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**Choice Factors and Airline Preference of Taiwanese Air Passengers in
2019**



UNIVERSITY OF ALGARVE

Faculty of Economics

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2019**

Master in Management

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Choice Factors and Airline Preference of Taiwanese Air Passengers in 2019

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(signature)

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RESUMO

O objetivo desta dissertação será explorar os fatores de escolha dos passageiros aéreos Taiwaneses, em relação aos voos de Companhias Aéreas de Baixo Custo e voos de Companhias Aéreas de Linha em 2019. São examinados fatores de escolha previamente definido em estudos da área, como sendo importantes para os viajantes Taiwaneses quando escolhem uma companhia aérea para viajar. Os dados serão relacionados com fatores demográficos, tais como idade, rendimento e profissão, bem como preferências prévias (fatores de escolha) relacionadas com a qualidade do serviço oferecido pela companhia aérea escolhida.

A literatura sobre esta matéria indica grandes mudanças na indústria da aviação, ao longo dos tempos, em termos globais e em Taiwan, no que respeita aos voos de Companhias Aéreas de Baixo Custo, em resultado da aplicação de preços mais reduzidos e horários mais adequados. Segundo pesquisas, fatores demográficos, fatores de escolha e objetivos de viagem são essenciais para uma análise da escolha habitual de uma viagem.

Foi elaborado um questionário para aferir os fatores demográficos entre os Taiwaneses, bem como a motivação e fatores de escolha ao decidir entre Companhias Aéreas de Baixo Custo e/ou Companhias Aéreas de Linha. O questionário foi dividido em três partes: (1) Características de viagens; (2) Fatores de escolha/preferências dos viajantes; (3) Características sócio-demográficas dos viajantes.

No capítulo Resultados, este estudo analisa as características sócio-demográficas dos inquiridos e características da viagem, classificando, por ordem, fatores de escolha em quatro grupos: o grupo de viajantes inquiridos na totalidade, viajantes de Companhias Aéreas de Baixo Custo, viajantes de Companhias Aéreas de Linha e o grupo que viajou nos dois tipos de companhia em 2019.

As conclusões mostram que a maioria dos entrevistados escolher voar em Companhias Aéreas de Linha em 2019, tinham entre 31 e 50 anos de idade, viajavam por razões pessoais, estavam empregados (ou eram trabalhadores independentes) e que a maioria eram mulheres. Estes viajantes identificaram como razões de escolha mais

importantes a confiança nas companhias aéreas, o historial de segurança e ausência de situações implicando perda ou desencaminhamento de bagagem.

Estas limitações foram verificadas nos resultados deste estudo. Em primeiro lugar, o questionário recebeu mais respostas de mulheres do que de homens. Este facto é inconsistente com a maioria dos estudos conduzidos em outros países. Em segundo lugar, poucos viajantes em negócios responderam ao questionário. Finalmente, cada vez mais, os Taiwanese evitam responder a questionários por temerem que alguém possa roubar informações online sobre eles.

Em conclusão, este estudo mostra que, embora as Companhias Aéreas de Baixo Custo, tenham tido um impacto significativo sobre o tráfego aéreo Taiwanese, em 2019 a maioria dos viajantes continuou a preferir as Companhias Aéreas de Linha como as suas principais companhias aéreas. Embora as Companhias Aéreas de Baixo Custo, mantenham claramente uma larga percentagem do mercado é ainda imprevisível se esta indústria virá a ultrapassar o mercado das Companhias Aéreas de Baixo Custo, nos próximos anos.

Palavras chave: Companhias Aéreas de Baixo Custo; fatores de escolha; preferência por Companhias Aéreas de Linha, preferência por Companhias Aéreas de Baixo Custo.

ABSTRACT

The purpose of this dissertation is to explore Taiwanese air passengers' choice factors relative to LCCs and FSAs in 2019. It examines choice factors previously defined by academicians as being important to Taiwanese travellers when choosing which airline to use. It correlates the data with demographics such as age, income and occupation as well as reported preferences (choice factors) such as the perceived quality of service provided by the airline.

Significant literature review on this subject indicates a large shift, over time, globally and in Taiwan, in the airline industry towards LCCs as a result of lower price and convenient schedules. Research designates demographics, choice factors, and travel purpose as the building blocks for analysis of travel habits.

A questionnaire was developed to ascertain Taiwanese demographics, motivation and choice factors in choosing LCCs and/ or FSAs. The questionnaire was divided into three parts: (1) Travel characteristics; (2) Choice factors/preferences of travellers and (3) Socio-demographics of travellers.

In the Results chapter, using data from questionnaire results, this study analyses socio-demographics of respondents, travel characteristics, and ordering of choice factors for four groups: the all-respondents group of travellers; the only-LCC travellers; the only-FSA travellers; and the combined LCC and FSA travellers group.

Findings show the majority of respondents chose to fly FSAs in 2019, that they were 31-50 years old, travelled for personal reasons, were employed (or self-employed) and the majority were women. These travellers identified Reliability/trust of airlines, Airline's safety record, and Avoiding lost/misplaced baggage as the most important choice factors.

Three limitations were encountered in the results of this study: first, the questionnaire received more responses from women than from men. This is inconsistent with the majority of other questionnaires conducted in other countries, second, few business travellers responded to the questionnaire. Finally, increasingly, Taiwanese

people do not like to respond to questionnaires because they are afraid someone will steal online information about them.

In conclusion, this study shows that while LCCs have made a significant impact on Taiwanese air traffic, the majority of travellers in 2019 still preferred FSAs as their primary air carriers. Though LCCs clearly have a large percentage of the market, it remains to be seen whether the industry will overtake the FSA market during 2021-2025.

Keywords: Full Service airline, Low Cost Carrier, choice factor, preference of LCCs,
preference of FSAs.

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LIST OF ABBREVIATIONS

CAPA	Centre for Asia Pacific Aviation
FSA	Full Service Airline
ICAO	International Civil Aviation Authority
LCC	Low Cost Carrier
TTB	Taiwan Tourism Bureau

CHAPTER 1. INTRODUCTION

Air travel has rapidly become accessible and affordable in the last 50 years. The World Bank (2017) shows that between 1975 and 2017, the world's airlines saw an increase of twelve times the number of air passengers (O'Connor, 2019). This is an enormous increase in global air travel. LCCs (Low Cost Carriers) have significantly changed the landscape of air travel globally. By 2019, LCCs had 31% of the total global air passenger market (Statista, 2020).

Likewise Taiwan saw a significant increase in air travel from 2004 to 2019. In 2004 LCCs began operating in Taiwan. Asia quickly adopted the LCC model from the west and Taiwanese airlines subsequently established their own local LCCs (Tigerair and V Air) in 2014 (Lu and Mao, 2015). By 2015 LCCs accounted for 18.4% of Taiwan's air travel market and Tigerair itself had 13.84% of the overall market (CAA, 2015).

LCCs are defined as “no frills” airlines, usually low cost, that generally don't include food, drink, entertainment, and other additional services without a fee. FSAs are defined as established airlines companies that, for a higher price, usually provide food, drinks, entertainment and other services (see Chapter two 2.1.2 for a complete definition).

What factors influenced Taiwanese air travelers to select LCCs (Low Cost Carriers) and/or FSAs (Full Service Airlines) in 2019? It is important to look at factors influencing air passengers choices (referred to here as “choice factors”) regarding whether they chose LCCs or FSAs and specifically in 2019. This is important because more data is needed to determine why Taiwanese make the air travel choices they make. Previous studies haven't differentiated categorically choice factors relative to Taiwanese passenger choice of LCCs or FSAs.

The history of global air travel will be discussed, the introduction of LCCs to the global and Taiwanese FSA market, and choice factors available to Taiwanese travellers. Choice factors were identified based on research of other studies. These choice factors were used in the questionnaire that was developed for this study, and the questionnaire helped identify which choice factors were most important to respondents who travelled in 2019.

After the introduction of LCCs, Malighetti et al. (2009) stated that more people could afford the price of a plane ticket, which led to more flights and destinations being offered thanks to LCCs. The question of what leads the customer to choose either an LCC or an FSA is of vital importance for the future of the industry. As traditional airlines try to compete with the newer lower-cost companies, both stand to benefit from understanding what it is that their customers want.

Based on previous research and the limited amount of more contemporary investigations, especially regarding Taiwan, this study focused on choice factors such as the importance of price, perception of service by staff, “extras” (such as meals included in the price, and online check-in etc.). The results will be valuable to both LCCs and FSAs operating in Taiwan as they will inform companies of what passengers value most when booking flights and exhibiting loyalty.

This dissertation consists of five chapters. The following chapter reviews the literature pertaining to the definitions, history and development of LCCs and FSAs, the background of the industry including air transport numbers worldwide and a history of LCCs in the US, Europe and Asia, plus contemporary air transport in Taiwan. Chapter three presents the methodology which includes the questionnaire, data collection and analyses. Chapter four includes the results of data collection and discussion. Chapter five is a conclusion of the results and presents some thoughts on the theoretical, practical implications of the results and perspectives for future research.

CHAPTER 2. LITERATURE REVIEW

2.1 The Development and Evolution of Low-Cost Carriers and Full Service Airlines

This section will discuss the evolution of Low-Cost Carriers (LCCs) from their inception and development in the United States, through their rapid expansion in Europe and Asia, to the contemporary situation in Taiwan. It will provide more detailed descriptions of LCCs and Full Service Airlines (FSAs) and explore their interactions to contextualize the novel conditions within which the airline industry now operates. The main aims of this section are to analyse how LCCs have evolved, vis a vis FSAs, what problems they face, and how they may change in the near future. It also explores the most significant choice factors, and their importance based on previous research.

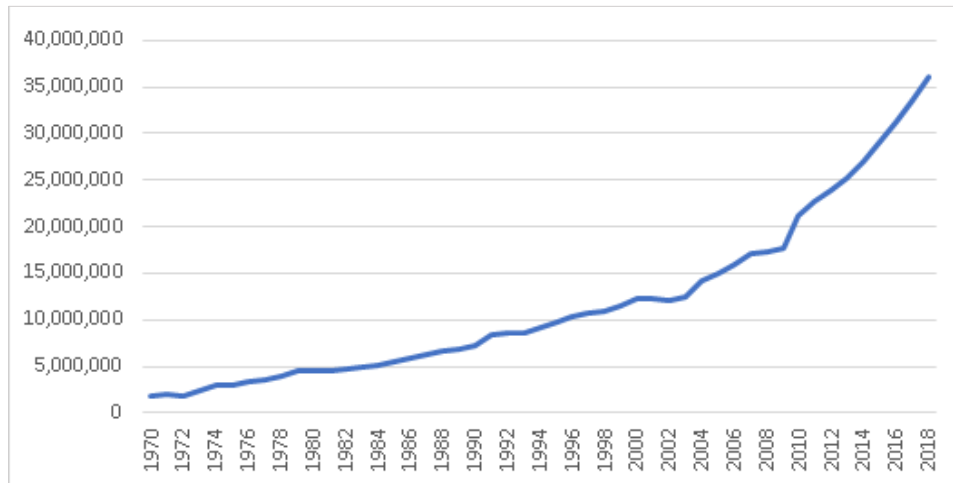
Air travel has completely changed the pattern of travel around the globe. Since 1960, tourism has evolved from a local to an intercontinental activity (Burton, 1991). Both the cost of tourism products and the consumer's choice of destination are influenced by the cost of air transport. Recent international tourism has been shaped in great part by the fact that air travel is so accessible to so many people, and the air transport sector is therefore not only a key component of the tourism industry specifically, but also of the world economy more generally (Pender, 2001).

2.1.1 Air Transport Development Worldwide

Before 1925 Europe led in the development of air transport. After this, however, America took the lead, and continues to do so to the present day. Asia (in particular Japan, South Korea, Taiwan, Hong Kong and Singapore) has been the region with the most consistent growth since 1971, and has even eroded some of the dominance enjoyed by Europe and North America which has historically been based on the expansion of both international and domestic traffic (Hilling, 1996).

Over the last five decades, numbers of air passengers have increased dramatically. Figure 2.1 shows the number of air passengers worldwide from 1970 to 2018. This chart shows an increase of 95% of air passengers every two years. It shows that by 2018 the number of air passengers had increased to approximately 36,000,000.

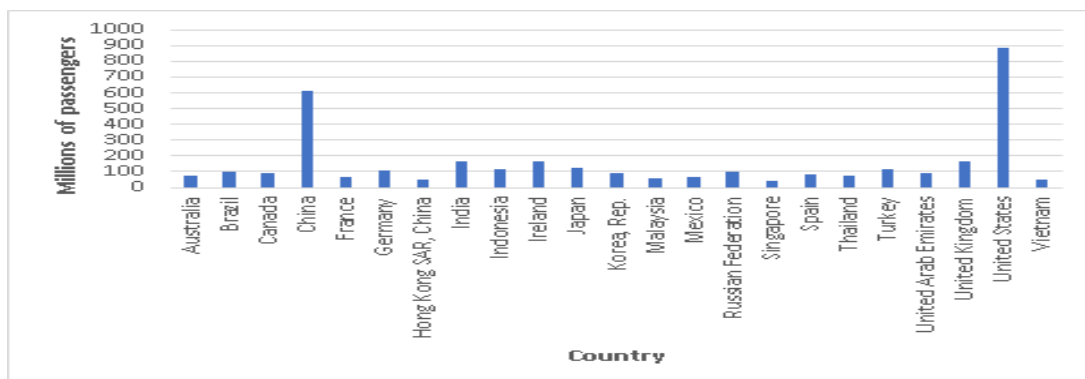
Figure 2.1: Number of Air Passengers Worldwide 1970-2018, in Millions



Source: The World Bank (2019)

As of 2018, the United States carried the largest number of airline passengers in the world (slightly less than 900 million). Figure 2.2 shows China in second place (with 600 million air passengers). However, Asia (including China, Hong Kong, India, Indonesia, Japan, Korea Rep., Malaysia, Singapore, Thailand and Vietnam) emerges cumulatively in first place with 1,320,000,000 air passengers in the worldwide market (Figure 2.2).

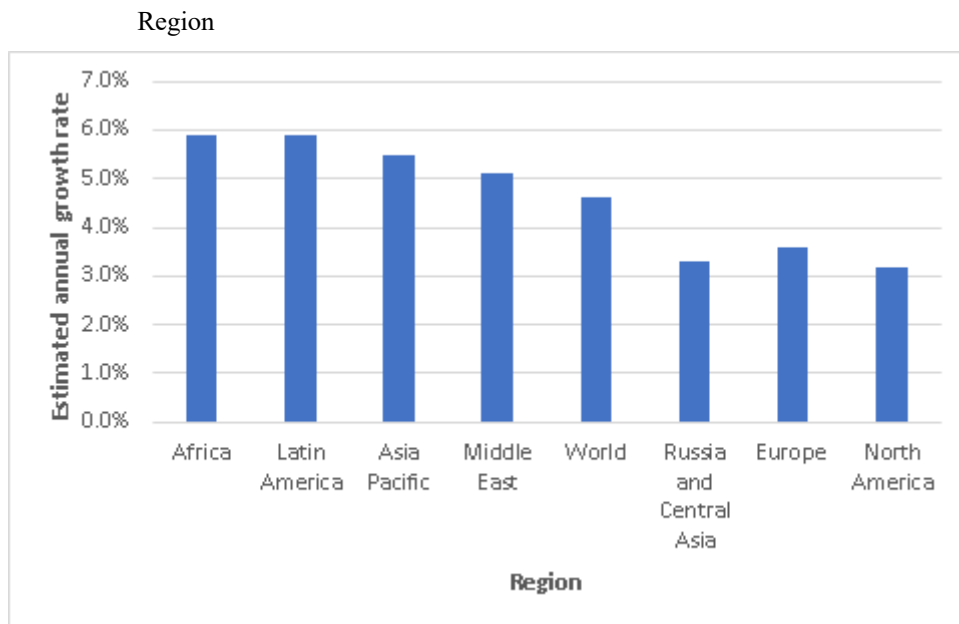
Figure 2.2: The Countries with the Largest Number of Passengers Carried in 2018



Source: The World Bank (2019)

Figure 2.3 shows, however, Africa (approximately 5.9%) and Latin America (approximately 5.9%) have the highest projected air travel growth rates. Asia at 5.5% is forecast to have the fastest annual growth rates in terms of passengers between 2019 and 2038. (Along with Russia) Central Asia is forecast for a 3.3% growth rate (Figure 2.3).

