied on the co-operation of the respondents in the interview process at a time when they might be in a rush in terms of checking-in and having to catch a flight. Whilst 732 interviews were conducted, there were numerous refusals to be interviewed due to time constraints on the part of the passenger. Given the relative time-pressured nature of the situation, it was not possible to explore the open-ended questions in detail with the respondents, which might have yielded more detailed insights.

**9.4.4** Whilst respondents were asked to identify whether they were travelling for business or leisure purposes, there was no distinction between respondents travelling in business class or economy class. The nature of the questionnaire did not require this distinction as it focussed on perceptions and behaviours relating to the two models and not the class of travel.

## 9.5 PROPOSED FUTURE RESEARCH (secondary objective 7)

The research project was an extensive one. Whilst conducting the analysis of the data, many more questions were arising from the findings that warrant further investigation. The ensuing points identify some possible research opportunities to be considered for the future:

**9.5.1** Research into the differences between the business class and economy class passengers should be considered in the context of their model choice criteria, model perceptions, and loyalty to a model. A greater understanding of these two markets in terms of their behaviours will provide for better segmentation and strategy development.

**9.5.2** More attention should be given to a cross-analytical approach relating to the genders across the two models. Research needs to be conducted with a more detailed focus on the differences or similarities between the genders regarding the two models. The research needs to explore male and female passengers and the way in which they perceive price and how it influences the loyalty/switching behaviour. It is also suggested that a deeper look be taken at the differences between how the two genders perceive the two models and why female passengers are more accepting of the LCC model than male passengers.

**9.5.3** Research into the characteristics and deeper influences on the different age groups is highly recommended. In particular, focussed research relating to the younger generations (e.g. Millennials and Generation Z) who have grown up with the LCC model. They have shown clear differences to the older generation passengers and these 'new behaviours' need to be analysed given they are the future leisure and business passengers. Issues that could be researched include analysing their perceptions of the two models and whether they view them as being direct substitutes. Do they clearly distinguish between the product offerings and rate them according to the different service expectations linked to the two models? The investigation should explore the reasons why these younger age groups rate both models so high in terms of the service quality dimensions. Insights need to be obtained into their model choice criteria and the features and benefits they expect from the entire travel experience. This would also include establishing the communication channels that would be most appropriate for them and the type of communication they desire.

**9.5.4** A further research area would be a larger study into the business travel market, their needs, and what it would take for the LCCs to penetrate this market in order to grow their business in the saturated South African domestic market. This should be explored in conjunction with exploring whether the demand from the business market is for a LCC or a hybrid carrier. In other words, explore whether the business market will be accepting of a pure LCC or whether they want the hybrid product, which offers lower fares but has added features designed to attract the business traveller or the leisure traveller that wants the full-service experience.

**9.5.5** A study on the development of the booking methods per model, and specifically the use of the Internet and the other unusual channels being introduced by the LCCs, should be explored further. This line of research would focus on identifying channels that would appeal to consumers and facilitate the entire booking process. By understanding these preferences on the part of the consumer, airlines will be in a better position to develop channels for their products that are focussed on the customer. The research should look at the characteristics of those using the newer channels: Are they sophisticated travellers? Are they frequent travellers? Are they experienced or inexperienced travellers? What is their level of access to mobile booking platforms? What is their banking status (access to credit facilities etc.)?

**9.5.6** South Africa does not have an extensive number of secondary airports that can be utilised by the LCCs in line with the principles of this model. Two secondary airports are currently used in South Africa for mainstream commercial travel – George and Lanseria. Research could be conducted into establishing whether there are differences between the passengers that choose to use the primary and the secondary airports. In effect, the research would look to establish if there are meaningful differences between passengers and their behaviours when they have another local airport to select from.

## 9.6 CONCLUSION

This study attempted to establish a picture of the travel behaviours of the South African air traveller and how they differed between the two models. Key insights were identified into the travel profile of the travellers as well as their perceptions of the two models. Additional insights were obtained into their choice criteria and switching patterns relating to the two models. The contents of this chapter focussed on identifying all the important findings from the research and offering a few recommendations that should provide topics for thought in the development and marketing of the two models into the future.

From the data collected it was readily apparent that, whilst respondents were willing to offer their opinions on the differences between the two models, they had a limited understanding of the actual differences between the models. This results in consumer perceptions and expectations being discordant with the true differences. Amongst the key findings was the absolute importance of price to the travellers when purchasing the ticket. This applies to passengers travelling on both models. It was established that in some cases that the price of available tickets even influences whether a trip is taken or not.

In distinguishing between models, it became increasingly clear that LCC passengers rate LCCs more favourably than FSC passengers do, but both rate FSCs higher than LCCs. This shows the need of consumers to have the features of the FSCs but that in many cases price thresholds are reached and the cheaper LCC option is selected. From this it was seen that LCC passengers are highly price sensitive and show limited loyalty – they are loyal to price. FSC passengers show a greater degree of loyalty and less fare sensitivity. This provides the FSCs with a degree of fare flexibility. Overall, FSC passengers can be grouped according to those that are price sensitive and those that are extremely loyal.

Perceived price is an important concept for LCCs in distinguishing themselves from FSCs. It is essential for LCCs to ensure they are perceived as being more affordable than the FSCs and that they are offering a value for money service. It is for this reason that pricing strategies (and how they are communicated) for LCCs need to be carefully considered. They cannot just focus on price – the LCC consumer will know if they are not the cheapest and therefore the LCCs can become constrained in their efforts to engage in differentiation strategies if the consumers are fixated only on price. Brand building around issues other than fare need to be carefully devised and more attention paid to the determinant factors.

It was identified that FSCs have greater fare flexibility than LCCs and they need to take the opportunity to move their loyal and less price-sensitive consumers up the price curve. Importantly, FSCs need to capitalise on the premium service seekers by offering travel solutions and not just a service product. It was also seen that the design and implementation of loyalty programmes for LCCs need to be reconsidered. It seems apparent that the LCC passengers have a need for a simple FFP to feel that they are receiving some form of reward and by proxy, a fare reduction. From the FSCs perspective, they must clearly distinguish between passengers that are loyal and those that are price sensitive and adapt their strategies for those markets if they are to retain them and maximise revenue generation opportunities.

Numerous future study options have arisen out of the study that will be of extreme value to the airline industry. Given the importance of this industry to the South African economy in terms of connecting the key cities and their contribution to economic growth, it is crucial that continuous research be conducted to identify changing dynamics and behaviour patterns. This is particularly relevant at this stage with the growth in the number of LCCs in the market and the 'competitive' difficulties being experienced by the 'national carrier' as they attempt to restructure their operations. Coupled with the evolution of the hybrid carrier, any airline that does not heed the changes that are occurring faces an uncertain future that will probably follow the path of Nationwide, Velvet Sky, Skywise, and 1time Airlines.