Figure 2.3: Estimated Annual Growth Rates for Passenger Air Traffic from 2019 to 2038, by



Source: Statista (2019)

2.1.2 The Definition of Low Cost Carriers (LCCs) and Full Service Airlines (FSAs)

Sharpley (2006) defines LCCs as those airlines which provide low cost / no frills flights (“frills” here refer to non-essential services such as business-class seating, complimentary food and in-flight entertainment systems) which operate mainly to and from regional airports (though this is changing rapidly), fast turnaround time, minimum levels of service, and high passenger load factors (an airline industry metric which measures how much of an airline’s passenger carrying capacity is utilized). This adherence to efficiency restricts the distances over which the airline can operate.

Furthermore, Karivate (2004) defines LCCs as airlines that operate a point-to-point network, offer a “no-frills” service, and pay their employees below the industry average wage. These measures allow the company to offer low-cost tickets and compete successfully with established FSAs.

However, Gross and Luck (2013) state that the definition of an LCC is ambiguous due to the range of business models and products, but they can nevertheless be recognised by their focus on managing their operational costs at a low level.

According to Doganis (2006), the LCC business model can most reliably be identified by the following features: point-to-point traffic; single aircraft type; mostly serving secondary airports; direct sales of the airline's tickets (not employing an intermediary seller) and mainly through the airline's own website; the availability of only one-way fares per flight at each point in time; a single class cabin and a lack of complimentary services or frequent flyer plans.

As can be seen, the definition of an LCC is not universally agreed-upon. There are, however, several features that most authors consent to. Traditionally, LCCs have operated at the edges of the airline industry since deregulation. They have provided cheaper yet lower-quality services, operated from secondary airports and locations, and been secondary players in the market when compared to legacy airlines (Galindo-martín, 2019).

However, since the year 2000, all this has been changing. LCCs now occupy many of the same airports and routes as FSAs, and they have changed the face of the market, the spending habits of airline passengers and the behaviour of their more-established competitors (Kwoka, Hearle, and Alepin, 2016).

Low Cost Carriers represent the most recent stage of development of air travel. According to Wensveen and Leick (2009: 127) "New airlines have an advantage over existing carriers because they are devoid of legacy¹ indebtedness or an out-of-date business model." Furthermore, they point out that the strategies employed by airlines, rather than being driven by the politics of a country, are now mainly determined by consumer demand in deregulated and liberalised markets (for example, the US and Europe). It is in such markets that LCCs (Low Cost Carriers) have seen the greatest growth and impact on traditional airlines. Wensveen and Leick (2009: 128)

In sharp contrast to LCCs, FSAs typically offer services like in-flight entertainment, checked baggage, complimentary meals and drinks, and extras such as

¹ A carrier that operated in the air market as a public undertaking, habitually under a monopoly regime, and later privatized, and is currently operating in a free regime (Public Service Obligations European Commission, 2020).

blankets and pillows. The seats themselves usually have more leg room and recline more. There is a choice of economy and business class on most flights, and additional premium economy and first class on others. These airlines transfer baggage between flights and partner airlines and are often “flag carriers” for their origin countries (e.g. Aer Lingus for the Republic of Ireland, British Airways for Great Britain) (Airline Ratings, 2019). Of course, the ticket price is usually higher than for LCCs.

In addition, while FSAs serve regional destinations through partner airlines, they also serve long-distance flights to international destinations around the world. They also fly to large primary airports in major cities. Finally, FSAs are more likely to be members of large airline alliances, use codeshares, and have interline agreements with other airlines (Hamburg, 2017). Codesharing refers to a commercial contract between two or more airlines. This agreement allows participating companies to publish and market the same flight under their own flight number and airline designator. Codesharing is one of the key factors in airline alliances (Hanlon, 1996). Airline alliances themselves are comprehensive agreements between airlines to work on a significant and wide-reaching level. The main objectives of an alliance of this nature is to increase market coverage and reduce costs (Fernandez de la Torre, 1999).

2.1.3 Background of LCCs

LCCs have played a major role in the development and evolution of the air transport industry. These companies have contributed greatly to the behaviour and expectations of customers, the products of competitors, and influenced both global society and the world's economy (Costantino, Di Gravio, Nonino, and Patriarca, 2016).

The early 2000s saw legacy and charter airlines suffer growth rate collapse and diminishing profits. However, their LCC competitors in the US and Europe grew rapidly. During this period, Southwest, a USA-based LCC, continued to be profitable and JetBlue, a USA-based company with routes to Central and South America, which started slowly, generated profits every year. In Europe both Ryanair and EasyJet saw an increase in passenger traffic of 40% per annum between 2000 and 2004 and also enjoyed attendant profits (Doganis, 2006).

Jou *et al.* (2008) and Reibstein showed that lower ticket prices were one of the most important factors which attract customers to LCCs. Worldwide, LCCs represent over a quarter of all seats sold, and the figures for Southeast Asia and South Asia are even more impressive, at 57.7% and 58.4%, respectively, in 2013 (Pearson, O'Connell, Pitfield, and Ryley, 2015).

In recent years, these numbers have continued to grow. According to the International Civil Aviation Authority (ICAO, 2019) LCCs carried 984 million passengers in 2015. This number represents 28% of the world total and is an increase of 10% compared to the previous year. This rate of growth is about one and a half times the average for the airline industry. Pearson, O'Connell, Pitfield and Ryley put the number at 26.3% of all seats worldwide in the same year (Pearson et al., 2015).

The most salient driver of this rapid expansion is the focus LCCs have had on reducing cost and maximising whatever passengers value most. The products that LCCs offer attempt to satisfy the demands of the customers at the lowest possible cost (Atiqur, Hossan and Zaman, 2012).

It should be noted that deregulation in the 1970s in the North American market was the catalyst that allowed Southwest Airlines (heretofore limited to operations in California) to rapidly expand and create the effect which bears their name (Bailey, 2019). This was the first hugely successful LCC model in the world. Deregulation in the European Union has seen the rise of competitive and successful LCCs such as Ryanair and EasyJet where such airlines now command 41% of the market share. Compare this to the highly-regulated African market (where LCCs account for only 9% of the market) (ICAO, 2019).

2.1.4 LCCs of United States of America (USA)

Southwest Airlines has operated a Low-Cost system in the United States of America since 1949 (Bailey, 2019). The company was founded on the belief that everybody, not just the wealthy, should be able to afford air travel. This business model proved so successful that it gave rise to the economics term “Southwest Effect”. The phrase was coined to describe the increase in air travel that would arise whenever the

company entered a new market (Bennett and Craun, 1993). The “Southwest Effect” is characterized by three elements which can be observed when a LCC begins operations in a new market².

Gittell (2005) highlights the importance of the LCC model for the success of Southwest Airlines. This model incorporates quick turnarounds of aircraft and decreases the amount of time that it spends on the ground. The more time spent in the air, the more revenue the aircraft generates.

2.1.5 LCCs of Europe

As has been seen in the more mature markets of the US and Europe, free access (operations began in the 1970s and 1990s, respectively) has allowed for the proliferation and profitability of LCCs. They have established new routes that traditional airlines have either abandoned or never served, challenging the established airlines and generating both interest on behalf of passengers and the attendant profits that allow the routes to continue. Notably, the largest LCCs in the US and Europe (Southwest and Ryanair, respectively) are now the largest airlines operating in their continents, although neither has gone on to become a global player (Dobruszkes and Wang, 2019). According to CAPA Centre For Asia Pacific Aviation, LCCs had 33.1% of the air transportation European market in 2019 (CAPA, 2019)

Ryanair has achieved its leading position in Europe by adhering to a strict policy of efficiency. Turnaround times are kept to a minimum. Standardization of its fleet means standardization of replacement parts, servicing and maintenance. Due to its historical reliance on second-tier airports, landing and service fees are lower. It also sells directly to the customer, further reducing possible costs to the company (Slack, Brandon-Jones, and Johnston, 2013:99).

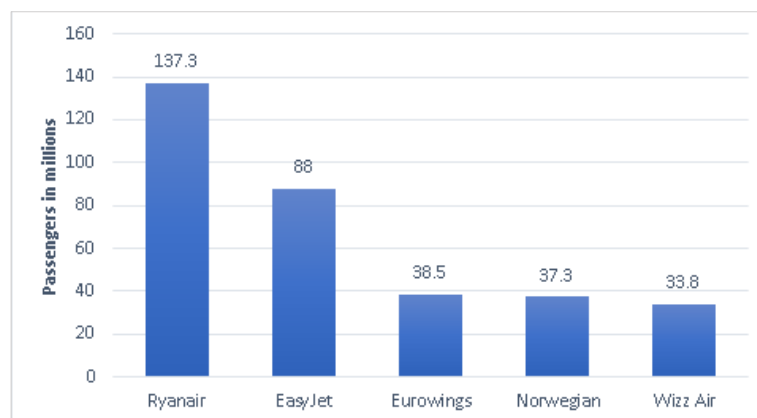
According to Michael O’Leary, Ryanair’s chief executive, “We patterned Ryanair after Southwest Airlines, the most consistently profitable airline in the US.” Their

²“There are three distinct features of the “Southwest Effect”: passenger numbers in a particular market, the fares in a particular market, and the effects that Southwest has on surrounding airports when it enters a market.” (Ritter, 2018)

customer service policy is similarly simple and direct. “Our customer service is about the most well defined in the world. We guarantee to give you the lowest air fare. You get a safe flight. You get a normally on-time flight. That’s the package. We don’t, and won’t, give you anything more. Are we going to say sorry for our lack of customer service? Absolutely not. If a plane is cancelled, will we put you up in a hotel overnight? Absolutely not. If a plane is delayed, will we give you a voucher for a restaurant? Absolutely not.” (Slack, Brandon-Jones, and Johnston, 2013:99).

As the Figure 2.4 shows, in 2018, by far the biggest LCC in terms of passengers carried in Europe was Ryanair (137.3 million passengers). Cumulatively Eurowings, Norwegian and Wizz Air’s total was 109.6 million passengers. Even cumulatively totals of its competitors don’t match Ryanair’s total

Figure 2.4: Number of Passengers in Europe 2018 (in millions)



Source: Statista (2020)

Judging by the success of Ryanair many passengers do not expect a higher standard of customer service or frills if it means that they can obtain lower ticket prices when travelling abroad (Slack, Brandon-Jones, and Johnston, 2013)

Finally, some signs of market limitations have arisen in recent years in Europe and North America due in part to route saturation and density (Costantino, Di Gravio, Nonino, and Patriarca, 2016).

2.1.6 LCCs of Asia

The air travel market of Asia has seen dramatic changes over the past decade, influenced by rising incomes, governmental and policy changes, and overall economic growth. Much of the growth in air travel is international. A substantial proportion of this can be attributed to the rise of LCCs (Slocum, 2018).

In Asia, as in the US and Europe, FSAs have in recent years been adapting to the pressure exerted by LCCs. Similarly to how they responded in the more mature markets, in Asia they have been adapting by copying some of the characteristics of LCCs. These changes have included reducing or removing unnecessary services, changing some previously free services to paid ones, and providing a uniform economy class cabin. In other cases, they have even established their own LCC subsidiary companies (Chen, Chang, Chen, and Chen, 2019).

In Asia, low-cost carriers experienced their earliest development in Japan and the Philippines in the mid-1990s (Doganis, 2001). Both these countries had liberalised domestic markets, much like the US and Europe - ideal for the growth of these new airline company types. Both Skymark Airlines and Air Do initiated their low-cost services in 1996 in Japan. The Philippines, in the same year, Launched Cebu Pacific Air. Primarily, these airlines offered point-to-point services within their respective country's borders.

More generally, and beginning in the late 1990s, Southeast Asia has seen almost the fastest-growing rate of air traffic in the world. Much of this is attributable to LCCs, which together accounted for almost half of the service to and from south eastern cities by 2013, and by this time 20 of the world's 101 LCCs were based in the region. (Bowen, 2016).

Research suggests that Asian adaptations of LCCs has been consistent with the US and European models (Dobruszkes and Wang, 2019). China's LCC market, however is subject to stricter government control (Wu, Liao, Zhang, Luo, and Zhang, 2020).

2.1.7 Air Transport in Taiwan

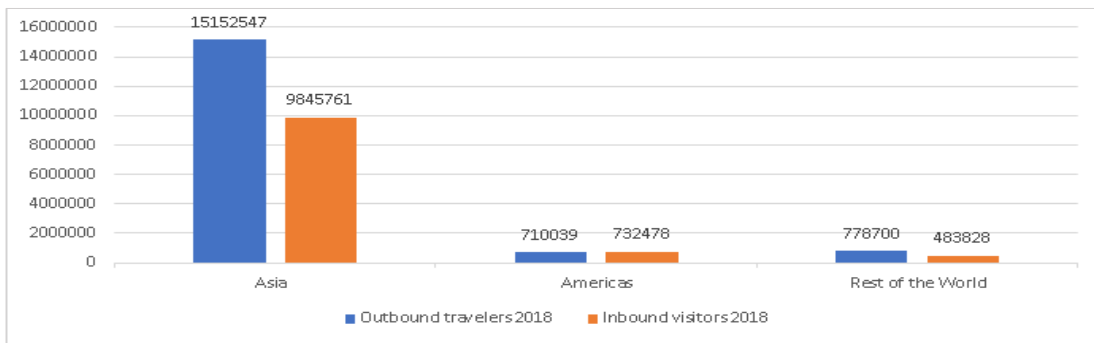
In 2012, Taiwan had 11 foreign low-cost airlines and nine routes, but LCCs held only 3.6% of the market. This was in stark contrast to the Asia-Pacific average of 24%, and the world average of 26%. However, by 2016, LCCs had captured 21% of the market indicating both that low-cost airlines are highly competitive in the country and that there may still be some room for growth. Additionally, the advent of foreign LCCs brought a large number of tourists to Taiwan, stimulating the tourism industry specifically and the economy generally. In response to this novel situation, the Taiwanese government adopted three policies designed to capitalize on and further stimulate the development of low-cost aviation:

- a) Relaxing of regulations and reducing the costs payable by aviation companies.
- b) Signing agreements with other Asian countries (China, Japan, Korea, Singapore, Vietnam, Macau etc.) to allow these countries' LCCs to operate in Taiwan.
- c) Reducing airport landing fees to incentivize LCCs to develop routes there (Han, 2016).

Most international air routes connecting northeast and southeast Asia must pass through or near Taiwanese airspace. The Civil Aeronautics Administration (CAA), MOTC of Taiwan administers the "Taipei Flight Information Region" (Taipei FIR) which connects to the FIRs of Manila, Shanghai, Hong Kong and Fukuoka. In addition, the Taipei FIR controls 14 international and four domestic air routes. In 2015, it served 58.16 million passengers and 1.53 million flights. In 2016, these numbers had increased to 63.25 million passengers and 1.65 million flights (Civil Aeronautics Administration, 2016:8).

In 2016, 78 airlines operated routes to and from Taiwan, connecting 141 cities worldwide. Tourist destinations within Asia are the most popular by far for Taiwanese travellers, and as Figure 2.5 indicates travellers from Asia made up the vast majority of visitors to Taiwan. Figure 2.5 clearly demonstrates that Asians represented the largest numbers of inbound and outbound air travellers in 2018.

Figure 2.5: Number of Passengers 2018



Source: Tourism Statistics Database of the Taiwan Tourism Bureau (2020)

Lu's study of Taiwanese travellers is one of the few specific studies to focus on Taiwan travellers. Lu states, "To our knowledge there is little evidence about the profiles of Asian air travellers using FSAs as well as LCCs." Lu's objective was to investigate characteristics and expectations of Taiwanese travellers in terms of airline preferences, and he found that the characteristics of those who chose LCCs and FSA differed. In terms of results, as "choice factors" are defined here, Lu identified "safety" (Performance of flight safety) as the number one choice of FSA travellers, and "Price (Airfare)" as the number one choice factor for LCC travellers. Moreover, in terms of demographics, Lu's study identified female passengers travelling for vacation purposes as the largest segment of Taiwan's air passengers (Lu, 2017: 206-210).

2.1.8 Taiwan Tourism Bureau, Travel and Demographics

Studies investigating factors that have influenced airline choice have taken into account demographics of travellers and trip purpose. Demographics in terms of, for example, age, gender, income, cultural values and attitudes effect expectations customers have in their airline choices (Gilbert and Wong, 2003).

The Taiwan Tourism Bureau (TTB) has provided demographics for both gender, age, and numbers of travellers from Taiwan in 2019. (see Appendix 2-4). Included in those statistics are the following:

- In terms of gender in 2019 females made up 51.09% of outbound travellers from Taiwan. Males accounted for 48.91%

➤ According to TTB, ages of Taiwanese air passengers were the following for 2019 (see Appendix 3):

Table 2.1: Ages of Taiwanese Air Passengers, 2019

Under 20 years old	10.20%
20-29 years old	14.08%
30-39 years old	20.09%
40-49 years old	20.67%
50-59 years old	18.12%
60+	16.84%

Source: Taiwan Tourism Bureau “Ages of Taiwanese Air Passengers” (2019)

It has been shown (Desai *et. al* 2014) that the presence of LCCs in Taiwan has changed the patterns of airline selections for younger people by offering more affordable tickets. Older passengers were not recorded flying with LCCs with the same regularity; most of them still choose to fly with FSAs.

Population density in Taiwan in 2019 can be found on the map in Appendix 5. (total population in 2019 was 23,773,876) The majority of the population in Taiwan lives in central and northern Taiwan. The "Central District" on this map, (somewhat confusingly), is located in south Taiwan. The eastern region of Taiwan has a very low population (National Statistics Republic of China, Taiwan, 2020).

Educationally, a large percentage of the Taiwan population is college educated or post graduate. In 2018 (there are no published statistics for 2019) 46% of the population had either a technical college or a university degree (Taiwan.gov.tw, 2018).

Employment status: Government employment statistics are not yet available for the year 2019. In 2018, 11,434,000 were employed which was 48.47% of the population) (Taiwan Statistical Data Book, 2019:39) (See Appendix 4).

Monthly income: The Directorate-General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (Taiwan) states that the average income in 2019 was NT\$ 44,114 (Executive Yuan [Taiwan], 2020). In terms of Net Income, because the economy has

slowed down, salaries have not grown exponentially due to economic downturn in Taiwan over the past approximately 20 years (Clark, Tan and Ho, 2018).

2.2 Identifying Factors Affecting Passenger Choice of Airlines

As stated previously the secondary aim of this study is to explore if there are differences in the importance attached to the factors associated with passenger airline choices (see definition of “choice factors” below; see Table 2.2) according to the type of airline - LCCs vs FSAs and describe these differences.

2.2.1 Factors Effecting Customer Choices

A number of choice factors have been presented in studies/journals that air passengers consider most important when deciding which airline to use. These choice factors are the following:

Safety in this context is defined as, from boarding to landing, whether airlines have a safe flight record without accidents. In four studies (Gilbert and Wong, 2003; Atalik and Ozel, 2007; Chen and Chao, 2015; Milioti, Karlaftis and Akkogiounglou, 2015) safety is one of the most important factors for passengers in choosing to take LCCs or FSAs. Of the four studies three focus on FSAs and LCCs and one focuses on LCCs. In fact, all of these studies have discussed safety as either a primary or secondary passenger concern. One can assume this is a global concern beyond the regions mentioned in the studies (Europe, Asia and Eurasia). Therefore, for purposes of this study safety emerges as a very important passenger concern.

Timeliness is the record of an airline’s on-time departures and arrivals. Timeliness is important for personal schedules, business meetings and successful flight connections. Timeliness is a factor that holds great importance for passengers, particularly for business travellers and those making flight connections. In addition, Immigration and Security Screenings now require air passengers to arrive significantly earlier than flight departures. Delayed flights only add to irritation and anger of passengers. These four studies have indicated that timeliness is an important concern of passengers (Gilbert and Wong, 2003; Atalik and Ozel, 2007; Chen and Chao, 2015; Kurtulmusoglu, Can and Tolon, 2016).

Convenience of schedules refers to whether airlines provide dates/days of the week and times (clock time) convenient for passengers' departures and arrivals. As referred to above, business travellers may have specific time objectives, and some passengers need to make flights connections. One study specifically raises the factor of convenience of schedules relative to LCCs. In this study, convenience of schedules was highlighted as the most important factor in customer choice of LCCs (Özlem Atalık and Emin Özel, 2007).

Seat comfort refers to whether the seat is comfortable, wide enough with enough legroom and elbow room. Fourie and Lubbe (2006), in their study found that seat comfort is one of the three most important factors in customer flight selection. Even though most people think 'seat comfort' is one of the important factors, everyone knows if they pay more money, they can get a more comfortable seat.

The schedule/frequency refers to the hours and days of the week and how many times flights depart and arrive. In this study, the schedule/ frequency is an important factor in air passengers consideration of LCCs and FSAs. Fouie and Lubbe (2006) found that there was a "significant difference" between business travellers using FSAs and travellers using LCCs. Business travellers (choosing FSAs) attach more importance to schedule/ frequency than air passengers choosing LCCs (Fourie and Lubbe, 2006).

Prices refers to the cost of tickets for flights. According to the four studies used as reference for this paper, price is the most important factor in air passengers' choices. From 2006 to 2016 air passengers booked their flights based on their number one priority: price. One assumes that, during these years, the subject of ticket price was a global factor. In some cases FSAs have competed with LCCs by lowering pricing strategy (Kurtulmusoglu, Can, and Tolon 2016).

Reliability refers to the level of customer confidence in the airline and whether the airline has a history of timeliness, and safety. Reliability and trust are important for air passengers because if they don't trust the airlines, air passengers will not buy tickets from them. For these three studies, we can conclude that Europeans and Asians value reliability and trust (Forgas, Moliner, Sánchez and Palau, 2010; Chen and Chao, 2015; Milioti, Karlaftis and Akkogiounglou, 2015).

Airline's image refers to the “mental image” customers have, plus its image created through advertising, “and the accumulative feelings, ideas, attitudes”(Norazah Mohd Suki, 2017) and the air passengers’ personal history with the airline (Norazah Mohd Suki, 2017). For example, there is evidence that some FSA passengers associate a good meal and beverage service with their image of an airline (Han *et al.*, 2019). According to Cambridge online dictionary image in advertising should convey who your company is and why you are better than your competition (Cambridge University Press, 2020). It is well-known that advertising has a powerful influence on consumers (Han *et al.*, 2019). Airlines, like other industries, spend many millions cultivating an “image” (See, for example: (Nagraj, 2013; Fleming, 2019)).

Loyalty refers to which airlines customers typically consider first. This may be based on experiences with the companies and/or frequent flyer status. Forgas *et al.* (Forgas *et al.*, 2010) argue that the researchers identify three components or antecedents of customer loyalty. These are satisfaction, trust and perceived value. In the context of this study these terms are defined as follows:

- (1) *Satisfaction*: “is a comparison between the results of the different transactions made and prior expectation”.
- (2) “*Trust* appears when one party trusts in the reliability and integrity of the other party to the exchange.”
- (3) *Perceived value* is “defined as the judgement or evaluation made by the customer of the comparison between the advantages of, or the utility obtained from, a product, service or relationship and the perceived sacrifices or costs “(Forgas *et al.*, 2010).

For example, a Taiwanese traveller has flown EMIRATES (and is a member of their frequent flyer program) airlines when taking a long trip because of previous experiences with that company, and satisfaction with their food service, in-flight entertainment and availability of WIFI.

Booking convenience refers to the ability of customers to quickly and efficiently book flight tickets (usually online) with minimal complication. In this period of high technology, airline companies give passengers the option of booking online. This is a significant change from having to visit travel agencies or go to an airport to book a ticket. In 2001 EasyJet sold 90% tickets from its online website. (Doganis, 2002: 142).

Customer-Relationship Management as defined by Cambridge dictionary is “ways that a company can encourage customers to like it and buy from it, for example by using software to look at information it has about its customers and using social media”(Cambridge University Press, 2020). It usually consists of a methodology and/ or tool which handles contact management, sales management, productivity, customer data gathering, and “extras”. It also helps provide essential support to customers through effective customer service (Debnath, Datta, and Mukhopadhyay, 2018).

In-flight service refers to everything the airline provides to ensure customer comfort on the airplane including meals/ drinks/ in-flight entertainment, duty-free services, attention from flight attendants, etc. Most air passengers know if they take LCCs, they will not get the same level of service compared with FSAs (Lin and Huang, 2015).

Table 2.2: Choice Factors Identified as Primary

Factors Listed as Primary	Sources (authors and dates)
Safety	<ul style="list-style-type: none"> • Atalık and Özel (2007) • Milioti, Karlaftis, and Akkogiounoglou (2015) • Gilbert and Wong (2003) • Chen and Chao (2015)
On time record	<ul style="list-style-type: none"> • Atalık and Özel (2007) • Gilbert and Wong (2003) • Kurtulmusoglu, Can, and Tolon (2016) • Chen and Chao (2015)
Price	<ul style="list-style-type: none"> • Fourie and Lubbe (2006) • Milioti, Karlaftis, and Akkogiounoglou (2015) • Kurtulmusoglu, Can and Tolon (2016) • Lin and Huang (2015)
Reliability	<ul style="list-style-type: none"> • Milioti, Karlaftis and Akkogiounoglou (2015) • Chen and Chao (2015) • Forgas, Moliner, Sánchez, and Palau (2010)
Airline's image	<ul style="list-style-type: none"> • Milioti, Karlaftis and Akkogiounoglou, (2015) • Lin and Huang (2015)
Convenience of schedule	<ul style="list-style-type: none"> • Atalık and Özel (2007)
Loyalty	<ul style="list-style-type: none"> • Forgas, Moliner, Sánchez, and Palau (2010)
Booking convenience	<ul style="list-style-type: none"> • Forgas, Moliner, Sánchez and Palau, (2010)
Customer-relationship management (CRM)	<ul style="list-style-type: none"> • Chen and Chao (2015)
In-flight service	<ul style="list-style-type: none"> • Lin and Huang (2015)

Source: Gilbert and Wong, 2003; Fourie and Lubbe, 2006; Atalık and Ozel, 2007; Forgas, Moliner, Sánchez and Palau, 2010; Chen and Chao, 2015; Milioti, Karlaftis and Akkogiounoglou, 2015; Lin and Huang, 2015; Kurtulmusoglu, Can and Tolon, 2016.

2.2.2 Market Share

In fact that has been true; just 2 years later Mason reported that LCCs and FSAs accounted for 48% of all air travel in Europe which had a significant impact on the airline industry. Go airlines reported that 30% of it's travellers were business travellers, and EasyJet provided data that on some routes 50% of their customers were business travellers. (Mason, 2002).

A questionnaire was developed and presented to Taiwanese air passengers on Google Forms, regarding air travel in 2019. The following chapter highlights the content of the questionnaire, and data gathered regarding demographics and choice factors specifically relative to Taiwanese air passengers.

CHAPTER 3. RESEARCH METHODOLOGY

This chapter explains how the questionnaire was developed, how the sample was defined, how the questionnaire was administered, number of respondents and data collected regarding choice factors and demographics.

A literature review was conducted in order to gain an in-depth understanding of the choice factors and identified the variables which were included in the questionnaire.

An online questionnaire was designed which was posted on Google Forms over one month and was directed at Taiwanese air passengers for the year 2019. We used a descriptive survey format to design the questionnaire (Altinay and Paraskevas, 2008: 82). Descriptive surveys are designed to highlight the characteristics of a specific population and focus on what that population does and thinks. The study used snowball sampling and convenience sampling.

3.1 Research Aims

The main research aims of this study were to:

- (1) identify choice factors and measure their importance to Taiwanese passengers in their selection of LCCs and/or FSAs.
- (2) assess the importance attached to each factor when choosing LCCs and/or FSAs.

The secondary aim was to:

- (1) characterize Taiwanese travellers according to flight frequency, destination choices and motivation for travelling.

3.2 Defining the Sample

There are two different sampling methods: probability sampling and non-probability sampling. Probability sampling, which involves random selection allowing researchers to make statistical inferences about a whole group, has four main aspects:

(1) simple random sampling involves using a pre-selected chart or list of random numbers which are used to designate specific members of a population being surveyed. This random selection insures that each member of the surveyed population has the same probability of being selected;

(2) systematic sampling involves systematically selecting every “nth” passenger for survey. For example, every 6th passenger or every 10th passenger of a total population is designated;

(3) stratified sampling divides the total population into groups (strata) based on the break down of their total user population. For example, groups based on the ages of their users, the gender of their users, the residency of their users, etc. It then looks at a percentage of each of these groups, reflective of that actual user group base relative to its total population;

(4) cluster sampling involves selecting random samples from a large population being studied, using one of the sampling methods mentioned above, it “divides the population into mutually exclusive subsets and then select(s) a random sample of the subsets” (a) one-stage cluster sampling is where researchers study all members of the subsets; and (b) two stage cluster takes a random sampling of each subset for survey purposes (Altinay and Paraskevas, 2008: 91-94).

Altinay and Paraskevas (2008: 95-97) state that non-probability sampling involves non-random selection based on convenience allowing easy collection of initial data. In a non-probability sample respondents are selected based on non-random criteria, and not every individual has a chance of being included. Non-probability sampling has five different aspects:

(1) convenience sampling is when participants are selected because of their convenient accessibility;

(2) judgmental sampling involves participants being handpicked from the existing population;

(3) quota sampling is ensuring equal representation of participants in each layer of a stratified sample grouping;

(4) snowball sampling involves identifying potential participants when appropriate candidates for the study are hard to locate; and finally,

(5) self-selection sampling, which means individuals identify their wish to participate in the study.

Due to the research context, we had to choose a non-probabilistic sample, therefore, in this particular case snowball sampling and convenience sampling were the most reasonable choices. Snowball sampling was used because the target respondent group would build on itself or snowball into more and more respondents. The questionnaire was distributed to friends and relatives who in turn distributed them to their friends and relatives. It was also posted on social media. Convenience sampling was then used to collect data from unknown individuals responding to the questionnaire, having placed it on social media platforms e.g. Facebook 歐洲的台灣人 European Taiwanese, 台灣人在歐洲 Taiwanese in Europe.