# APPENDICES

## APPENDIX A - TABULATIONS FOR SECTION 8.3.1 (OBJECTIVE 2)

### APPENDIX A.1: Cross tabulation of gender and type of model flown

| | | | Q39_S1:39. Are you: | | Total |
|---|---|---|---|---|---|
| | | | Male | Female | |
| Type model | FSC | Count | 249 | 127 | 376 |
| | | % within model | 66.2% | 33.8% | 100% |
| | | % within gender | 55.8% | 48.5% | 53.1% |
| | LCC | Count | 197 | 135 | 332 |
| | | % within model | 59.3% | 40.7% | 100% |
| | | % within gender | 44.2% | 51.5% | 46.9% |
| | Total | Count | 446 | 262 | 708 |
| | | % within model | 63.0% | 37.0% | 100% |
| | | % within gender | 100% | 100% | 100% |

### APPENDIX A.2: Cross tabulation of age categories and type of model flown

| | | | Q40_S1:40. Are you aged between: | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 16–18 | 19–24 | 25–34 | 35–44 | 45–54 | 55–64 | 65+ | |
| Type model | FSC | Count | 19 | 62 | 95 | 98 | 72 | 22 | 14 | 382 |
| | | % within model | 5.0% | 16.2% | 24.9% | 2.7% | 18.8% | 5.8% | 3.7% | 100% |
| | | % within age group | 35.8% | 40.3% | 53.7% | 62.4% | 62.6% | 57.9% | 56.0% | 53.1% |
| | LCC | Count | 34 | 92 | 82 | 59 | 43 | 16 | 11 | 337 |
| | | % within model | 10.1% | 27.3% | 24.3% | 17.5% | 12.8% | 4.7% | 3.3% | 100% |
| | | % within age group | 64.2% | 59.7% | 46.3% | 37.6% | 37.4% | 42.1% | 44.0% | 46.9% |
| | Total | Count | 53 | 154 | 177 | 157 | 115 | 38 | 25 | 719 |
| | | % within model | 7.4% | 21.4% | 24.6% | 21.8% | 16.0% | 5.3% | 3.5% | 100% |
| | | % within age group | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

### APPENDIX A.3: Cross tabulation of purpose of travel and type of model flown

| Type model * purpose cross tabulation | | | | | |
|---|---|---|---|---|---|
| | | | Purpose | | Total |
| | | | Business | Leisure | |
| Type model | FSC | Count | 146 | 221 | 367 |
| | | % within type model | 39.8% | 60.2% | 100.0% |
| | | % within purpose | 60.8% | 47.7% | 52.2% |
| | LCC | Count | 94 | 242 | 336 |
| | | % within type model | 28.0% | 72.0% | 100.0% |
| | | % within purpose | 39.2% | 52.3% | 47.8% |
| | Total | Count | 240 | 463 | 703 |
| | | % within type model | 34.1% | 65.9% | 100.0% |
| | | % within purpose | 100.0% | 100.0% | 100.0% |

## APPENDIX A.4: Tabulation of the type of ticket purchased and the type of model flown

| % within type model vs. purpose | | | | | |
|---|---|---|---|---|---|
| | | | Type model | | Total |
| | | | FSC | LCC | |
| Q3_S1:3. Is your journey: | Return | Count | 264 | 196 | 460 |
| | | % within type model | 70.2% | 58.0% | 64.4% |
| | | % within type ticket | 57.4% | 42.6% | 100.0% |
| | One-way | Count | 112 | 142 | 254 |
| | | % within type model | 29.8% | 42.0% | 35.6% |
| | | % within type ticket | 44.1% | 55.9% | 100.0% |
| | Total | Count | 376 | 338 | 714 |
| | | % within type model | 100.0% | 100.0% | 100.0% |
| | | % within type ticket | 52.7% | 47.3% | 100.0% |

## APPENDIX B - CROSS TABULATIONS FOR SECTION 8.3.2 (OBJECTIVE 3)

### APPENDIX B.1: Tabulation of the ticket booking method and the type of model flown ('other' excluded)

| | | | Q33_S133. How did you book your airline ticket | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Travel agent | Purchased at airport | Airline call centre | Family member/ friend booked ticket | Airline website | Other travel booksite | Office booked ticket | Total |
| Type model | FSC | Count | 109 | 25 | 19 | 16 | 144 | 10 | 51 | 374 |
| | | % within model | 29.1% | 6.7% | 5.1% | 4.3% | 38.5% | 2.7% | 13.6% | 100.0% |
| | | % within booking method | 72.2% | 47.2% | 48.7% | 34.0% | 48.0% | 43.5% | 62.2% | 53.8% |
| | LCC | Count | 42 | 28 | 20 | 31 | 156 | 13 | 31 | 321 |
| | | % within model | 13.1% | 8.7% | 6.2% | 9.7% | 48.6% | 4.0% | 9.7% | 100.0% |
| | | % within booking method | 27.8% | 52.8% | 51.3% | 66.0% | 52.0% | 56.5% | 37.8% | 46.2% |
| | Total | Count | 151 | 53 | 39 | 47 | 300 | 23 | 82 | 695 |
| | | % within model | 21.7% | 7.6% | 5.6% | 6.8% | 43.2% | 3.3% | 11.8% | 100.0% |
| | | % within booking method | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

*For the purposes of the inferential analysis the answers reflected as 'other' were excluded from the analysis.

### APPENDIX B.2: Tabulation of airline model flown and whether price comparisons were made prior to ticket purchase

| | | | Q34_S1:34. Did you: | | Total |
|---|---|---|---|---|---|
| | | | Yes | No | |
| Type model | FSC | Count | 140 | 192 | 332 |
| | | % within model | 42.2% | 57.8% | 100.0% |
| | | % within comparisons made | 39.3% | 69.1% | 52.4% |
| | LCC | Count | 216 | 86 | 302 |
| | | % within model | 71.5% | 28.5% | 100.0% |
| | | % within comparisons made | 60.7% | 30.9% | 47.6% |
| | Total | Count | 356 | 278 | 634 |
| | | % within model | 56.2% | 43.8% | 100.0% |
| | | % within comparisons made | 100.0% | 100% | 100.0% |

### APPENDIX B.3: Tabulation of the airline model flown and the ticket purchase time frame

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | Type model | *n* | Mean | Std. Deviation | Std. Error Mean |
| Q35_S135. How long ago did you book the ticket | FSC | 325 | 41.65 | 51.978 | 2.883 |
| | LCC | 309 | 34.20 | 46.216 | 2.629 |

## APPENDIX B.4: Tabulation of the airline model flown and the price paid for tickets

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | **Type model** | ***n*** | **Mean** | **Std. Deviation** | **Std. Error Mean** |
| **Q36_S1:36. How much did you pay for your ticket** | **FSC** | 247 | 1538.959514 | 828.8810696 | 52.7404395 |
| | **LCC** | 279 | 1005.148530 | 552.6948585 | 33.0889757 |

## APPENDIX B.5: Tabulation of the airline model flown and the influence of ticket price on the decision to travel

| Q37_S1:37. Was your trip influenced by the fare? * type model - Cross tabulation | | | | | |
|---|---|---|---|---|---|
| | | | **Type model** | | **Total** |
| | | | **FSC** | **LCC** | |
| **Q37_S1:37. Was your trip influenced by the fare?** | **Yes** | Count | 77 | 156 | 233 |
| | | % | 33.0% | 67.0% | 100.0% |
| | **No** | Count | 260 | 149 | 409 |
| | | % | 63.6% | 36.4% | 100.0% |
| | **Total** | Count | 337 | 305 | 642 |
| | | % | 52.5% | 47.5% | 100.0% |

## APPENDIX B.6: Tabulation of the airline model flown and who paid for the ticket?

| Type model * Q38_S1:38. Who paid for the ticket - Cross tabulation | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | **Who paid for the ticket** | | | | **Total** |
| | | | **Self** | **Work** | **Gift** | **Parent** | |
| **Type model** | **FSC** | Count | 205 | 114 | 5 | 36 | 360 |
| | | % within type model | 56.9% | 31.7% | 1.4% | 10.0% | 100.0% |
| | | % within who paid for ticket | 51.5% | 68.3% | 31.3% | 35.6% | 52.8% |
| | **LCC** | Count | 193 | 53 | 11 | 65 | 322 |
| | | % within type model | 59.9% | 16.5% | 3.4% | 20.2% | 100.0% |
| | | % within who paid for ticket | 48.5% | 31.7% | 68.8% | 64.4% | 47.2% |
| | **Total** | Count | 398 | 167 | 16 | 101 | 682 |
| | | % within type model | 58.4% | 24.5% | 2.3% | 14.8% | 100.0% |
| | | % within who paid for ticket | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

## APPENDIX C - TABULATIONS FOR SECTION 8.3.3 (OBJECTIVE 4)

**APPENDIX C.1: Tabulation of respondent individual choice criteria and type of model flown**

| Ranks | | | | |
|---|---|---|---|---|
| **Reasons for choosing airline** | **Type model** | ***n*** | **Mean Rank** | **Sum of Ranks** |
| **Q17_S117 Frequent flyer programme** | **FSC** | 70 | 57.69 | 4038.00 |
| | **LCC** | 40 | 51.68 | 2067.00 |
| | **Total** | 110 | | |
| **Q17_S1 Fare** | **FSC** | 139 | 218.72 | 30401.50 |
| | **LCC** | 215 | 150.85 | 32433.50 |
| | **Total** | 354 | | |
| **Q17_S1 Quality** | **FSC** | 248 | 205.86 | 51054.50 |
| | **LCC** | 195 | 242.52 | 47291.50 |
| | **Total** | 443 | | |
| **Q17_S1 Connections/airport destination** | **FSC** | 104 | 100.37 | 10438.00 |
| | **LCC** | 85 | 88.44 | 7517.00 |
| | **Total** | 189 | | |
| **Q17_S1 Reliability** | **FSC** | 216 | 195.77 | 42286.50 |
| | **LCC** | 189 | 211.26 | 39928.50 |
| | **Total** | 405 | | |
| **Q17_S1 Frequency of flights** | **FSC** | 135 | 120.82 | 16310.50 |
| | **LCC** | 108 | 123.48 | 13335.50 |
| | **Total** | 243 | | |
| **Q17_S1 Safety** | **FSC** | 217 | 184.02 | 39933.00 |
| | **LCC** | 176 | 213.00 | 37488.00 |
| | **Total** | 393 | | |
| **Q17_S1 Comfort** | **FSC** | 195 | 168.90 | 32936.00 |
| | **LCC** | 156 | 184.87 | 28840.00 |
| | **Total** | 351 | | |
| **Q17_S1 Service** | **FSC** | 192 | 182.28 | 34997.00 |
| | **LCC** | 178 | 188.98 | 33638.00 |
| | **Total** | 370 | | |
| **Q17_S1 Company policy** | **FSC** | 34 | 43.50 | 1479.00 |
| | **LCC** | 54 | 45.13 | 2437.00 |
| | **Total** | 88 | | |

**APPENDIX C.2: Tabulation of respondent choice criteria and gender for the FSC respondents (travelling on the FSC model)**

| Ranks | | | | |
|---|---|---|---|---|
| **Reasons for choosing airline** | **Q39_S139. Are you** | ***n*** | **Mean Rank** | **Sum of Ranks** |
| **Q17_S1 Frequent flyer programme** | **Male** | 46 | 34.78 | 1600.00 |
| | **Female** | 23 | 35.43 | 815.00 |
| | **Total** | 69 | | |
| **Q17_S1 Fare** | **Male** | 79 | 69.59 | 5498.00 |
| | **Female** | 58 | 68.19 | 3955.00 |
| | **Total** | 137 | | |
| **Q17_S1 Quality** | **Male** | 155 | 122.05 | 18917.50 |
| | **Female** | 86 | 119.11 | 10243.50 |
| | **Total** | 241 | | |
| **Q17_S1 Connections/airport destination** | **Male** | 70 | 53.81 | 3767.00 |
| | **Female** | 32 | 46.44 | 1486.00 |
| | **Total** | 102 | | |

| | | | | |
|---|---|---|---|---|
| **Q17_S1 Reliability** | **Male** | 136 | 101.95 | 13865.00 |
| | **Female** | 74 | 112.03 | 8290.00 |
| | **Total** | 210 | | |
| **Q17_S1 Frequency of flights** | **Male** | 85 | 66.64 | 5664.00 |
| | **Female** | 45 | 63.36 | 2851.00 |
| | **Total** | 130 | | |
| **Q17_S1 Safety** | **Male** | 135 | 103.25 | 13938.50 |
| | **Female** | 80 | 116.02 | 9281.50 |
| | **Total** | 215 | | |
| **Q17_S1 Comfort** | **Male** | 117 | 88.79 | 10389.00 |
| | **Female** | 71 | 103.90 | 7377.00 |
| | **Total** | 188 | | |
| **Q17_S1 Service** | **Male** | 126 | 98.02 | 12350.50 |
| | **Female** | 63 | 88.96 | 5604.50 |
| | **Total** | 189 | | |
| **Q17_S1 Company policy** | **Male** | 23 | 18.87 | 434.00 |
| | **Female** | 11 | 14.64 | 161.00 |
| | **Total** | 34 | | |

**APPENDIX C.3: Tabulation of respondent choice criteria and gender for the LCC respondents (travelling on the LCC model)**

| **Ranks** | | | | |
|---|---|---|---|---|
| **Reasons for choosing airline** | **Q39_S139. Are you** | ***n*** | **Mean Rank** | **Sum of Ranks** |
| **Q17_S117 Frequent flyer programme** | **Male** | 28 | 19.64 | 550.00 |
| | **Female** | 11 | 20.91 | 230.00 |
| | **Total** | 39 | | |
| **Q17_S1 Fare** | **Male** | 116 | 106.09 | 12306.50 |
| | **Female** | 89 | 98.97 | 8808.50 |
| | **Total** | 205 | | |
| **Q17_S1 Quality** | **Male** | 110 | 89.20 | 9812.50 |
| | **Female** | 76 | 99.72 | 7578.50 |
| | **Total** | 186 | | |
| **Q17_S1 Connections/airport destination** | **Male** | 48 | 39.88 | 1914.00 |
| | **Female** | 33 | 42.64 | 1407.00 |
| | **Total** | 81 | | |
| **Q17_S1 Reliability** | **Male** | 104 | 88.63 | 9217.50 |
| | **Female** | 74 | 90.72 | 6713.50 |
| | **Total** | 178 | | |
| **Q17_S1 Frequency of flights** | **Male** | 61 | 54.67 | 3335.00 |
| | **Female** | 44 | 50.68 | 2230.00 |
| | **Total** | 105 | | |
| **Q17_S1 Safety** | **Male** | 103 | 83.04 | 8553.00 |
| | **Female** | 63 | 84.25 | 5308.00 |
| | **Total** | 166 | | |
| **Q17_S1 Comfort** | **Male** | 88 | 77.97 | 6861.00 |
| | **Female** | 65 | 75.69 | 4920.00 |
| | **Total** | 153 | | |
| **Q17_S1 Service** | **Male** | 102 | 88.02 | 8978.50 |
| | **Female** | 67 | 80.40 | 5386.50 |
| | **Total** | 169 | | |
| **Q17_S1 Company policy** | **Male** | 37 | 24.42 | 903.50 |
| | **Female** | 14 | 30.18 | 422.50 |
| | **Total** | 51 | | |