This study consisted of three main stages: questionnaire development (began in February of 2020), data gathering (began in May-June 2020) and data analysis (began in July 2020). The questionnaire was available to Taiwanese worldwide. Excel was used to analyze results.

3.3 The Questionnaire

It was hoped to survey a minimum of 300 respondents who had travelled using air transportation in 2019. The data then would be analyzed according to the reported information and the preference for LCCs or FSAs.

A questionnaire was developed and posted online on Google Forms. The questionnaire was based on extensive research information contained in journals, articles, tutorial videos and numerous books about customer choice factors.

We gathered data in three major areas: (1) Travel characteristics; (2) Which choice factors were of greatest importance to air passengers when choosing LCCs or FSAs; and (3) Socio-demographics of travellers. In other words, the questionnaire gathered background information on the respondents (e.g. age, gender, occupation, level of education, net monthly income, number of trips taken in 2019) and choice factors for choosing LCCs or FSAs (e.g. price, service, leisure / business trips, distance, effect of promotion and advertising, etc.)

The reasons an online questionnaire was chosen for this dissertation were:

- (a) According to Altinay and Paraskevas, questionnaires are an effective means of obtaining data about tourism (Altinay and Paraskevas, 2008: 120).
- (b) The online questionnaire is an efficient tool for reaching Taiwanese people. As opposed to a paper-based questionnaire (or interviews) the online questionnaire reaches the largest Taiwanese population.
- (c) People can conveniently respond to online questionnaires on their cellphones or other digital devices, for example laptops.

3.3.1 Questionnaire Design (Pilot Test and Main Questionnaire)

We adhered to the following principles of questionnaire design:

- (a) Address only one question or idea;
- (b) Express in neutral language to avoid leading questions;
- (c) Use easy-to-understand language and instructions;
- (d) Define the scope to consider the time frame or number of instances relevant to the question. In this case the questionnaire focused on 2019;
- (e) For numeric responses, allow respondents to answer in consistent units and formats.

Survey research is a typical method for gathering data in the travel industry (Altinay and Paraskevas, 2008). The process was as follows:

- (a) Design the questionnaire based on choice factors and socio-demographic characteristics (see Appendix 1).
- (b) Apply the pilot test using the Google Form platform and analyze the results from responses, and based on suggestions from the pilot test, modify the questionnaire.
- (c) Distribute the final questionnaire to social websites.
- (d) Collect the data from the questionnaire.
- (e) Use Excel to analyze initial data.
- (f) Data was organized in graphs or charts according to the following:

- Socio-Demographics (e.g. Age, Gender, Residence of Respondents, Occupation, Net Income).
- Choice Factors Data (LCCs and FSAs).
- Travel Details (when respondents travelled, how often, motivation response etc.)

(f) Apply descriptive statistics to analyse the results.

In the Literature Review chapter the thirteen predominant classifications of areas of concern of passengers were discussed. These thirteen classifications were identified as the most likely factors affecting customer satisfaction based on previous studies. Twenty choice factors were identified and questions developed, to expand upon these classifications (see Table 3.2 to 3.14). These questions reflect choice factors and specifically highlight detailed elements of each classification and areas of customer concern in their selection of airlines.

Questions were derived from classifications as follows: respondents were asked to rate each choice factor on a 1-5 Likert Scale (1 = not important at all; 5 = very important).

For clarification:

- Question number two and question fifteen refer to the category of Price. Question two refers to the overall price of flights. Question number fifteen refers to whether airlines levy additional charges for baggage.
- Choice factor questions number thirteen and eighteen reflect different aspects of the classification of Reliability. Number thirteen refers to how airlines manage passengers in the event of flight cancellation. Number eighteen refers to overall trust and confidence passengers have in the airline company itself.
- Question number twelve in the classification of Online Booking refers to whatever it is simple and easy to book a flight online. Question fourteen refers to the online flight check-in system at home or at the airport.

- Customer Relationship Management (CRM) is a broad category encompassing different aspects of customer service. Question eleven refers to customer service at the airport (arrival and departure). Question sixteen refers to overall customer care provided by the airlines both on the ground and in the air. Question seventeen is another aspect of CRM regarding how the airlines manage baggage.
- In-flight service, another broad category could include in-flight entertainment, in-flight meals and in-flight attendant service. Question eight refers to whatever there are free drinks, meals, and snacks in flight. Question nineteen refers to the quality and accessibility of entertainment on the flight. Question nine in-flight service refers to the quality of service provided by flight attendants: the speed with which drinks and meals are served and flight attendants' ability to answer questions and resolve problems efficiently.
- Three questions address the general topic of flight schedules and include classification Table 3.8 (Convenience of Schedule), 3.10 (Frequency) and 3.14 (Direct or Connecting Flight), and include questions one, ten and twenty. Question number one, convenience of schedule, is usually important to passengers flying FSAs. It refers to flight schedules during convenient hours throughout the day as opposed to flights at odd hours (for example very early morning or late night). Number ten refers to how often flights occur, whereas question number twenty refers to the easy (or difficult) availability of connecting flights to the final destination.
- Choice factor number eight, Availability of free in-flight meals/snacks, is actually constructed from two classifications: Airline's image (see Literature Review 2.2.1) and In-flight service.

Table 3.1: Choice Factors Derived from Classification

Table and Classification	Choice Factors and Number on Questionnaire
Table 3.2 Safety	3. Airline's safety record
Table 3.3 On time	6. On time departure and arrival
Table 3.4 Price	2. Price
Table 3.4 Price	15. Carry-on baggage allowance included in the fare
Table 3.5 Reliability	13. Reliability/dependability in terms of flight cancellation
Table 3.5 Reliability	18. Reliability/trust of airline
Table 3.6 Airline's image	5. Airline's image
Table 3.6 Airline's image	8. Availability of free in-flight meals/snacks
Table 3.7 Online booking	12. Convenient online booking system
Table 3.7 Online booking	14. Online check-in
Table 3.8 Convenience of schedule	1. Convenience of schedule
Table 3.9 Seat Comfort	4. Seat Comfort
Table 3.10 Frequency	10. Flight frequency
Table 3.11 Loyalty	7. Airline loyalty programs
Table 3.12 CRM	11. Ground staff service
Table 3.12 CRM	16. Customer care/service
Table 3.12 CRM	17. Avoiding loss/misplaced baggage
Table 3.13 In-flight service	8. Availability of free in-flight meals/snacks
Table 3.13 In-flight service	9. In-flight service
Table 3.13 In-flight service	19. In-flight entertainment
Table 3.14 Direct or connecting flight	20. Direct or connecting flight

Below the reader will find thirteen tables comprising the choice factors identified in the literature review classifications. Tables 3.2 to 3.14 represent summaries of choice factors listed in the different studies. Each table has six columns: factors, airline type, objectives, geographic area, methodology, and source, and reference to LCCs, FSAs or both. For example, the choice factors of safety and price, each have a table (3.2 Safety and 3.4 Price) linking them with the studies and sources.

Tables 3.2 to 3.14 are organized into the following groupings:

- Factors: Specific choice factors identified as important in the research.
- Airline Type: LCCs, FSAs, or both.
- Objectives: The titles of the studies, including the objective of the studies.
- Geographic area: What countries the research the originated from.

- Methodology: Analytic tools used for data collection, including either questionnaires or face-to face interviews. The methodology category presents information on how the choice factors were identified.
- Source: Authors and publication dates.

These tables demonstrate which choice factors are most important in the selection of LCCs, FSAs or both.

Table 3.2 focuses on Safety. Safety emerges as one of the most important classifications for passengers. Safety is equally important for passengers in their choices of LCCs and FSAs. The studies used both questionnaires and face-to face interviews as the source of this classification information. These studies covered classification factors for the period of 2003-2015.

Table 3.2: Classification for LCCs and FSAs -Safety

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Safety	LCCs	Factors affecting passengers' choices of LCCs.	Sabiha Gökçen Airport in Turkey.	Questionnaire via face-to- face interview (100 passengers).	Atalık and Özel (2007)
	LCCs and FSAs	Investigate factors that influence airline choices.	Eleftherios Venizelos International Airport Athens Greece.	Questionnaire (853 people respondents).	Milioti, Karlaftis, and Akkogiounoglou (2015)
	LCCs and FSAs	Factors for selecting airlines.	Hong Kong International Airport.	Questionnaire.	Gilbert and Wong (2003)
	LCCs and FSAs	Explore the airline choice factors considered by passengers.	Passengers from Taiwan and mainland China in Kaohsiung International Airport.	Questionnaire plus interview.	Chen and Chao (2015)

In Table 3.3 on time, on time departure and arrival, and punctuality are all listed as a function of timeliness of flights. In general terms these three classifications had equal importance and were highly valued by passengers. The methods used for gathering information were questionnaires, interviews and face-to-face interviews.

Table 3.3: Classification for LCCs and FSAs - On Time

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
<ul style="list-style-type: none"> •On time •On time departure and arrival •Punctuality 	LCCs	Factors affecting passengers' choices of LCCs.	Sabiha Gökçen Airport in Turkey.	Questionnaire via face-to- face interview (100 passengers).	Atalık and Özel (2007)
	LCCs and FSAs	Factors for selecting airlines.	Hong Kong International Airport.	Questionnaire.	Gilbert and Wong (2003)
	FSAs	Airline passenger service expectations.	Atatürk International Airport in Turkey.	Questionnaire.	Kurtulmusoglu , Can, and Tolon (2016)
	LCCs and FSAs	Explore the airline choice factors considered by passengers.	Passengers from Taiwan and mainland China in Kaohsiung International Airport.	Questionnaire plus interview.	Chen and Chao (2015)

Ticket price includes ticket price, fare, and low ticket prices for LCCs and FSAs. Although all of the studies for this dissertation listed price (in some form) on their classification lists, four of these studies did an indepth analysis of price. As a consequence, these four sources are listed here.

Table 3.4: Classification for LCCs and FSAs - Price

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
<ul style="list-style-type: none"> •Ticket price •Fare •Low ticket prices 	LCCs and FSAs	Determinants of selection of FSAs and LCCs.	Johannesburg International airport South Africa.	Questionnaire via face-to- face interview.	Fourie and Lubbe (2006)
	LCCs and FSAs	Investigate factors that influence airline choices.	Eleftherios Venizelos International Airport Athens Greece.	Questionnaire (853 people respondents).	Milioti, Karlaftis, and Akkogiounoglou (2015)
	FSAs (using low cost strategies)	Airline passenger service expectations.	Atatürk International Airport in Turkey.	Questionnaire.	Kurtulmusoglu, Can, and Tolon (2016)
	LCCs	Passenger choices of LCCs.	Global.	Analysis network process (ANP).	Lin and Huang (2015)

Table 3.5 reliability and trust means passengers believe they can depend on the airline to provide reliable service, safety, on-time service and comfort. Naturally these qualities extend to both LCCs and FSAs. Reliability and trust of airlines are very important classifications.

Table 3.5: Classification for LCCs and FSAs - Reliability

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
<ul style="list-style-type: none"> •Reliability •Trust 	LCCs and FSAs	Investigate factors that influence airline choices	Eleftherios Venizelos International Airport Athens Greece.	Questionnaire (853 people respondents).	Milioti, Karlaftis, and Akkogiounoglou (2015)
	LCCs and FSAs	Explore the airline choice factors considered by passengers.	passengers from Taiwan and mainland China in Kaohsiung International Airport.	Questionnaire plus interview.	Chen and Chao (2015)
	LCCs and FSAs	Airline passenger loyalty.	El Prat airport in Barcelona.	Questionnaire (personal interviews) emphasis Barcelona-London-Barcelona route.	Forgas, Moliner, Javier Sánchez, and Palau (2010)

Airline’s image includes several factors, such as, advertising, reputation, actual personal flight experience and statistics including on-time arrivals/departures, and accidents, amongst others. “It provides a powerful way of differentiating a company’s service, products and prices from its competitors, and to stimulate purchases” Nio (2011: 1).

Regarding perceived corporate value Lin and Huang (2015: 2) state, “Passengers base their purchase decisions on their personal perceptions and motivations concerning the adoption of a special service or product.” It is important to highlight the concepts of perceptions and motivations on the part of passengers. The authors identified the perceived corporate value as a major classification with subcategories which include corporate awareness, corporate image, corporate reputation and corporate development.

Table 3.6: Classification for LCCs and FSAs - Airline's Image

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Airline's image	LCCs and FSAs	Investigate factors that influence airline choices.	Eleftherios Venizelos International Airport Athens Greece.	Questionnaire (853 people respondents).	Milioti, Karlaftis, and Akkogiounoglou (2015)
•Perceived corporate value	LCCs	Passenger choices of LCCs.	Global.	Analysis network process (ANP).	Lin and Huang (2015)

In Table 3.7 the factors are “online booking” and “convenience of online search system”. Kurtulmusoglu et al. (2016: 133) state in their study, “Online booking is the third most important expectation for passengers. Airlines use online booking to reach new markets, to minimize costs, and to increase customer satisfaction and value.”

Table 3.7: Classification for LCCs and FSAs - Online Booking

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Online booking	FSAs (using low cost strategies)	Airline passenger service expectations.	Atatürk International Airport in Turkey.	Questionnaire.	Kurtulmusoglu, Can, and Tolon (2016)
•Convenience of online search system		Explore the airline choice factors considered by passengers.	passengers from Taiwan and mainland China in Kaohsiung International Airport.	Questionnaire plus interview.	Chen and Chao (2015)
•Convenience in making reservations	LCCs and FSAs				

Table 3.8 presents the classification of convenience of schedule. This classification is only discussed in one study, and that analysis discusses choice factors for LCCs only. No other sources raised this issue as an important classification. This study was conducted in Turkey and used questionnaires plus face-to-face interviews. Atalık and Özel (2007) listed convenience of schedules as their number one classification.

Table 3.8: Classification for LCCs and FSAs - Convenience of Schedules

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Convenience of schedules	LCCs	Factors affecting passengers' choices of LCCs.	Sabiha Gökçen Airport in Turkey.	Questionnaire via face-to-face interview (100 passengers).	Atalık and Özel (2007)

Table 3.9 lists seat comfort as an important classification for LCCs and FSAs. There is one study only for this classification. In this particular study seat comfort is ranked number one on their overall list of classification. This information was obtained through questionnaires plus face-to-face interviews.

Table 3.9: Classification for LCCs and FSAs - Seat Comfort

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Seat comfort	LCCs and FSAS	Determinants of selection of FSAs and LCCs.	Geographic: Johannesburg International airport South Africa.	Questionnaire via face-to-face interview.	Fourie and Lubbe (2006)

Table 3.10 lists schedule/frequency as an important classification for LCCs and FSAs. There is one study only for this classification. In this particular study “the schedule /frequency” is ranked number two on their overall list of choice factors. This information was obtained through questionnaires and face-to-face interviews.

Table 3.10: Classification for LCCs and FSAs - Frequency

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•The schedule /frequency	LCCs and FSAS	Determinants of selection of FSAs and LCCs.	Geographic: Johannesburg International airport South Africa.	Questionnaire via face-to-face interview.	Fourie and Lubbe (2006)

Loyalty is defined by Forgas et al. (2010) as based on satisfaction, trust and perceived value. Satisfaction indicates overall approval for services provided by the airlines, including arrivals/departures, amongst others. According to Forgas et al. (2010: 229), “Satisfaction is a comparison between the results of the different transactions made and prior expectations.” Passengers may have frequent flyer status with the airline.