**APPENDIX C.4: Tabulation of respondent choice criteria and age groups for the FSC respondents (travelling on the FSC model)**

| Ranks | | | |
|---|---|---|---|
| **Reasons for choosing airline** | **Q40_S140. Are you aged between** | ***n*** | **Mean Rank** |
| **Q17_S117 Frequent flyer programmes** | **16 – 24** | 13 | 43.50 |
| | **25 – 34** | 18 | 40.56 |
| | **35 – 44** | 13 | 29.69 |
| | **45 – 64** | 26 | 30.90 |
| | **Total** | 70 | |
| **Q17_S1 Fare** | **16 – 24** | 30 | 62.03 |
| | **25 – 34** | 35 | 64.47 |
| | **35 – 44** | 31 | 69.74 |
| | **45 – 54** | 21 | 67.38 |
| | **55 – 64** | 13 | 63.12 |
| | **65+** | 9 | 91.28 |
| | **Total** | 139 | |
| **Q17_S1 Quality** | **16 – 18** | 15 | 142.23 |
| | **19 – 24** | 43 | 119.01 |
| | **25 – 34** | 56 | 124.04 |
| | **35 – 44** | 65 | 112.22 |
| | **45 – 54** | 44 | 122.63 |
| | **55 – 64** | 16 | 151.59 |
| | **65+** | 8 | 164.50 |
| | **Total** | 247 | |
| **Q17_S1 Connections/airport destination** | **16 – 18** | 8 | 53.81 |
| | **19 – 24** | 14 | 54.61 |
| | **25 – 34** | 16 | 41.06 |
| | **35 – 44** | 23 | 61.61 |
| | **45 – 54** | 29 | 55.50 |
| | **55 – 64** | 7 | 33.14 |
| | **65+** | 7 | 49.93 |
| | **Total** | 104 | |
| **Q17_S1 Reliability** | **16 – 18** | 14 | 145.79 |
| | **19 – 24** | 35 | 122.34 |
| | **25 – 34** | 46 | 102.37 |
| | **35 – 44** | 55 | 95.48 |
| | **45 – 54** | 42 | 104.71 |
| | **55 – 64** | 13 | 128.50 |
| | **65+** | 10 | 86.80 |
| | **Total** | 215 | |
| **Q17_S1 Frequency of flights** | **16 – 18** | 7 | 88.43 |
| | **19 – 24** | 24 | 60.90 |
| | **25 – 34** | 24 | 70.83 |
| | **35 – 44** | 31 | 72.89 |
| | **45 – 54** | 34 | 60.43 |
| | **55 – 64** | 9 | 67.17 |
| | **65+** | 5 | 69.20 |
| | **Total** | 134 | |
| **Q17_S1 Safety** | **16 – 18** | 13 | 66.58 |
| | **19 – 24** | 34 | 108.49 |
| | **25 – 34** | 49 | 105.45 |
| | **35 – 44** | 58 | 112.83 |
| | **45 – 54** | 38 | 122.16 |
| | **55 – 64** | 15 | 115.20 |
| | **65+** | 9 | 89.00 |
| | **Total** | 216 | |
| **Q17_S1 Comfort** | **16 – 18** | 13 | 79.00 |
| | **19 – 24** | 38 | 88.53 |
| | **25 – 34** | 42 | 110.19 |
| | **35 – 44** | 47 | 95.77 |
| | **45 – 54** | 38 | 110.00 |
| | **55 – 64** | 12 | 92.21 |
| | **65+** | 5 | 60.70 |
| | **Total** | 195 | |

| | | | |
|---|---|---|---|
| **Q17_S1 Service** | **16 – 18** | 12 | 84.29 |
| | **19 – 24** | 35 | 101.96 |
| | **25 – 34** | 43 | 87.63 |
| | **35 – 44** | 49 | 102.37 |
| | **45 – 54** | 37 | 95.35 |
| | **55 – 64** | 9 | 95.50 |
| | **65+** | 7 | 110.93 |
| | **Total** | 192 | |
| **Q17_S1 Company policy** | **16 – 18** | 2 | 10.75 |
| | **19 – 24** | 2 | 11.50 |
| | **25 – 34** | 6 | 11.25 |
| | **35 – 44** | 15 | 18.07 |
| | **45 – 54** | 7 | 21.36 |
| | **55 – 64** | 1 | 28.50 |
| | **Total** | 33 | |

**APPENDIX C.5: Tabulation of respondent choice criteria and age groups for the LCC respondents (travelling on the LCC model)**

| **Ranks** | | | |
|---|---|---|---|
| | **Q40_S140. Are you aged between** | ***n*** | **Mean Rank** |
| **Q17_S117 Frequent flyer programme** | **16 – 24** | 17 | 20.97 |
| | **25 – 34** | 7 | 17.36 |
| | **35 – 44** | 8 | 22.69 |
| | **45 – 64** | 7 | 17.21 |
| | **Total** | 39 | |
| **Q17_S1 Fare** | **16 – 24** | 84 | 101.45 |
| | **25 – 34** | 42 | 93.36 |
| | **35 – 44** | 36 | 121.31 |
| | **45 – 54** | 30 | 123.37 |
| | **55 – 64** | 10 | 97.70 |
| | **65+** | 9 | 97.61 |
| | **Total** | 211 | |
| **Q17_S1 Quality** | **16 – 18** | 23 | 108.24 |
| | **19 – 24** | 53 | 105.08 |
| | **25 – 34** | 37 | 89.45 |
| | **35 – 44** | 40 | 84.95 |
| | **45 – 54** | 23 | 85.87 |
| | **55 – 64** | 8 | 96.50 |
| | **65+** | 6 | 105.33 |
| | **Total** | 190 | |
| **Q17_S1 Connections/airport destination** | **16 – 18** | 6 | 28.67 |
| | **19 – 24** | 19 | 38.34 |
| | **25 – 34** | 23 | 43.72 |
| | **35 – 44** | 16 | 46.72 |
| | **45 – 54** | 12 | 41.50 |
| | **55 — 64** | 5 | 33.90 |
| | **Total** | 81 | |
| **Q17_S1 Reliability** | **16 – 18** | 16 | 85.81 |
| | **19 – 24** | 49 | 93.69 |
| | **25 – 34** | 42 | 104.17 |
| | **35 – 44** | 43 | 89.56 |
| | **45 – 54** | 21 | 91.86 |
| | **55 – 64** | 8 | 60.38 |
| | **65+** | 6 | 100.50 |
| | **Total** | 185 | |
| **Q17_S1 Frequency of flights** | **16 – 18** | 13 | 58.77 |
| | **19 – 24** | 28 | 44.09 |
| | **25 – 34** | 30 | 51.42 |
| | **35 – 44** | 11 | 58.09 |
| | **45 – 54** | 12 | 49.42 |
| | **55 –64** | 8 | 60.00 |
| | **Total** | 102 | |

| | | | |
|---|---|---|---|
| **Q17_S1 Safety** | **16 – 18** | 22 | 87.41 |
| | **19 – 24** | 45 | 81.13 |
| | **25 – 34** | 34 | 85.82 |
| | **35 – 44** | 37 | 92.50 |
| | **45 – 54** | 22 | 79.39 |
| | **55 – 64** | 6 | 109.58 |
| | **65+** | 6 | 93.25 |
| | **Total** | 172 | |
| **Q17_S1 Comfort** | **16 – 18** | 21 | 67.83 |
| | **19 – 24** | 44 | 81.34 |
| | **25 – 34** | 32 | 70.31 |
| | **35 – 44** | 30 | 77.28 |
| | **45 – 54** | 16 | 85.19 |
| | **55 – 64** | 7 | 55.71 |
| | **Total** | 150 | |
| **Q17_S1 Service** | **16 – 18** | 18 | 103.33 |
| | **19 – 24** | 48 | 89.19 |
| | **25 – 34** | 43 | 79.16 |
| | **35 – 44** | 33 | 83.18 |
| | **45 – 54** | 18 | 100.47 |
| | **55 – 64** | 8 | 91.81 |
| | **65+** | 6 | 65.33 |
| | **Total** | 174 | |
| **Q17_S1 Company policy** | **16 – 18** | 1 | 44.00 |
| | **19 – 24** | 18 | 30.25 |
| | **25 – 34** | 15 | 25.60 |
| | **35 – 44** | 10 | 19.55 |
| | **45 – 54** | 5 | 22.20 |
| | **55 – 64** | 1 | 27.50 |
| | **65+** | 2 | 35.75 |
| | **Total** | 52 | |