Table 3.11: Classification for LCCs and FSAs - Loyalty

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Loyalty •Satisfaction	LCCs and FSAs	Airline passenger loyalty.	El Prat airport in Barcelona.	Questionnaire (personal interviews) emphasis Barcelona-London-Barcelona route.	Forgas, Moliner, Sánchez, and Palau (2010)

In Table 3.12 the factors are Customer-Relationship Management (CRM)” and “ground service”. CRM focuses on using technology to track customer relationship/history/data. “CRM in the airline industry would be based on analyzing customer data in order to understand preferences and behavior” (Maalouf and Mansour, 2008: 1). Chen and Chao (2015: 56) define ground service as “... Efficiency in problem solving of passengers, efficiency of ground service staff, service attitude of flight attendants, speed of baggage transport, reliability and safety in baggage handling, speed in providing flight information, safety and reliability of the airline, and punctuality of flights.”

Table 3.12: Classification for LCCs and FSAs - CRM

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
<ul style="list-style-type: none"> • CRM • Ground service 	LCCs and FSAs	Explore the airline choice factors considered by passengers.	passengers from Taiwan and mainland China in Kaohsiung International Airport.	Questionnaire plus interview.	Chen, and Chao (2015)

In Table 3.13 the classification is in-flight service. In-flight service includes a variety of aspects: in-flight entertainment, flight crew relationships, meals and drinks, and comfort of passengers while on board.

Table 3.13: Classification for LCCs and FSAs - In-Flight Service

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
• In-flight service	LCCs	Passenger choices of LCCs.	Global.	Analysis network process (ANP).	Lin, and Huang (2015)

A direct flight is a flight with one or more intermediate stops but no change of aircraft. The Collins English Dictionary states a connecting flight is “A flight taken from an airport other than that from which the journey began, and which is taken in a different aeroplane from that used for the previous stage of the journey.” Direct or Connecting Flights involves the ease with which passengers can get to their final destinations within a reasonable amount of time.

Table 3.14: Classification for LCCs and FSAs - Direct or Connecting Flight

Factors	Airline Type	Objectives	Geographic area	Methodology	Source
•Direct or connecting flight	LCCs	Dynamics (characteristics) of LCCs.	Europe.	In listing of Main Characteristic in Terms of Product Features (LCCs).	Almeida and Costa (2017)

Once we identified choice factors from these classifications, we designed the questionnaire. Each classification was analysed individually. In some cases we developed one choice factor based on classification topic, and in others, additional choice factor questions based on research and reflecting the breadth of the classification. For example the classification of CRM was broken down into three different choice factors: Ground staff service, customer care/service and Avoiding lost/misplaced baggage.

The questionnaire was divided into three sections:

Section one: There were five questions, and questions one (Q1a) and two (Q1b) focused on the number of flights (one way and roundtrip). Question three (Q1c) asked about destinations, plus motivation for travel (Q1d). Question 5, using a five points Likert Scale (Q2), measured which choice factors were of greatest importance in selection of LCCs.

Section 2: There were five questions, and questions one (Q3a) and two (Q3b) focused on the number of flights (one way and roundtrip). Question three (Q3c) asked about destinations, plus motivation for travel (Q3d). Question 5, using a five points Likert Scale (Q4) measured which choice factors were of greatest importance in selection of FSAs.

Section 3: The objective was to identify socio-demographic characteristics of Taiwanese travellers. Question five to Question ten are designed to ascertain Gender, Age, Residency, Level of Education, Employment Status and Net Monthly Income. Questions referring to socio-demographics were designed based on Veal's proposals (2017); plus demographics referenced in Chen and Chao (2015); Atalik and Özel (2007); and Milioti, Karlaftis and Akkogiounoglou (2015).

The original questionnaire was written in English. The pilot test was administered to Taiwanese fluent English speakers. The questionnaire was then translated to Mandarin (traditional Chinese) and posted on Google Forms in Mandarin. Responses were received in Mandarin and the results translated back to English.

Potential anticipated problems specifically related to Taiwan were that the Taiwanese want to protect their privacy and are fearful that someone will steal personal information (Regmi, 2016). For this reason many don't want to fill out online questionnaires (or questionnaires of any kind).

3.3.2 Pilot Test

A Pilot Test was designed and implemented to:

- (1) Ensure that all questions and issues were thoroughly covered and were suitable.
- (2) Add relevant suggestions from respondents.
- (3) Ensure questions were easily understood.
- (4) Get a sense of what the results of the final questionnaire might be.
- (5) Add any questions that were missing.

In this case the results of the questionnaire were not important (except insofar as they related to the questionnaire itself), but the pilot test could give us data on structural modifications and content of the questionnaire (Leon, Davis and Kraemer, 2011).

The pilot test was administered to twenty-one people who had had air travel experience in 2019, and who were willing to provide feedback on the questionnaire itself. Those respondents were sent, along with the questionnaire, a critique to which they responded in writing. The critique consisted of the following:

Table 3.15: Pilot Test Feedback

Thank you for taking the time to complete the “Taiwanese Air Passengers Experience Survey”. The purpose of this questionnaire was to gather data on factors most important in Taiwanese selection of airlines.

Q 1: How long did it take to fill out the questionnaire?

Q 2: Were any questions unclear?

Q 3: Is anything missing in the questionnaire?

Q 4: Did you find the format easy and unambiguous?

Q 5: What suggestions do you have for improvement?

Twenty-one respondents were counted:

A: Pilot Test -- frequency of travel percentages

- 4 (19%) respondents flew only FSAs in 2019.
- 6 (28.5%) respondents flew only LCCs in 2019.
- 11 (52.3%) respondents flew both LCCs and FSAs in 2019.

In this pilot test the female respondents outnumbered the males (females 57.14%, males 38.10%), and the majority live in central Taiwan (71.43%). Most respondents are university educated (66.67%), and are employed (61.90%). Most respondents have an income level of NT30,000 or less (38.10%).

Table 3.16: Pilot Test - Results of Socio-Demographics

Demographics	No. of sample	Percentage (%)
<u>Gender</u>		
Male	8	38.10%
Female	12	57.14%
Prefer not to say	1	4.76%
<u>Age</u>		
30 years or younger	4	19.05%
31-50 years old	15	71.43%
51 years or older	2	9.52%
<u>Residence</u>		
North Taiwan	5	23.81%
Central Taiwan	15	71.43%
South Taiwan	1	4.76%
East Taiwan	0	0%
<u>Level of Education</u>		
Primary School or below	0	0%
High School	2	9.52%
University	14	66.67%
Postgraduate	5	23.81%
<u>Employment status</u>		
Employed	13	61.90%
Self-employed	2	9.52%
Not currently working	1	4.76%
Government/ Public sector	3	14.29%
Retired	2	9.52%
Student	0	0%
<u>Net Monthly Income</u>		
NT\$ 30,000 or less	8	38.10%
NT\$ 30,001-NT\$ 40,000	4	19.05%
NT\$ 40,001-NT\$ 50,000	1	4.76%
NT\$ 50,001-NT\$ 60,000	2	9.52%
NT\$ 60,001-NT\$ 70,000	1	4.76%
NT\$ 70,001 or more	5	23.81%

The pilot test revealed that we first needed to separate questions on LCCs and FSAs. We then repeated the same questions for each section, including the question on motivation for travel (Q4 in the pilot test 1d and 3d in the final questionnaire). In the pilot test Q8, we added overseas to potential residences to expand our respondent base. Finally, we added directives to respondents to skip questions if they had not specifically flown LCCs or FSAs.

Table 3.17: Changes Made to Final Questionnaire as a Result of the Pilot Test

Question Number	Pilot Test	Final Questionnaire
Section 1 and Section 2	Not included	Add separate sections 1 and section 2 for LCCs and FSAs using the same questions.
Q1 and 3d	Q4	Added study/training as an option.
Q1 and 3d	Q4	Included Question Q4 in both the FSA and LCC sections for clarity.
Q8	Not included	Added overseas as a residence choice.
General	Not included	Added directives to skip questions if respondents hadn't travelled either LCCs or FSAs in 2019.

3.4 Data Collection Procedures

Before designing this questionnaire we adhered to the following principles: (1) to design questions directly addressing research aims, (2) decide the most effective method for reaching targeted respondents, face-to-face contact, postal contact, or questionnaire/online contact, (3) to draft investigative, measurable questions, (4) to draft clear comprehensible questions, (5) to ensure the questionnaire was a suitable length and not too time-consuming, (6) draft and conduct a pilot test, (7) using principles of effective questionnaire design draft questions to stimulative accurate, measurable responses, in proper sequence. Modify the questionnaire based on issues that arose during the pilot test (Altinay and Paraskevas, 2008: 120-126). The relationship between selected demographics and the choice of LCCs and FSAs were analyzed using Excel software.

We developed a pilot test to assess the thoroughness of questions and methodology. Data collected from the pilot test was used to make several changes to the questionnaire. Google forms was chosen as a “vehicle” for a questionnaire, in part because of it’s accessibility, but primarily because it provides detailed and categorical data relative to questionnaire results. Online data was provided based on the questionnaire with a number of categorical results in the form of charts, graphs and tables. The data provided gave results by (1) a list of all individual respondent and how each responded to each question and (2) a cumulative table was provided reflecting total numbers for each category. Data was provided about:

- number of valid and invalid respondents. Eighty-five respondents were invalidated because respondents had not flown in 2019 and could not provide complete information;

- individual tables were provided reflecting each category of demographics: gender, age, residency, education, employment status, and income;
- a ranking which identified choice factors figuring most prominently in travel decisions by Taiwanese travellers (see Table 3.1 to Table 3.13);
- separate tables were provided with numbers of flyers choosing LCCs and/or FSAs;
- numbers of roundtrip and/ or one way trips;
- destinations;
- motivation for travel.

3.5 Data Analysis Procedures

Using this data we developed specific Excel-based analyses targeting demographics, choice factors, choices of LCCs, and FSAs or both, and relationships to choice factors. New tables were created with the following:

- Likert Scale choice factors preferences related to each individual respondent. Excel did not provide with percentages relative to Likert Scale/choice factor preferences. Using Excel data percentages were calculated percent for all twenty choice factors including the percentage of respondents choosing each one;
- Calculated which choice factors affected choices of airlines creating an order of preference causing travellers to choose LCCs and/or FSA;
- Calculated and subsequently analyzed percentages of each demographic category, gender, age, residency, education, employment status, and income;
- Calculated and subsequently analyzed percentages for motivations for travel for all respondents;
- Using Excel, created mean and standard deviation percentages for twenty choice factors as they relate to airline selection.

The next chapter presents data provided from the questionnaire results including Socio-Demographics and cumulative results. It then analysis those results, as provided

by the data base. Section 4.2 presents respondent results regarding numbers of flights taken, destinations and motivations for travel, for LCCs and FSAs. Section 4.3 presents results of choice factors selected by respondents and the order and frequency of those selections. Section 4.4 presents Socio-Demographic results of respondent groups specifically, and compares them with choices of LCCs and FSAs. Section 4.5 is a more thorough analysis of respondents' motivation for travel. Finally, overall findings of this chapter are presented.

CHAPTER 4. RESULTS AND DISCUSSION

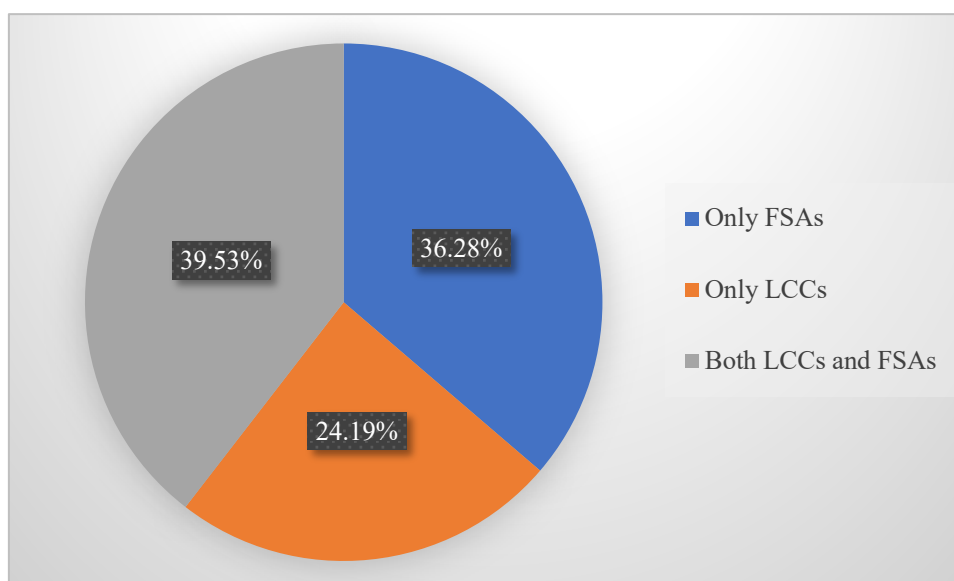
This chapter provides an analysis of data resulting from the two hundred and fifteen valid responses to the questionnaire. It analyses data collected in each of the following sections: demographics, and the importance of specific factors for choosing either FSAs or LCCs. The intention was to juxtapose data specifically relating to demographics, choice factors, and choice of LCCs, FSAs with combined LCCs and FSAs. In addition, choice factor results are discussed along with the importance attached by the respondents to particular factors when choosing LCCs or FSAs. It presents a discussion on socio-demographic characteristic elements, a discussion on travel characteristics, motivations and destination choice, and the importance of choice factors.

4.1 Sample's Characteristics

Table 4.1 presents the questionnaire results regarding the socio-demographic characteristics of respondent according to: gender, age, residence, level of education, employment status, and net monthly income. The following is an explanation of each of the results, along with a brief analysis of each. For the purposes of this section, the LCC group corresponds to the respondents that only flew LCCs in 2019, the FSA group corresponds to the respondents that only flew FSAs in 2019, the combined LCCs and FSAs group corresponds to the respondents that flew both LCCs and FSAs in 2019, the all respondents group is the total of all three groups.

Figure 4.1 presents respondents' flight preferences. It must also be said that three hundred questionnaires were collected, eighty-five were deemed invalid (*i.e.*, incomplete data), and were excluded in the final data. This left a sample size of two hundred and fifteen valid questionnaires. When the valid responses were analyzed, it was found that 36.28% of respondents flew only FSAs in 2019 and 24.19% of respondents flew only LCCs in 2019. Also 39.53% of respondents flew both LCCs and FSAs (see figure 4.1).

Figure 4.1: Respondents' Flight Preferences



➤ Gender

Respondents had the choice of selecting female, male, or prefer not to say. Of the total respondents to the questionnaire it can be seen that 72.56% are female, 26.51% were male and 0.93% preferred not to say. When considering each defined group, the results show that the LCCs respondents are 71.15% female and 26.92% male and 1.92% prefer not to say. In the FSAs group female respondents amounted to 79.49% whereas male ones were 20.51% and 0.00% preferred not to say. In the LCCs and FSAs group, female respondents totalled 67.06% and males 31.76%, and 1.18% preferred not to say.

The higher percentage of female respondents in the four groups may indicate the possibility that more women are willing to spend money on flights. In addition, female respondents outnumber male respondents 72.56% versus 26.51%. This may reflect the higher number of female users of social networks. Females tend to respond to online questionnaires more than male respondents (Smith, 2008). As mentioned in the methodology chapter, in the pilot test also women responded in higher percentages than men.

In addition, according to statistics issued by Outbound Departures of Nationals of the Republic of China in 2019 (see Appendix 2), female travellers' percentages were higher than the male travellers' percentages.

➤ Age

In the questionnaire, age was divided into the following four categories: (1) 30 years or younger, (2) 31-50 years old, (3) 51 years or older, and (4) prefer not to say. Of total respondents, 61.40% were in the 31 - 50 years old group, 29.30% in the 30 years or younger group, 8.84% were in the 51 and older group and 0.47% preferred not to say. The youngest respondents were 19 years old, the oldest respondent was 65 years old. The average age of respondents was 37.68 years old.

In the LCCs group of the total respondents 59.62% were in the 31-50 years old category (n=31 responses). This constituted the highest number of responses in terms of age. Also 30.77% of respondents were in the 30 years or younger category (n=16) and the 51 years or older category was 7.69% (4 respondents). Moreover, the prefer not to say category was 1.92% (1 respondent). Finally, the youngest respondent was 19 years old, and the oldest was 63 years old. The average age was 37.18 years old.

In the FSAs group, the majority of respondents were aged between 31-50 years old at 55.13% (n=43). The responses also indicate 29.49% were in the 30 years or younger category (n=23) and that 15.38% are in the 51 years or older category (n=12). Moreover, the prefer not to say category was noted as 0.00% (0 respondents). Finally, the youngest respondents were 19 years old, and the oldest was 65 years old. The average age was 38.31 years old.

In the combined LCCs and FSA group, the primary respondents in this category were 31-50 years old 68.24% (n=58). This constituted the highest number of responses in terms of age. Also 28.24% were in the 30 years or younger category (n=24 respondents). In addition, 3.53% were in the 51 years or older category (n=3). The prefer not to say category is 0.00% (0 respondents). The youngest respondents were 19 years old, and the oldest was 56 years old. The average age was 37.36 years old.

➤ Residence

Residence was divided into six locations: (1) North Taiwan, (2) Central Taiwan, (3) South Taiwan, (4) East Taiwan, (5) Overseas, and (6) Prefer not to say. The total

respondents to this questionnaire primarily live in central and north Taiwan and were 60.47% and 28.37% respectively, for a total of 88.84%. When looking at the results for the LCCs group, 84.61% of the respondents to this questionnaire live in central (63.46%) and north Taiwan (21.15%). Furthermore, for the FSAs group, the respondents to this questionnaire primarily live in central Taiwan (60.26%) (n=47) and north Taiwan (29.49%) (n=23), amounting to a total of 89.75% of respondents. Finally, for the combined LCCs and FSAs group, the respondents once again primarily live in central Taiwan and north Taiwan, (57.65% and 32.94% respectively), i.e. 90.59% with 49 respondents and north Taiwan, with 28 respondents).

➤ Level of Education

The level of Education was classified into four groups: (1) Primary school or below, (2) High school (including junior high school and senior high school), (3) University, and (4) Postgraduate. The total number of respondents that are highly educated is found at 93.48% with 58.60% stating they had received a university degree and that 34.88% received a postgraduate degree. Moreover, for the LCCs group the respondents to this questionnaire showed that 59.62% of LCC users were university educated (with a total of 31 respondents). Furthermore, for the FSAs group, the respondents to this questionnaire showed that 64.10% are university educated (n=50). Finally, for the combined group of LCCs and FSAs, 54.12% of respondents to this questionnaire are university educated (n=46).

➤ Employment Status

Six categories are designated under employment status: (1) Employed in private industry, (2) Self-employed, (3) Not currently working, (4) Government/Public sector, (5) Retired and (6) Student. The majority of respondents answered that they were employed in private industry (42.79%) (with 92 respondents). When considering the LCCs group alone, the majority of respondents were also employed in private industry (44.23%) with 23 respondents. Additionally, for the FSAs group, the majority indicate they are employed in private industry (41.03%) (with 32 respondents). Last, for combined LCCs and FSAs, 43.53% of answers (37 respondents) indicated employment in private industry.

➤ Net Monthly Income

For this characteristic, the total respondents are divided into seven Net Monthly Income categories: (1) NT\$30,000 or less, (2) NT\$30,001-NT\$40,000, (3) NT\$40,001-NT\$50,000, (4) NT\$50,001-NT\$60,000, (5) NT\$60,001-NT\$70,000, (6) NT\$70,001 or more, and (7) Prefer not to say. Firstly, the majority of respondents in the sample can be found in the lowest income category NT\$30,00 or less with 23.72% of the total number of respondents. Secondly, for the LCCs group, the majority of respondents can be found in NT\$30,001-NT\$40,000 category with 28.85% (15 respondents). Thirdly, for the FSAs group, the highest levels of income were NT\$30,001-NT\$40,000 and NT\$30,00 or less with 21.79% and each had 17 respondents. Finally, for combined LCCs and FSAs the highest levels of income were between NT\$30,000 or less and NT\$70,001 or more, each with 23.53% and 20 respondents.

Table 4.1: Socio-Demographic Characteristics of the Four Groups

	Total Respondents		Only LCCs		Only FSAs		LCCs and FSAs	
	n=215	Percentage	n=52	Percentage	n=78	Percentage	n=85	Percentage
Gender								
Female	156	72.56%	37	71.15%	62	79.49%	57	67.06%
Male	57	26.51%	14	26.92%	16	20.51%	27	31.76%
Prefer not to say	2	0.93%	1	1.92%	0	0.00%	1	1.18%
Age								
31-50 years old	132	61.40%	31	59.62%	43	55.13%	58	68.24%
30 years or younger	63	29.30%	16	30.77%	23	29.49%	24	28.24%
51 years or older	19	8.84%	4	7.69%	12	15.38%	3	3.53%
Prefer not to say	1	0.47%	1	1.92%	0	0.00%	0	0.00%
The youngest age.	19 years old		19 years old		19 years old		19 years old	
The oldest age.	65 years old		63 years old		65 years old		56 years old	
The average age.	37.68 years old		37.18 years old		38.31 years old		37.36 years old	
Residence								
Central Taiwan	129	60.00%	33	63.46%	47	60.26%	49	57.65%
North Taiwan	62	28.84%	11	21.15%	23	29.49%	28	32.94%
South Taiwan	16	7.44%	6	11.54%	5	6.41%	5	5.88%
Overseas	4	1.86%	1	1.92%	0	0.00%	3	3.53%
East Taiwan	2	0.93%	1	1.92%	1	1.28%	0	0.00%
Prefer not to say	2	0.93%	0	0.00%	2	2.56%	0	0.00%
Level of Education								
University degree	126	58.60%	31	59.62%	50	64.10%	45	52.94%
Postgraduate degree	75	34.88%	15	28.85%	24	30.77%	36	42.35%
High school (including junior high school and senior high school)	13	6.05%	5	9.62%	4	5.13%	4	4.71%
Primary school or below	1	0.47%	1	1.92%	0	0.00%	0	0.00%
Employment Status								
Employed in private industry	92	42.79%	23	44.23%	32	41.03%	37	43.53%
Government/Public sector	46	21.40%	11	21.15%	14	17.95%	20	23.53%
Self-employed	31	14.42%	8	15.38%	14	17.95%	10	11.76%
Student	21	9.77%	5	9.62%	9	11.54%	7	8.24%
Retired	16	7.44%	4	7.69%	8	10.26%	4	4.71%
Not currently working	9	4.19%	1	1.92%	1	1.28%	7	8.24%
Net Monthly Income								
NT\$ 30,000 or less	51	23.72%	14	26.92%	16	20.51%	21	24.71%

Table 4.1: Socio-Demographic Characteristics of the Four Groups

	Total Respondents		Only LCCs		Only FSAs		LCCs+FSAs	
	n=215	Percentage	n=52	Percentage	n=78	Percentage	n=85	Percentage
Net Monthly Income								
NT\$ 30,001-NT\$ 40,000	45	20.93%	15	28.85%	17	21.79%	13	15.29%
NT\$ 50,001-NT\$ 60,000	33	15.35%	7	13.46%	13	16.67%	13	15.29%
NT\$ 40,001-NT\$ 50,000	32	14.88%	3	5.77%	17	21.79%	12	14.12%
NT\$ 70,001 or more	30	13.95%	4	7.69%	6	7.69%	20	23.53%
NT\$ 60,001-NT\$ 70,000	20	9.30%	7	13.46%	7	8.97%	6	7.06%
Prefer not to say	4	1.86%	2	3.85%	2	2.56%	0	0.00%

4.2 Respondents' Travel Characteristics and Travel Motivation of the Four Groups

This section will provide commentary and a detailed statistical result regarding destination choices, purpose of trips, and numbers of flights for: (1) All respondents, (2) numbers of respondents who chose the LCCs, (3) numbers of respondents who chose the FSAs, (4) numbers of respondents who chose both LCCs and FSAs. Table 4.2, Travel Characteristics and Motivation of the Four Groups, shows the numbers of flights, and percentages of all respondents, the LCCs, the FSAs, and combined LCCs and FSAs groups. It presents percentages regarding respondents' destinations and motivation for travel. The following is an explanation of each section, a discussion of results and a brief analysis of each.

➤ Numbers of flights

To determine in a precise manner the number of flights taken by the respondents, the *number of flights* characteristic was divided into two subcategories: *one-way*³ flights and *round-trip* flights. Each subcategory includes the following options: 1-3 times, 4-6 times and 7 times plus. The results will also be differentiated in percentages based on 1) all the respondents group, 2) the LCCs group, 3) the FSAs group, and 4) the combined LCCs and FSAs group (*cf.* Table 4.2)

Firstly, the all-respondents group show that flights were taken a majority of 1-3 times for both one-way (72.41%) and round-trip (88.98%) flights. Few respondents in 2019 have travelled more than 4 times for either one-way journeys or round-trips. Twenty-one point thirty-three percent of respondents answered that they had taken 4-6 one-way flights and even less (8.65%) for round-trip flights. The same can be said for respondents who travelled more than 7 times as 6.26% of answers showed that they had used one-way flights over 7 times and 2.37% answered they had been on round-trips more than 7 times.

³ It should be noted that one-way flights can include different 'legs' of a single trip. For example, in a journey involving flights between Paris-London-Geneva-Paris, London and Geneva are considered as legs of the trip and are hence one-way flights.

Secondly, when considering the LCCs group the concentration of responses was around the 1-3 times subcategory for round-trips (95.74%). The second highest figure refers to those who had flown 1-3 times for one-way trips where 77.14% of respondents had answered. It must be noted that less than 1/3 of our respondents had answered that they had travelled more than 4 times for either one-way trips or round-trips (*cf.* Table 4.2 for the percentages).

Next, when considering the FSAs group and combined LCCs and FSAs group the majority of responses were 1-3 times for round-trips as well (FSAs at 89.74%, combined LCCs and FSAs at 87.42%). The second highest figure refers to those who had flown 1-3 times for one-way trips where 62.79% were FSAs only and 75.19% are found in the combined LCCs and FSAs group. It must be highlighted that most of the respondents from all four groups are focused in 1-3 times for round-trips.

➤ Destinations Choices

To discover the respondents' preferences in destinations, table 4.2 categorises the answers between the following locations: Asia, Europe, North America, South America, Oceania, Africa, and other destinations.

The answers from the all respondents group can be seen as such: in 2019, 74.19% had travelled to Asia, 15.30% to Europe, 5.55% to North America, 0.26% to South America, 3.45% to Oceania, 0.26% to Africa and 0.98% to other regions.

Secondly, in the LCC group the Asia percentage accounts for the largest percentage (75.68%). The FSAs group and combined LCCs and FSAs group are the same (FSAs at 65.31% and combining LCCs and FSAs at 74 %), their percentages account for the largest percentages in each of their groups.

It can be seen that the respondents to the questionnaire have in an overwhelming majority focused their travels in Asia. The most popular destinations in terms of percentages of travel were within Asia and second, to that is Europe. This preference in destination can be seen in all four groups.

➤ Primary Motivation

Respondents were given the following categories as their primary motivation for travelling: (1) Business, (2) Vacation/Holiday/Leisure, (3) Visit friends and relatives, (4) Study/training, and (5) Other.

The majority of respondents indicated that their primary motivation for travel was Vacation/Holiday/Leisure with 74.01% choosing this option. The other available responses categories have low percentage rates yet increases can be seen in the FSAs group when the motivation is to visit friends and relatives (20.51%) or in the combined LCCs and FSAs group for business related trips (12.35%). All other information presented in Table 4.2 regarding the motivations of travel are too low to be considered as relevant.

In the LCCs group, it is noted that the business category accounted for 0.00% and Vacation/Holiday/Leisure accounted for 90.38%. This result may indicate that taking LCCs is not this study's business travellers' first choice in Taiwan in 2019. Moreover, in the FSAs group it is clear that the business category is higher than the LCCs group (LCCs at 0.00%, FSAs at 6.41%).

Based on the findings on passengers' motivation to travel, it is possible to determine the most frequent (1) to the least frequent (5) for all subgroups: (1) Vacation/Holiday/Leisure, (2) Visit friends and relatives, (3) Business, (4) Study/training, and (5) Other.

Looking at the Vacation/Holiday/Leisure motivation (see Table 4.2), the LCCs group shows significantly higher percentages than the FSAs group (LCC: 90.38%, FSA: 64.10%). However, in the FSAs group, the Visit Friends and Relatives category is the second highest percentage (20.51%). This is more than four times that of the LCC group. Moreover, in the business category the LCC group accounts for 0.00%, the FSA group accounts for 6.41%, and the combined LCC and FSA group accounts for 12.35%. This study's results show that business travellers prefer to take FSAs more than LCCs.

Table 4.2: Travel Characteristics and Travel Motivation of the Four Groups

	All respondents (n=215)	LCCs (n=52)	FSAs (n=78)	LCCs+FSAs (n=85)
	%	%	%	%
Number of Flights				
One way flight				
1-3 times	72.41%	77.14%	62.79%	75.19%
4 - 6 times	21.33%	20.00%	30.23%	18.61%
7 times plus	6.26%	2.86%	6.98%	6.21%
Round trip				
1-3 times	88.98%	95.74%	89.74%	87.42%
4 - 6 times	8.65%	2.13%	6.41%	11.29%
7 times plus	2.37%	2.13%	3.85%	1.30%
Respondents Destination				
Asia	74.19%	75.68%	65.31%	74.00%
Europe	15.30%	16.22%	18.37%	16.44%
North America	5.55%	5.41%	8.16%	5.51%
South America	0.26%	0.00%	0.00%	0.49%
Oceania	3.45%	2.70%	7.14%	3.57%
Africa	0.26%	0.00%	1.02%	0.00%
Other	0.98%	0.00%	0.00%	0.00%
Respondents Primary Motivation				
Business	8.39%	0.00%	6.41%	12.35%
Vacation/Holiday/Leisure	74.01%	90.38%	64.10%	72.35%
Visit friends and relatives	11.26%	3.85%	20.51%	9.41%
Study/training	5.43%	5.77%	6.41%	4.70%
Other	0.91%	0.00%	2.56%	1.18%

4.3 Order of Choice Factors for LCCs Group, FSAs Group, Combined LCCs and FSAs Group and Overall Total Group According to Importance

This section shows first, the choice factors that were identified as most important to LCC flyers, FSA flyers, combined LCC and FSA flyers, and overall total flyers. Second, the tables present the ordering of choice factors, both overall and by group. Ordering of choice factors was based on how many people selected the choice factor, in rank order. Third, it presents an analysis of ordering of choice factors. In addition there is an analysis provided regarding themes, or categorical groups. These five groups are Price, Safety, Ease/convenience of scheduling/ flights and Customer-Relationship Management (CRM).

4.3.1 Ranking of All Respondents Choice Factors Order

The overall total number of respondents is two hundred and fifteen. The list on Table 4.3 appears in order of ranking results. Reliability/trust of airline was considered the most important factor and in-flight entertainment was considered the least important item out of the twenty listed factors.