## APPENDIX D - TABULATIONS FOR SECTION 8.3.4 (OBJECTIVE 5)

**APPENDIX D.1: Mean 'service scores' of respondent (LCC and FSC) perceptions relating to both models**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | type_model | *n* | Mean | Std. Deviation | Std. Error Mean |
| lowcostserv | FSC | 336 | 4.7446 | 1.17330 | .06401 |
| | LCC | 329 | 5.1015 | .93771 | .05170 |
| fullserv | FSC | 375 | 5.8283 | .84141 | .04345 |
| | LCC | 320 | 5.5713 | .99626 | .05569 |

**APPENDIX D.2: Mean 'service scores' of respondent (LCC and FSC) perceptions relating to both models sub-divided according to gender**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| | Q39_S1:39. Are you: | *n* | Mean | Std. Deviation | Std. Error Mean |
| lowcostserv | Male | 407 | 4.9027 | 1.07198 | .05314 |
| | Female | 241 | 4.9336 | 1.09935 | .07082 |
| fullserv | Male | 432 | 5.7157 | .87869 | .04228 |
| | Female | 246 | 5.7098 | .95044 | .06060 |

**APPENDIX D.3: Mean 'service scores' of respondent (LCC and FSC) perceptions relating to both models sub-divided according to age group**

| Report | | | |
|---|---|---|---|
| Q40_S1:40. Are you aged between: | | lowcostserv | fullserv |
| 16–18 | Mean | 5.2560 | 5.7920 |
| | N | 50 | 50 |
| 19–24 | Mean | 4.9472 | 5.8234 |
| | N | 144 | 145 |
| 25–34 | Mean | 4.8233 | 5.5810 |
| | N | 163 | 168 |
| 35–44 | Mean | 4.8222 | 5.6724 |
| | N | 144 | 152 |
| 45–54 | Mean | 4.8981 | 5.7036 |
| | N | 104 | 112 |
| 55+ | Mean | 5.1373 | 5.9390 |
| | N | 51 | 59 |
| Total | Mean | 4.9195 | 5.7187 |
| | N | 656 | 686 |

## APPENDIX E - TABULATIONS FOR SECTION 8.3.5 (OBJECTIVE 6)

### APPENDIX E.1: Tabulation of type of carrier travelled on and the 'loyalty' variable

| | | | Loyalty | | | Total |
|---|---|---|---|---|---|---|
| | | | .00 | 1.00 | 2.00 | |
| Type model | FSC | Count | 214 | 169 | 0 | 383 |
| | | % within type model | 55.9% | 44.1% | 0.0% | 100.0% |
| | | % within Loyalty | 41.8% | 100.0% | 0.0% | 52.5% |
| | LCC | Count | 298 | 0 | 48 | 346 |
| | | % within type model | 86.1% | 0.0% | 13.9% | 100.0% |
| | | % within Loyalty | 58.2% | 0.0% | 100.0% | 47.5% |
| | Total | Count | 512 | 169 | 48 | 729 |
| | | % within type model | 70.2% | 23.2% | 6.6% | 100.0% |
| | | % within Loyalty | 100.0% | 100.0% | 100.0% | 100.0% |
| 0 = switch 1 = loyalty to FSCs 2 = loyalty to LCCs | | | | | | |

### APPENDIX E.2: LCC respondent Loyalty variable and their mean service scores relating to the two models

| LCC respondents | | | | | |
|---|---|---|---|---|---|
| | Loyalty_LCC | *n* | Mean | Std. Deviation | Std. Error Mean |
| lowcostserv | .00 (switch) | 619 | 4.9108 | 1.08413 | .04357 |
| | 2.00 (loyal to LCC) | 46 | 5.0609 | .98240 | .14485 |
| fullserv | .00 (switch) | 649 | 5.7297 | .90540 | .03554 |
| | 2.00 (loyal to LCC) | 46 | 5.4304 | 1.13292 | .16704 |

### APPENDIX E.3: FSC respondent Loyalty variable and their mean service scores relating to the two models

| FSC respondents | | | | | |
|---|---|---|---|---|---|
| | Loyalty_FSC | *n* | Mean | Std. Deviation | Std. Error Mean |
| lowcostserv | .00 (switch) | 517 | 4.9006 | 1.03838 | .04567 |
| | 1.00 (loyal to FSC) | 148 | 4.9932 | 1.20485 | .09904 |
| fullserv | .00 (switch) | 527 | 5.6216 | .95132 | .04144 |
| | 1.00 (loyal to FSC) | 168 | 5.9869 | .77294 | .05963 |

**APPENDIX E.4: Tabulation of FSC respondent mean perception scores and switching level groups**

| | | *n* | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Min | Max |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound | | |
| lowcostserv | 10% | 71 | 4.9211 | .98124 | .11645 | 4.6889 | 5.1534 | 2.80 | 7.00 |
| | 20% | 76 | 4.6789 | 1.19781 | .13740 | 4.4052 | 4.9527 | 2.00 | 7.00 |
| | 30% | 54 | 4.4519 | 1.03609 | .14099 | 4.1691 | 4.7347 | 2.60 | 6.60 |
| | Not switch | 190 | 5.0368 | 1.15750 | .08397 | 4.8712 | 5.2025 | 1.80 | 7.00 |
| | Total | 391 | 4.8655 | 1.13545 | .05742 | 4.7526 | 4.9784 | 1.80 | 7.00 |
| fullserv | 10% | 77 | 5.7714 | .94575 | .10778 | 5.5568 | 5.9861 | 3.00 | 7.00 |
| | 20% | 84 | 5.6262 | .86305 | .09417 | 5.4389 | 5.8135 | 2.60 | 7.00 |
| | 30% | 54 | 5.6630 | .77880 | .10598 | 5.4504 | 5.8755 | 3.00 | 7.00 |
| | Not switch | 207 | 6.0010 | .74924 | .05208 | 5.8983 | 6.1036 | 3.60 | 7.00 |
| | Total | 422 | 5.8412 | .82830 | .04032 | 5.7620 | 5.9205 | 2.60 | 7.00 |

**APPENDIX E.5: Tabulation of LCC respondent mean perception scores and switching level groups**

| | | *n* | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Min | Max |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound | | |
| lowcostserv | 10% | 34 | 5.2235 | 1.04187 | .17868 | 4.8600 | 5.5871 | 3.20 | 7.00 |
| | 20% | 74 | 5.1919 | .91528 | .10640 | 4.9798 | 5.4039 | 3.00 | 7.00 |
| | 30% | 200 | 5.1160 | .83861 | .05930 | 4.9991 | 5.2329 | 3.00 | 7.00 |
| | Not switch | 73 | 5.1315 | 1.13491 | .13283 | 4.8667 | 5.3963 | 2.80 | 7.00 |
| | Total | 381 | 5.1433 | .93220 | .04776 | 5.0494 | 5.2372 | 2.80 | 7.00 |
| fullserv | 10% | 35 | 5.3657 | 1.10559 | .18688 | 4.9859 | 5.7455 | 2.40 | 7.00 |
| | 20% | 73 | 5.6822 | 1.00711 | .11787 | 5.4472 | 5.9172 | 2.00 | 7.00 |
| | 30% | 197 | 5.8812 | .92863 | .06616 | 5.7507 | 6.0117 | 2.00 | 7.00 |
| | Not switch | 74 | 5.7351 | 1.08797 | .12647 | 5.4831 | 5.9872 | 1.00 | 7.00 |
| | Total | 379 | 5.7668 | 1.00109 | .05142 | 5.6656 | 5.8679 | 1.00 | 7.00 |

**APPENDIX E.6: Cross Tabulation of gender with respondent loyalty to a model**

| | | | Loyalty | | | |
|---|---|---|---|---|---|---|
| | | | Switch | Loyalty FSC | Loyalty LCC | Total |
| Q39_S1:39. Are you: | Male | Count | 307 | 112 | 27 | 446 |
| | | % within gender | 68.8% | 25.1% | 6.1% | 100% |
| | | % within Loyalty | 61.9% | 67.9% | 57.4% | 63.0% |
| | Female | Count | 189 | 53 | 20 | 262 |
| | | % within gender | 72.1% | 20.2% | 7.6% | 100.0% |
| | | % within Loyalty | 38.1% | 32.1% | 42.6% | 37.0% |
| | Total | Count | 496 | 165 | 47 | 708 |
| | | % within gender | 70.1% | 23.3% | 6.6% | 100.0% |
| | | % within Loyalty | 100.0% | 100.0% | 100.0% | 100.0% |

## APPENDIX E.7: Tabulation of age groups with the loyalty to a model

| | | | Loyalty | | | |
|---|---|---|---|---|---|---|
| | | | Switch | Loyalty FSC | Loyalty LCC | Total |
| Q40_S1:40. Are you aged between: | 16–18 | Count | 36 | 8 | 9 | 53 |
| | | % within Age group | 67.9% | 15.1% | 17.0% | 100.0% |
| | | % within Loyalty | 7.2% | 4.7% | 19.1% | 7.4% |
| | 19–24 | Count | 121 | 21 | 12 | 154 |
| | | % within Age group | 78.6% | 13.6% | 7.8% | 100.0% |
| | | % within Loyalty | 24.1% | 12.4% | 25.5% | 21.4% |
| | 25–34 | Count | 132 | 33 | 12 | 177 |
| | | % within Age group | 74.6% | 18.6% | 6.8% | 100.0% |
| | | % within Loyalty | 26.2% | 19.5% | 25.5% | 24.6% |
| | 35–44 | Count | 101 | 50 | 6 | 157 |
| | | % within Age group | 64.3% | 31.8% | 3.8% | 100.0% |
| | | % within Loyalty | 20.1% | 29.6% | 12.8% | 21.8% |
| | 45–54 | Count | 71 | 39 | 5 | 115 |
| | | % within Age group | 61.7% | 33.9% | 4.3% | 100.0% |
| | | % within Loyalty | 14.1% | 23.1% | 10.6% | 16.0% |
| | 55–64 | Count | 24 | 11 | 3 | 38 |
| | | % within Age group | 63.2% | 28.9% | 7.9% | 100.0% |
| | | % within Loyalty | 4.8% | 6.5% | 6.4% | 5.3% |
| | 65+ | Count | 18 | 7 | 0 | 25 |
| | | % within Age group | 72.0% | 28.0% | 0.0% | 100.0% |
| | | % within Loyalty | 3.6% | 4.1% | 0.0% | 3.5% |
| | Total | Count | 503 | 169 | 47 | 719 |
| | | % within Age group | 70.0% | 23.5% | 6.5% | 100.0% |
| | | % within Loyalty | 100.0% | 100.0% | 100.0% | 100.0% |

## APPENDIX E.8: Tabulation of respondent price sensitivities sub-divided according to gender – FSC and LCC respondents

| | | | Q29_S1:29. If a full-service carrier increased its fare, at what interval would you consider switching to a low-cost carrier? | | | | |
|---|---|---|---|---|---|---|---|
| | | | Switch at 10% | Switch at 20% | Switch at 30% | Not switch | Total |
| FSC respondents (if FSC increased fares) | Male | *n* | 39 | 37 | 41 | 112 | 229 |
| | | % row | 17.0% | 16.2% | 17.9% | 48.9% | 100.0% |
| | | % column | 69.6% | 51.4% | 75.9% | 67.9% | 66.0% |
| | Female | *n* | 17 | 35 | 13 | 53 | 118 |
| | | % row | 14.4% | 29.7% | 11.0% | 44.9% | 100.0% |
| | | % column | 30.4% | 48.6% | 24.1% | 32.1% | 34.0% |
| | Total | *n* | 56 | 72 | 54 | 165 | 347 |
| | | % row | 16.1% | 20.7% | 15.6% | 47.6% | 100.0% |
| | | % column | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | | | Q31_S1:31. If a full-service carrier reduced its fare, at what interval would you consider switching to a full-service carrier? | | | | |
| | | | Switch at 10% | Switch at 20% | Switch at 30% | Not switch | Total |
| LCC respondents (if FSCs decreased fares) | Male | *n* | 18 | 34 | 97 | 27 | 176 |
| | | % row | 10.2% | 19.3% | 55.1% | 15.3% | 100.0% |
| | | % column | 60.0% | 48.6% | 64.2% | 57.4% | 59.1% |
| | Female | *n* | 12 | 36 | 54 | 20 | 122 |
| | | % row | 9.8% | 29.5% | 44.3% | 16.4% | 100.0% |
| | | % column | 40.0% | 51.4% | 35.8% | 42.6% | 40.9% |
| | Total | *n* | 30 | 70 | 151 | 47 | 298 |
| | | % row | 10.1% | 23.5% | 50.7% | 15.8% | 100.0% |
| | | % column | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

**APPENDIX E.9: Tabulation of respondent price sensitivities sub-divided according to age (FSC and LCC)**

| FSC respondents | | | Q29_S1:29. If a FSC increased its fare, at what interval would you consider switching to a LCC? | | | | |
|---|---|---|---|---|---|---|---|
| | **Age** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| **FSC respondents (if FSC increased fares)** | **16–18** | Count | 5 | 1 | 4 | 8 | **18** |
| | | % row | 27.8% | 5.6% | 22.2% | 44.4% | **100.0%** |
| | | % column | 8.8% | 1.4% | 7.4% | 4.7% | **5.1%** |
| | **19–24** | Count | 6 | 19 | 9 | 21 | **55** |
| | | % row | 10.9% | 34.5% | 16.4% | 38.2% | **100.0%** |
| | | % column | 10.5% | 26.0% | 16.7% | 12.4% | **15.6%** |
| | **25–34** | Count | 18 | 21 | 12 | 33 | **84** |
| | | % row | 21.4% | 25.0% | 14.3% | 39.3% | **100.0%** |
| | | % column | 31.6% | 28.8% | 22.2% | 19.5% | **23.8%** |
| | **35–44** | Count | 14 | 10 | 15 | 50 | **89** |
| | | % row | 15.7% | 11.2% | 16.9% | 56.2% | **100.0%** |
| | | % column | 24.6% | 13.7% | 27.8% | 29.6% | **25.2%** |
| | **45–54** | Count | 7 | 15 | 10 | 39 | **71** |
| | | % row | 9.9% | 21.1% | 14.1% | 54.9% | **100.0%** |
| | | % column | 12.3% | 20.5% | 18.5% | 23.1% | **20.1%** |
| | **55–64** | Count | 5 | 3 | 3 | 11 | **22** |
| | | % row | 22.7% | 13.6% | 13.6% | 50.0% | **100.0%** |
| | | % column | 8.8% | 4.1% | 5.6% | 6.5% | **6.2%** |
| | **65+** | Count | 2 | 4 | 1 | 7 | **14** |
| | | % row | 14.3% | 28.6% | 7.1% | 50.0% | **100.0%** |
| | | % column | 3.5% | 5.5% | 1.9% | 4.1% | **4.0%** |
| | **Total** | Count | **57** | **73** | **54** | **169** | **353** |
| | | % row | **16.1%** | **20.7%** | **15.3%** | **47.9%** | **100.0%** |
| | | % column | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