Reliability/trust of airline and Airline's safety record appear as the most important choice factors for respondents, number one and number two. Passengers want to know that they will arrive safely, securely and their flights will arrive without incident. This reflects a basic instinct for safe survival. It is not surprising that these choice factors emerged in first and second place.

Questionnaire results indicate that flyers don't want to waste time waiting for their luggage, particularly after a long and tiring trip (Martin, 2014). The price of carry-on baggage relates to the overall price of the flight. Travellers want an efficient and non-time-consuming way to retrieve their luggage.

Price is the sixth on the list. It is obviously an important consideration for many travellers, though not all. Price seems less important overall than one might think. The fact that carry-on baggage as a potential cost appears before price may indicate that travellers do not want extra costs added to the total price of the flight.

Direct or connecting flight, which is number seven and convenience of schedule, number eight, relate to the ease with which travellers can reach their destinations, also taking travel time spent into consideration.

Apparently of less importance to respondents are in-flight service, number seventeen on the list, availability of free in-flight meals/snacks, number nineteen, and in-flight entertainment, number twenty. FSA flyers would naturally expect these choice factors on their flights. As for the rest, one could speculate that on short flights these elements are simply not as important as other considerations.

In fact there is a little difference in mean value between all twenty choice factors. For example, there is only a 0.04 percent difference between reliability/trust of airline and airline's safety record. There is only a one percent difference between the first choice (Reliability/trust of airline) and the last choice factor (In-flight entertainment).

In summary the top themes that emerge in this table and in this order (see Table 4.3) are:

- Safety and security (choice factor of Reliability/trust of airline, number one, and choice factor of Airline's safety record, number two).
- Time consideration (choice factor of on-time departure and arrival, number four, choice factor of direct or connecting flights, number seven, choice factor of convenience of schedule, number eight, and choice factor of flight frequency, number fourteen).
- Price (choice factor of carry-on baggage allowance included in the fare, number five, and choice factor of price, number six).
- Ease /Convenience (choice factor of direct or connecting flights, number seven, choice factor of convenience of schedule, number eight, choice factor of convenient online booking system, number nine, and choice factor of flight frequency, number fourteen, and choice factor of convenient online booking system, number nine).

- Customer-Relationship Management (choice factor of customer care/ service, number eleven, choice factor of ground staff service, number sixteen, choice factor of airline loyalty programs, number eighteen and choice factor of in-flight service, number seventeen).

Table 4.3: Choice Factors for All Respondents in Order of Ranking (by Questionnaire Respondents)

	1	2	3	4	5	Don't know	mean	standard deviation
Reliability/trust of airline	1.40%	1.40%	9.07%	30.23%	49.76%	8.14%	4.50	0.1937
Airline's safety record	1.86%	3.03%	9.53%	26.51%	51.16%	7.91%	4.46	0.1908
Avoiding loss / misplaced baggage	1.16%	3.49%	10.23%	26.51%	50.23%	8.37%	4.46	0.1870
On-time departure and arrival	1.17%	1.63%	11.16%	32.55%	46.75%	6.74%	4.42	0.1872
Carry-on baggage allowance included in the fare	1.39%	3.03%	10.00%	31.63%	45.35%	8.60%	4.42	0.1775
Price	1.63%	2.56%	12.10%	26.98%	50.00%	6.75%	4.41	0.1877
Direct or connecting flights	1.40%	4.18%	11.16%	30.46%	45.12%	7.67%	4.37	0.1732
Convenience of schedule	2.79%	3.96%	11.40%	30.47%	44.42%	6.98%	4.31	0.1695
Convenient online booking system	1.63%	3.26%	14.42%	33.02%	40.23%	7.45%	4.29	0.1624
Reliability/dependability in terms of flight cancellation	1.87%	5.12%	14.41%	30.46%	40.46%	7.68%	4.26	0.1546
Customer care/service	1.63%	4.42%	19.07%	31.63%	35.12%	8.14%	4.19	0.1428
Online check-in	2.79%	5.12%	18.14%	31.86%	34.19%	7.90%	4.13	0.1373
Airline image	1.87%	4.65%	20.47%	33.49%	32.10%	7.44%	4.12	0.1403
Flight frequency	2.10%	6.04%	20.70%	33.26%	30.23%	7.68%	4.07	0.1328
Seat comfort	2.79%	8.14%	22.56%	30.46%	29.30%	6.75%	3.96	0.1223
Ground staff service	2.56%	8.37%	23.49%	31.86%	26.51%	7.21%	3.93	0.1210
In-flight service	4.19%	12.56%	19.77%	29.07%	27.68%	6.74%	3.84	0.1054
Airline loyalty programs	4.65%	12.09%	24.42%	27.91%	23.49%	7.44%	3.76	0.0983
Availability of free in-flight meals/ snacks	8.38%	12.79%	23.95%	23.26%	24.88%	6.74%	3.64	0.0832
In-flight entertainment	1.84%	14.18%	26.97%	25.81%	16.97%	7.21%	3.50	0.0997

4.3.2 Ranking of LCCs Choice Factors Order

The total number of respondents who chose LCCs was fifty-two (24.19%). As previously mentioned, the list on the Table 4.4 appears in order of ranking results. This group chose price as the most important factor when choosing an LCC airline, and availability of free in-flight meals/snacks was considered the least important item out of the twenty listed factors.

LCC respondents chose price as the number one choice factor, Atalik and Özel in 2007 stated price is the most important factor when choosing an LCC (Atalik and Özel, 2007: 285). For example, when travellers fly from Taiwan to Hong Kong, which is a frequent destination, they can choose FSAs or LCCs. Most flyers choose LCCs because it is a short flight and therefore it's unnecessary to pay more money. Many flights within Asia are relatively short, therefore, many passengers chose LCCs as the least expensive alternative (O'connell and Williams, 2005).

The second choice factor for LCCs is airline's safety record. As has been established safety and security are of uttermost importance to travellers. So, even if they are saving money, safety and security remain as major consideration in travellers' minds.

The convenience of online booking likely appears as the third choice factor. LCCs have streamlined reservations, ticketing and boarding to accommodate lower prices. So, there is a direct relationship between this choice factor and price. LCCs often offer even cheaper prices by offering promotional campaigns, often within specified timeframes. These campaigns are designed to rapidly increase ticket sales. LCCs are fully aware that their customer base values lower prices.

Appearing last on the choice factors list are: in-flight service (ranked value, eighteen, mean value 3.38%), in-flight entertainment (ranked value, nineteen, mean value 2.94%) and availability of free in-flight meals/ snacks (ranked value, twenty, mean value 2.85%). Atalik and Özel in 2007 stated food/drinks are not important because "passengers only want to fly point to point" (Atalik and Özel, 2007: 288). Because price is the primary consideration for LCCs travellers, there is no expectation of extras. Even seat comfort appears as number seventeen on the list.

For the LCC choice factor group, the four major choice factors and the order in which they appear are:

- Price (choice factor of carry-on baggage allowance included in the fare number six, and choice factor of price number one).
- Safety and Security (choice factor of reliability/trust of airline number four and choice factor of airline's safety record number two).
- Ease /Convenience (choice factor of direct or connecting flights number seven, choice factor of convenience of schedule number eleven, choice factor of convenient online booking system number three, and choice factor of flight frequency number twelve, and choice factors of convenient online booking system number three).
- Time consideration (choice factor of on-time departure and arrival number eight, choice factors of direct or connecting flights number seven, choice factor of convenience of schedule number eleven, and choice factors of flight frequency twelve).
- Customer-Relationship Management (choice factor of customer care/ service, number ten, choice factor of ground staff service, number fifteen, choice factor of airline loyalty programs, number sixteen, choice factor of in-flight service, number eighteen and choice factor of in-flight service, number eighteen)

The first twelve choice factors show mean values of 4.00 or higher, this would indicate the important of these choice factors in respondents' mind in the LCCs group. There is a difference of 1.84% between the first choice factor, which is price and the last choice factor which is availability of free in-flight meals/ snacks.

Table 4.4: Choice Factors for the LCC Respondents in Order of Ranking (by Questionnaire Respondent)

	1	2	3	4	5	Don't know	mean	standard deviation
Price	1.92%	0.00%	5.77%	11.54%	80.77%	0.00%	4.69	0.3171
Airline's safety record	0.00%	1.92%	9.62%	28.85%	57.69%	1.92%	4.48	0.2278
Convenient online booking system	0.00%	0.00%	7.69%	42.31%	46.15%	3.85%	4.46	0.2157
Reliability/trust of airline	0.00%	1.92%	11.54%	28.85%	53.85%	3.85%	4.46	0.2106
Avoiding loss / misplaced baggage	0.00%	1.92%	15.38%	25.00%	53.85%	3.85%	4.42	0.2056
Carry-on baggage allowance included in the fare	1.92%	1.92%	13.46%	30.77%	46.15%	5.77%	4.35	0.1807
Direct or connecting flights	0.00%	3.85%	13.46%	32.69%	48.08%	1.92%	4.31	0.1956
On-time departure and arrival	0.00%	1.92%	15.38%	36.54%	44.23%	1.92%	4.29	0.1933
Reliability/dependability in terms of flight cancellation	0.00%	5.77%	13.46%	36.54%	40.38%	3.85%	4.23	0.1748
Customer care/service	1.92%	1.92%	25.00%	30.77%	38.46%	1.92%	4.08	0.1671
Convenience of schedule	3.85%	5.77%	15.38%	34.62%	38.46%	1.92%	4.04	0.1612
Flight frequency	1.92%	9.62%	15.38%	36.54%	32.69%	3.85%	4.00	0.1473
Online check-in	3.85%	3.85%	23.08%	32.69%	32.69%	3.85%	3.98	0.1447
Airline image	0.00%	7.69%	26.92%	32.69%	28.85%	3.85%	3.94	0.1437
Ground staff service	5.77%	5.77%	26.92%	32.69%	26.92%	1.92%	3.75	0.1358
Airline loyalty programs	5.77%	15.38%	28.85%	1.92%	30.77%	1.92%	3.58	0.1314
Seat comfort	0.00%	17.31%	34.62%	26.92%	21.15%	0.00%	3.52	0.1417
In-flight service	7.69%	19.23%	23.08%	28.85%	19.23%	1.92%	3.38	0.1001
In-flight entertainment	15.38%	19.23%	32.69%	21.15%	11.54%	0.00%	2.94	0.1085
Availability of free in-flight meals/ snacks	15.38%	23.08%	36.54%	13.46%	9.62%	1.92%	2.85	0.1196

4.3.3 Ranking of FSAs Choice Factors Order

The total number of respondents who chose FSAs is seventy-eight (36.28% of total respondents). As previously mentioned, the list on the Table 4.5 appears in order of ranking results. As such, this group chose airline's safety record as the most important factor when choosing a FSA airline. Reliability/ trust of airline also appears as the number four choice factor indicating that safety is the most important consideration for FSA flyers.

Moreover, with the avoiding loss / misplaced baggage choice factor is in second place, as previously stated, most travellers don't want to waste time in the airports, not to mention that flyers don't want to lose their possessions.

Why is on-time departure and arrival also important for travellers of the FSAs group? In addition to not wasting additional time, travellers may need to connect to other flights. The assumption for FSA travellers, as opposed to LCC travellers, is that many are on longer or long-haul flights.

Price appears as number thirteen on this list. As it is not even in the top ten choice factors, the expectation is that travellers know they're going to pay higher prices for flight tickets. FSA passengers often pay more for flights than LCCs passengers. This table shows they prioritize certain choice factors that LCC passengers don't. These are: on-time departure and arrival, number three, direct or connecting flights, number five, convenience of schedule, number six. In addition, the presumption is that passengers on FSAs expect to have included in the price of their tickets: availability of free in-flight meals/ snacks, number sixteen, a comfortable seat, number ten, and in-flight entertainment, number twenty.

The general themes and order of appearance in this table are as follows:

- Safety and security (choice factor of reliability/trust of airline, number four and choice factor of airline's safety record, number one).
- Time consideration (choice factors of on-time departure and arrival, number three, choice factors of direct or connecting flights, number five, choice factors of

convenience of schedule, number six, and choice factors of flight frequency, number seventeen).

- Price (choice factors of carry-on baggage allowance included in the fare, number seven, choice factors of price, number thirteen).
- Ease /Convenience (choice factors of direct or connecting flights, number five, choice factors of convenience of schedule, number six, choice factors of convenient online booking system, number twelve, and choice factors of flight frequency, number seventeen, and choice factors of convenient online booking system, number twelve).
- Customer-Relationship Management (choice factor of customer care/ service, number eleven, choice factor of ground staff service, number eighteen, choice factor of airline loyalty programs, number nineteen, and choice factor of in-flight service, number nineteen)

Compared with the other three groups, the FSAs group has more choice factors with a mean value of equal to four or above four. In fact, there are seventeen with mean values at four or higher (4.01- 4.49). Therefore, FSA respondents to the questionnaire gave higher and more equal importance to more choice factors than any other groups.

Table 4.5: Choice Factors for the FSA Respondents in Order of Ranking (by Questionnaire Respondents)

	1	2	3	4	5	Don't know	mean	standard deviation
Airline's safety record	2.56%	0.00%	8.97%	24.36%	62.82%	1.28%	4.49	0.2434
Avoiding loss / misplaced baggage	0.00%	2.56%	10.26%	28.21%	57.69%	1.28%	4.45	0.2267
On-time departure and arrival	1.28%	2.56%	5.13%	35.90%	55.13%	0.00%	4.41	0.2322
Reliability/trust of airline	1.28%	1.28%	7.69%	34.62%	55.13%	0.00%	4.41	0.2295
Direct or connecting flights	1.28%	3.85%	8.97%	29.49%	53.85%	2.56%	4.38	0.2101
Convenience of schedule	3.85%	1.28%	3.85%	37.18%	52.56%	1.28%	4.37	0.2241
Carry-on baggage allowance included in the fare	1.28%	3.85%	6.41%	35.90%	51.28%	1.28%	4.36	0.2150
Airline image	1.28%	2.56%	12.82%	32.05%	50.00%	1.28%	4.31	0.2017
Reliability/dependability in terms of flight cancellation	1.28%	3.85%	12.82%	34.62%	46.15%	1.28%	4.24	0.1920
Seat comfort	1.28%	2.56%	15.38%	35.90%	44.87%	0.00%	4.21	0.1939
Customer care/service	1.28%	2.56%	16.67%	35.90%	42.31%	1.28%	4.19	0.1844
Convenient online booking system	1.28%	5.13%	15.38%	35.90%	41.03%	1.28%	4.14	0.1773
Price	1.28%	5.13%	15.38%	37.18%	39.74%	1.28%	4.13	0.1767
In-flight service	1.28%	5.13%	16.67%	34.62%	42.31%	0.00%	4.12	0.1804
Online check-in	2.56%	6.41%	16.67%	32.05%	42.31%	0.00%	4.05	0.1718
Availability of free in-flight meals/ snacks	1.28%	8.97%	16.67%	33.33%	39.74%	0.00%	4.01	0.1664
Flight frequency	2.56%	7.69%	16.67%	32.05%	41.03%	0.00%	4.01	0.1666
Ground staff service	1.28%	6.41%	23.08%	33.33%	34.62%	1.28%	3.97	0.1562
Airline loyalty programs	3.85%	10.26%	21.79%	25.64%	35.90%	2.56%	3.87	0.1327
In-flight entertainment	3.85%	10.26%	25.64%	33.33%	26.92%	0.00%	3.69	0.1376

4.3.4 Ranking of Combined LCCs and FSAs Choice Factors Order

The total number of respondents who chose combined LCCs and FSAs is eighty-five (39.53%). This table shows respondents who showed no preference for either FSAs or LCCs. As previously mentioned, the list on Table 4.6 appears in order of ranking results. As such, this group chose reliability/trust of airline as the most important choice factor. This is also listed as number one in the All Respondents group (Table 4.3). The FSA group listed safety as their first priority. Except for the LCC group (Table 4.4), respondents have ranked a safety-oriented choice factor as the first choice.