| LCC respondents | | | Q31_S1:31. If a FSC reduced its fare, at what interval would you consider switching to a FSC? | | | | |
|---|---|---|---|---|---|---|---|
| | **Age** | | **Switch at 10%** | **Switch at 20%** | **Switch at 30%** | **Not switch** | **Total** |
| **LCC respondents (if FSCs decreased fares)** | **16–18** | Count | 1 | 5 | 16 | 9 | **31** |
| | | % row | 3.2% | 16.1% | 51.6% | 29.0% | **100.0%** |
| | | % column | 3.2% | 7.1% | 10.4% | 19.1% | **10.3%** |
| | **19–24** | Count | 5 | 23 | 46 | 12 | **86** |
| | | % row | 5.8% | 26.7% | 53.5% | 14.0% | **100.0%** |
| | | % column | 16.1% | 32.9% | 29.9% | 25.5% | **28.5%** |
| | **25–34** | Count | 8 | 16 | 35 | 12 | **71** |
| | | % row | 11.3% | 22.5% | 49.3% | 16.9% | **100.0%** |
| | | % column | 25.8% | 22.9% | 22.7% | 25.5% | **23.5%** |
| | **35–44** | Count | 10 | 10 | 28 | 6 | **54** |
| | | % row | 18.5% | 18.5% | 51.9% | 11.1% | **100.0%** |
| | | % column | 32.3% | 14.3% | 18.2% | 12.8% | **17.9%** |
| | **45–54** | Count | 4 | 10 | 17 | 5 | **36** |
| | | % row | 11.1% | 27.8% | 47.2% | 13.9% | **100.0%** |
| | | % column | 12.9% | 14.3% | 11.0% | 10.6% | **11.9%** |
| | **55–64** | Count | 2 | 2 | 7 | 3 | **14** |
| | | % row | 14.3% | 14.3% | 50.0% | 21.4% | **100.0%** |
| | | % column | 6.5% | 2.9% | 4.5% | 6.4% | **4.6%** |
| | **65+** | Count | 1 | 4 | 5 | 0 | **10** |
| | | % row | 10.0% | 40.0% | 50.0% | 0.0% | **100.0%** |
| | | % column | 3.2% | 5.7% | 3.2% | 0.0% | **3.3%** |
| | **Total** | Count | **31** | **70** | **154** | **47** | **302** |
| | | % row | **10.3%** | **23.2%** | **51.0%** | **15.6%** | **100.0%** |
| | | % column | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

## APPENDIX E.10: Tabulation of respondent choice criteria mean ranks and loyalty to model

| Ranks | | | |
|---|---|---|---|
| **Reason for choosing airline** | **Loyalty** | ***N*** | **Mean Rank** |
| **Q17_S117 Frequent flyer programme** | .00 | 69 | 57.07 |
| | 1.00 | 37 | 53.18 |
| | 2.00 | 4 | 49.88 |
| | Total | 110 | |
| **Q17_S1 Fare** | .00 | 278 | 166.76 |
| | 1.00 | 47 | 251.32 |
| | 2.00 | 29 | 160.84 |
| | Total | 354 | |
| **Q17_S1 Quality** | .00 | 301 | 221.45 |
| | 1.00 | 117 | 218.65 |
| | 2.00 | 25 | 244.38 |
| | Total | 443 | |
| **Q17_S1 Connections/airport destination** | .00 | 124 | 91.79 |
| | 1.00 | 54 | 100.15 |
| | 2.00 | 11 | 105.95 |
| | Total | 189 | |
| **Q17_S1 Reliability** | .00 | 279 | 204.37 |
| | 1.00 | 99 | 194.99 |
| | 2.00 | 27 | 218.19 |
| | Total | 405 | |
| **Q17_S1 Frequency of flights** | .00 | 169 | 122.69 |
| | 1.00 | 57 | 122.26 |
| | 2.00 | 17 | 114.24 |
| | Total | 243 | |
| **Q17_S1 Safety** | .00 | 261 | 208.30 |
| | 1.00 | 104 | 170.63 |
| | 2.00 | 28 | 189.64 |
| | Total | 393 | |
| **Q17_S1 Comfort** | .00 | 236 | 183.77 |
| | 1.00 | 88 | 163.10 |
| | 2.00 | 27 | 150.11 |
| | Total | 351 | |
| **Q17_S1 Service** | .00 | 251 | 188.40 |
| | 1.00 | 94 | 177.88 |
| | 2.00 | 25 | 185.06 |
| | Total | 370 | |
| **Q17_S1 Company policy** | .00 | 60 | 44.28 |
| | 1.00 | 18 | 45.19 |
| | 2.00 | 10 | 44.60 |
| | Total | 88 | |
| 0 = switch 1 = loyalty to FSCs 2 = loyalty to LCCs | | | |

## APPENDIX E.11: Tabulation of the FSC respondent loyalty to model and whether price comparisons were made prior to ticket purchase

| FSC respondents – If booked ticket self then were price comparisons made | | | | | |
|---|---|---|---|---|---|
| | | | **Loyalty_FSC** | | **Total** |
| | | | **.00** | **1.00** | |
| **Did you make comparisons before booking the ticket?** | **Yes** | Count | 95 | 45 | 140 |
| | | % within ‘yes made comparisons’ | 67.9% | 32.1% | 100.0% |
| | **No** | Count | 90 | 102 | 192 |
| | | % within ‘no did not make comparisons’ | 46.9% | 53.1% | 100.0% |
| | **Total** | Count | 185 | 147 | 332 |
| | | % within ‘did you make comparisons’ | 55.7% | 44.3% | 100.0% |
| 0 = switch 1 = loyalty to FSCs | | | | | |

## APPENDIX E.12: Tabulation of the LCC respondent loyalty to model and whether price comparisons were made prior to ticket purchase

| LCC respondents – If booked ticket self then were price comparisons made | | | | | |
|---|---|---|---|---|---|
| | | | **Loyalty_LCC** | | **Total** |
| | | | **.00** | **2.00** | |
| **Did you make comparisons before booking the ticket?** | **Yes** | Count | 192 | 24 | 216 |
| | | % within 'yes made comparisons' | 88.9% | 11.1% | 100.0% |
| | **No** | Count | 72 | 14 | 86 |
| | | % within 'no did not make comparisons' | 83.7% | 16.3% | 100.0% |
| | **Total** | Count | 264 | 38 | 302 |
| | | % within 'did you make comparisons' | 87.4% | 12.6% | 100.0% |
| 0 = switch 2 = loyalty to LCCs | | | | | |

## APPENDIX E.13: Tabulation of the FSC respondent loyalty to model and whether the trip was influenced by the fare

| FSC respondents | | | | | |
|---|---|---|---|---|---|
| | | | **Loyalty_FSC** | | **Total** |
| | | | **.00** | **1.00** | |
| **Was the trip decision influenced by the fare?** | **Yes** | Count | 58 | 19 | 77 |
| | | % within 'yes' | 75.3% | 24.7% | 100.0% |
| | **No** | Count | 134 | 126 | 260 |
| | | % within 'no' | 51.5% | 48.5% | 100.0% |
| | **Total** | Count | 192 | 145 | 337 |
| | | % within 'trip influenced by fare' | 57.0% | 43.0% | 100.0% |
| 0 = switch 1 = loyalty to FSCs | | | | | |

## APPENDIX E.14: Tabulation of the LCC respondent loyalty to model and whether the trip was influenced by the fare

| LCC respondents | | | | | |
|---|---|---|---|---|---|
| | | | **Loyalty_LCC** | | **Total** |
| | | | **.00** | **2.00** | |
| **Was the trip decision influenced by the fare?** | **Yes** | Count | 136 | 20 | 156 |
| | | % within 'yes' | 87.2% | 12.8% | 100.0% |
| | **No** | Count | 126 | 23 | 149 |
| | | % within 'no' | 84.6% | 15.4% | 100.0% |
| | **Total** | Count | 262 | 43 | 305 |
| | | % within 'trip influenced by fare' | 85.9% | 14.1% | 100.0% |
| 0 = switch 2 = loyalty to LCCs | | | | | |

## APPENDIX F – RESEARCH QUESTIONNAIRE

1. Which airline are you travelling on? ______________________________

2. Where is your final destination? ______________________________

3. Is your journey: ☐ Return ☐ One way

4. If you are connecting to another airline, please name it: ______________________________

5. Where will you/did you stay on your trip?

☐ Hotel ☐ Bed & Breakfast ☐ Hostel ☐ Family/Friends
☐ Other ______________________________

6. How did you travel to the airport today?

☐ Aircraft ☐ Car ☐ Taxi ☐ Bus ☐ Train + Bus

7. How many kilometres have you travelled today to reach the airport? ______________________________

8. How many people are travelling in your group? ______________________________

9. What is/was the main purpose of your visit?

**Business**
☐ Meeting
☐ Conference
☐ Training
☐ Trade fair
☐ Employment
☐ Other ____________________

**Leisure**
☐ Sports
☐ Shopping
☐ Visit Friends and Family
☐ Weekend break
☐ Holiday
☐ Studying
☐ Cultural/Religious
☐ Other ____________________

10. How many **short haul** flights did you take last year? (flights up to 3 hours)

☐ 1–2 ☐ 3–4 ☐ 5–7 ☐ >8

11. How many of these short haul flights were on a **full-service carrier** such as SAA or British Airways for example?

☐ 1–2 ☐ 3–4 ☐ 5–7 ☐ >8

Do you sometimes travel for business purposes? If yes, please answer questions 12 and 13.

12. How many *business trips* did you take last year on a full-service airline?

☐ 1–2 ☐ 3–4 ☐ 5–7 ☐ >8

13. How many *business trips* did you take last year on a low-cost carrier?

☐ 1–2 ☐ 3–4 ☐ 5–7 ☐ >8

Are you travelling for business purposes today? If yes, please answer questions 14–16:

14. How many people work in your Organisation?

☐ Self Employed ☐ 1–24 ☐ 25–99 ☐ 100–999 ☐ 1000–4999 ☐ 5000+

15. Do you work in the:

☐ Public sector ☐ Private sector ☐ Self employed

16. What field/industry do you work in?

☐ Admin, Office & Support
☐ Agriculture
☐ Arts & Entertainment
☐ Beauty
☐ Botanical
☐ Building & Construction
☐ Business & Management
☐ Design
☐ Distribution, Warehousing & Freight
☐ Education
☐ Engineering
☐ Financial
☐ FMCG, Retail & Wholesale
☐ Government & Local Government
☐ Hospitality & Restaurant
☐ Human Resources & Recruitment
☐ Information Technology
☐ Legal
☐ Manufacturing, Production & Trades
☐ Maritime
☐ Marketing
☐ Media
☐ Medical
☐ Mining
☐ Motor
☐ Petrochemical
☐ Property
☐ Safety, Security & Defence
☐ Sales
☐ Science & Technology
☐ Social & Community
☐ Sport & Fitness
☐ Telecommunication
☐ Transport & Aviation
☐ Travel & Tourism
☐ Other (specify) ________________

17. Please identify your top 5 reasons for choosing this airline today? (Rank First = 1, Second = 2, etc).

| | |
|---|---|
| ☐ Frequent Flyer Programme | ☐ Safety |
| ☐ Fare | ☐ Comfort |
| ☐ Quality | ☐ Service |
| ☐ Connections/ airport destination | ☐ Company Policy |
| ☐ Reliability | ☐ Frequency of flights |

18. Please describe your understanding of the differences between low-cost and full-service airlines?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

**PERCEPTIONS OF THE SERVICE DIMENSIONS OF FSCs AND LCCs**

Please rate on a scale of 1 to 7, where 1 is poor and 7 is excellent, your perception of the features and services offered by a ***low-cost carrier***.

19. The airline's ability to perform the promised service dependably and accurately.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| Poor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Excellent |

20. The airline's willingness to help customers and provide prompt service.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| Poor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Excellent |

21. The knowledge and courtesy of the airlines employees and their ability to convey trust and confidence.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| Poor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Excellent |

22. The caring, individualised attention the airline provides its customers.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| Poor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Excellent |

23. Overall perception of the service offered by this airline.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| Poor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | Excellent |

Please rate on a scale of 1 to 7, where 1 is poor and 7 is excellent, your perception of the features and services offered by a ***full-service carrier***.

24. The airline's ability to perform the promised service dependably and accurately.

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ Excellent

25. The airline's willingness to help customers and provide prompt service.

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ Excellent

26. The knowledge and courtesy of the airlines employees and their ability to convey trust and confidence.

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ Excellent

27. The caring, individualised attention the airline provides its customers.

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ Excellent

28. Overall perception of the service offered by this airline.

Poor 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ Excellent

**PRICE SENSITIVITY**

If you are travelling on a ***full-service carrier***, please answer questions 29 and 30:

29. If the full-service carriers, like on which you are travelling, **increased** their fares, at what interval would you consider switching to a low-cost carrier? (Please tick one):

☐ 10% Fare Increase ☐ 20% Fare Increase ☐ 30% Fare Increase ☐ Not Switch

30. Why would you consider switching or not switching? ________________________________

______________________________________________________________________________

______________________________________________________________________________

If you are travelling on a ***low-cost carrier***, please answer questions 31 and 32:

31. If the full-service carriers **decreased** their fares, at what interval would you consider switching to a full-service carrier? (Please tick one):

☐ 10% Fare decrease ☐ 20% Fare decrease ☐ 30% Fare decrease ☐ Not Switch

32. Why would you consider switching or not switching? ______________________________
____________________________________________________________
____________________________________________________________

**BOOKING INFORMATION**

33. How did you book your airline ticket?

☐ Travel agent
☐ Purchased at airport
☐ Telephoned airline Call Centre
☐ Friend/family member booked my ticket
☐ Airline website
☐ Other travel website
☐ Office booked ticket
☐ Other ______________________

34. If you booked your ticket yourself, did you do price comparisons before you made the booking?

☐ Yes ☐ No

35. How long ago did you book the ticket? ______________________________

36. How much did you pay for the ticket? ______________________________

37. Was your decision to undertake the trip influenced by the fare?

☐ Yes ☐ No

38. Who paid for the ticket?

☐ Self ☐ Work ☐ Gift ☐ Parent

☐ Other ____________________________________________________

39. Are you:

☐ Male ☐ Female

40. Are you aged between:

☐ 16–18 ☐ 19–24 ☐ 25–34 ☐ 35–44 ☐ 45–54 ☐ 55–64 ☐ 65+

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