Avoiding loss/ misplaced baggage appears on table 4.6 as the number two choice factor. This factor appears in the top five choice factors on each of the tables, so it is clearly important to all respondents.

Why are the convenience of schedule choice factor and convenient online booking system choice factor important for respondents of the LCCs and FSAs group? Because more and more people book the tickets online independently. They also think the convenience of schedule choice factor is important because if they have time differences, they have to adjust for their jet lag. For example, when travellers fly from London to Taiwan, it involves time-zone differences.

The in-flight entertainment choice factor, availability of free in-flight meals/snacks and airline loyalty programs are indicated consistently as least important in all four tables (in-flight entertainment number 19-20, availability of free in-flight meals/snacks number 16-20, and the airline loyalty programs number 16-19).

Even though there are eleven choice factors of mean value equal to four or above four in the combined LCC and FSA group, excepting the convenience of schedule choice factor and the convenient online booking system choice factor, there are only minor differences in other choice factors in terms of mean value.

The general themes and order of appearance in this table are as follows:

- Safety and security (choice factor of reliability/trust of airline, number one, and choice factor of airline's safety record, number seven).
- Time consideration (choice factors of on-time departure and arrival, number four, choice factors of direct or connecting flights, number five, choice factors of convenience of schedule, number eight, and choice factors of flight frequency, number fourteen, and on time departure choice factor, number four).
- Price (choice factors of carry-on baggage allowance included in the fare, number three, choice factors of price, number six).
- Ease /Convenience (choice factors of direct or connecting flights, number five, choice factors of convenience of schedule, number eight, choice factors of convenient online booking system, number nine, and choice factors of flight frequency, number fourteen, avoiding loss / misplaced baggage, number two, and reliability/dependability in terms of flight cancellation, number ten, and choice factors of convenient online booking system, number nine).
- Customer-Relationship Management (choice factor of customer care/ service, number eleven, choice factor of ground staff service, number sixteen, choice factor of airline loyalty programs, number eighteen, and choice factor of in-flight service, number seventeen)

The combined FSAs and LCCs group has no discernible pattern in term of analysing the choice factors chosen by respondents. However, beginning with choice factor number eight and through number twenty, the list and order is exactly the same as all respondents table (see table 4.3). This is perhaps logical given that these travellers will choose whatever form of travel suits their immediate preferences (choice factors). As can be seen in the table 4.6, price is not the highest priority. For example, a passenger booking a flight from Taiwan to Japan (between three to four hours) will chose an FSA flight or LCC flight depending on his or her preferences.

Table 4.6: Choice Factors for Both LCC and FSA Respondents in Order of Ranking (by Questionnaire Respondents)

	1	2	3	4	5	Don't know	mean	standard deviation
Reliability/trust of airline	1.18%	1.18%	10.00%	34.71%	50.00%	2.95%	4.40	0.2073
Avoiding loss / misplaced baggage	1.77%	4.11%	11.77%	26.47%	51.77%	4.11%	4.35	0.1944
Carry-on baggage allowance included in the fare	0.59%	3.54%	11.18%	35.29%	46.47%	2.95%	4.32	0.1941
On-time departure and arrival	1.18%	0.59%	13.53%	36.47%	47.06%	1.18%	4.31	0.2032
Direct or connecting flights	1.77%	2.94%	12.35%	33.53%	47.65%	1.77%	4.28	0.1947
Price	1.77%	2.94%	15.88%	27.64%	50.00%	1.77%	4.26	0.1931
Airline's safety record	2.36%	5.29%	11.18%	31.76%	45.88%	3.54%	4.24	0.1799
Convenience of schedule	1.77%	5.30%	14.71%	31.77%	44.70%	1.77%	4.18	0.1784
Convenient online booking system	2.36%	3.53%	20.58%	32.36%	39.41%	1.77%	4.08	0.1660
Reliability/dependability in terms of flight cancellation	2.36%	8.82%	16.47%	29.41%	41.18%	1.77%	4.04	0.1582
Customer care/service	1.77%	5.89%	21.77%	34.11%	33.53%	2.95%	4.01	0.1511
Online check-in	3.53%	5.29%	21.17%	34.71%	32.35%	2.95%	3.96	0.1471
Airline image	2.35%	5.30%	25.30%	37.65%	27.06%	2.36%	3.89	0.1524
Flight frequency	2.36%	5.89%	28.24%	31.17%	30.00%	2.36%	3.88	0.1447
Seat comfort	4.71%	8.83%	26.47%	33.53%	24.12%	2.36%	3.71	0.1300
Ground staff service	2.95%	8.83%	30.59%	32.94%	22.94%	1.77%	3.69	0.1392
In-flight service	5.30%	15.88%	21.18%	30.59%	25.30%	1.77%	3.60	0.1132
Airline loyalty programs	5.88%	9.41%	28.82%	38.24%	15.88%	1.77%	3.54	0.1418
Availability of free in-flight meals/ snacks	10.00%	12.94%	25.88%	24.71%	24.71%	1.77%	3.46	0.0995
In-flight entertainment	11.17%	13.53%	30.59%	27.06%	14.70%	2.95%	3.29	0.1033

4.4 Discussion

This section presents a discussion by comparing the results with current academic findings on socio-demographic characteristic elements, travel characteristics, motivations and destination choice versus choice factors.

4.4.1 Discussion on Socio-Demographic Characteristic

When considering gender, the literature (Atalik and Özel, 2007; Chen and Chao, 2015; Kurtulmusoglu, Can, 2016) shows that the number of male respondents of travel questionnaire are usually higher than the number of female respondents. However, the findings of this study show that the number of female respondents is higher than the number of male respondents (Kim and Lee, 2011; Lu, 2017). This could reflect a growing trend that there are more females in Taiwan that want to travel abroad and that can afford air tickets because of the availability of LCCs. There is an interesting finding, according to Outbound Departures of Nationals of Republic of China by Gender, 2019 (see Appendix 2), the percentage of female travellers are higher than male. These results are benefits for travel agencies and airplane companies because they can provide more marketing strategies to attract females to buy tickets or join tour groups.

When considering age, the 31-50 years category clearly shows a higher percentage of responses to the questionnaire in all four groups. This finding is shared in three studies, where 31-50-year-olds account for the highest percentage of travel respondents (Atalik and Özel, 2007; Chen and Chao, 2015; Kurtulmusoglu, Can, 2016). The findings of the results and three other studies highlight that most travellers are aged between 31-50 years old which could demonstrates that they are the age category that can afford airline tickets and can make the choice between LCCs and FSAs more easily.

When looking at the 30 years or younger category, the LCCs only group percentage is higher than the FSAs group (Lu, 2017). This could mean that the younger generations do not have a specific preference for either LCCs or FSAs. Furthermore, in the 51 years or older category, there is an obvious preference for FSAs over LCCs. Such a finding could show that older generations like “in-flight services” (*e.g.*, in-flight meals, in-flight movies) when they take the FSAs.

When looking at the education level category, the results of the questionnaire show that a university level of education accounts for the highest percentage (Kim and Lee, 2011; Lu, 2017). When considering income, different results can be analysed. As has been mentioned, the majority of respondents declared earnings of NT\$ 30,000 or less and NT\$ 30,001 - NT\$ 40,000. It shows that even though travellers do not make much money they are still willing to spend their money for travel. This is part of consistent with other studies cited in the Literature review chapter (Chen and Chao, 2015)

According to the results of the questionnaire and a previously mentioned study (Jou *et al.*, 2008) price is revealed as the most important choice factor when choosing an LCC. The primary justification is that LCCs offer lower ticket prices to attract more people. Another reason is that LCCs are popular for short flights. According to Table 4.2, the LCC travellers group had a significantly higher percentage of travellers in the vacation/holiday/leisure category than the other three groups (the LCCs group: 90.38% versus, all respondent group: 74.01%, the FSA group: 64.10%, and combined LCC and FSA group:72.35%).

The findings on income levels indicate that even though the respondents stated having lower incomes (*cf.* Table 4.1), their desire to travel is made possible by the low prices offered by LCCs and hence presents less of a burden on their personal finances.

Karivate (2004) stated that the low-cost tickets of LCCs can compete successfully with established FSAs. This is why so many countries in Asia provide many flights to Taiwan⁴. In addition, LCCs have been shown to play a major role in the air transport industry (Costantino *et al.*, 2016). Because FSA ticket prices are usually more expensive than LCCs, it is possible to deduce that those who prefer flying with FSAs do not have the same financial concerns as those who prefer LCCs.

4.4.2 Discussion on Travel Characteristics, Motivations and Destination Choice

When looking at the availability of flights, Slocum (2018) stated that because of the rise of LCCs, the air travel market in Asia has been dramatically changed at the same

⁴ All Asian countries have regular flights in and out of Taiwan, see Appendix 6

time by rising incomes, political movements, policy changes and overall economic growth. Slocum's study also showed that more LCC flights are available than FSAs for travel in Asia. The results indicate that a majority of respondents travel to Asian destinations.

It must be noted however, that in some instances, the traveller does not have a choice between FSAs and LCCs because the destination is too far away. For example, if the destination is in North America or Europe, travellers will only find FSAs available as a flight option.

When looking at leisure motivations, the results of the questionnaire shows most Taiwanese's primary motivation is Vacation/Holiday/Leisure. It is frequently cheaper to vacation in other countries than in Taiwan itself. Therefore Taiwanese people often prefer to travel abroad than travel in Taiwan (Yin Ping, 2019).

4.4.3 Discussion on the Importance of Choice Factors

From the results of the questionnaire, it is possible to conclude that the most important choice factors are airline safety record, avoiding loss/misplaced baggage, and reliability/ trust of airline in the four groups when selecting LCC or FSA airlines. This result was the same in four studies (see below), and it also shows the airline safety record choice factor is one of the most important choice factors for passengers in choosing to take LCC or FSA flights (Gilbert and Wong, 2003; Atalik and Özel, 2007; Chen and Chao, 2015; Milioti, Karlaftis and Akkogiounoglou, 2015).

People in Taiwan travel with valuables and place value on not losing their belongings, in addition to not losing time on trips, which is why avoiding loss/misplaced baggage ranges from numbers two to five selected by respondents in all four different groups (Chen and Chao, 2015:55). For example, some airline companies manage baggage loss efficiently, and it has benefited air passengers. This affects some passengers' choices of airlines. Nor do travellers don't want to waste time in the airports and on flights, they want to continue their plans or trips.

When looking at the reliability/trust of the airline choice factor, it ranks between number one and four in all four groups. If we combine the subjects of reliability and trust with airline safety record, (ranked between one to seven in all four groups) the rankings of these two choice factors show there is an indication of the deep importance of trusting airlines with human physical safety. It shows that customers must have confidence in the airlines (Forgas *et al.*, 2010; Chen and Chao, 2015; Milioti, Karlaftis and Akkogiounoglou, 2015).

In the literature review chapter Jou et al and Reibstein were referenced as stating that price is the most important consideration for Lcc flyers. Questionnaire results for only LCC flyers confirm this for respondents. Results for the two lowest income levels in this questionnaire (combined 55.77%) could indicate Taiwanese travellers choose LCCs based on primarily economic reasons. However, airline safety record, as stated above, emerges as the second most important consideration for LCC flyers. Though Price is clearly important to some travellers Safety remains a vitally important consideration.

It is noted that the in-flight entertainment choice factor emerged as the least important to respondents of the questionnaire. Those who fly LCCs would potentially have to pay more for this service, and probably don't want to add additional charges to their overall expenses. Given the apparent importance to flyers of other choice factors, which includes safety, price, efficiency, and scheduling, among others, evidently inflight entertainment has little importance.

The availability of free in-flight meals/ snacks choice factor, also was selected as one of least important choice factors in all four groups. It can be said that air passengers know that they have to pay extra money when choosing to fly with LCCs, and in FSAs in-flight meals/ snacks are already included in their airline ticket prices. Interestingly, even though the availability of free in-flight meals/ snacks choice factor is one of the least important choice factors, some companies continue to provide them. For example, the EVA Air airline company provides a traditional rice porridge choice at breakfast because the EVA Air airline company wants to attract Taiwanese (EVA Air, 2019).

When looking at the on-time departure and arrival choice factor, passengers of the FSA group gave it a higher importance than for passengers of the LCC group. For

example, some passengers need to connect to another flight, and that is of importance to FSA flyers. When looking at the direct or connecting flights choice factor, the ranking order is similar in all four groups. For instance, from Taiwan to Portugal, passengers have to transfer two or three times before arrival at the destination. This choice factor is important for long distance flights air passengers (Chen and Chao, 2015).

When looking at customer care/ service, ground staff service choice factors, and reliability/dependability in terms of flight cancellation, which is a part of Customer-Relationship Management, questionnaire respondents tended to devalue these choice factors as less important. The fact that passengers may use ground service for flight changes and baggage loss in addition to other issues seems to be less important (Chen and Chao, 2015)

When looking at the online check in choice factor and the convenient online booking system choice factor, Doganis (2002) found that this was a significant technological change. In fact, that has proved to be true. Now more and more air passengers use this technology in their lives. It is also good advertising for airlines and it is convenient for customers (Oakley, 2020).

Sezgen et al. (2019) lists seat comfort as being a potential source of discomfort for economy passengers. However, questionnaire results show this choice factor as having some importance only for FSA travellers. Otherwise it is rated consistently lower for the other three groups (all respondent group number fifteen, only LCC number seventeen, combined LCC and FSA number fifteen). If passengers specifically want more comfortable seats, they know they must pay extra.

The reliability/dependability in terms of flight cancellation choice factor is reasonably important to respondents, with numerical ratings of nine or ten (the all respondent group number ten, the only LCC group number nine, the only FSA number nine, combine LCC and FSA number ten).

4.5 Final Remarks

This study has revealed the core travel characteristics, travel motivations, and choice factors of the year 2019 for the Taiwanese air passengers who responded to this study's questionnaire. As a result of the questionnaire, four respondent groups were identified (all respondent group, travellers who flew only LCCs, travellers who flew only FSAs, and travellers who flew combined LCCs and FSAs). Table 4.1 identified socio-demographic characteristics of the four respondent groups. Table 4.2 identified travel characteristics, travel motivations, and destination choices of each of the four respondents groups. Section 4.3 reviewed the most important choice factors affecting travellers' choices in selecting airlines. Tables 4.3 to 4.6 have presented the order of importance of choice factors in each of the respondent groups.

CHAPTER 5. CONCLUSIONS

The purpose of this dissertation is to identify choice factors and measure their importance to Taiwanese passengers in their selection of LCCs and/or FSAs, and assess the importance attached to each factor when choosing LCCs and/or FSAs. The secondary aim was to characterize a cohort of Taiwanese travellers according to flight frequency, destination choices and motivation for travelling. Conclusions are based on the results of the data analysis of the questionnaire and literature review, taking into consideration the objectives of this work. The information that has been collected may be of interest to airline companies, media sources, and airline travellers.

5.1 Conclusions and Perspectives for Future Research

The overall results show the majority of respondents chose to fly FSAs in 2019, that they were 31-50 years old, travelled for personal reasons, were employed (or self-employed) and the majority were women. Though the statistical relationships between the categories and the four groups vary, the overall trends discovered in this study are consistent with current academic and available statistical results (Lu, 2017).

The findings from this study show that the majority of Taiwanese travellers, at least in 2019, would take the most convenient form of air travel available to them. This demonstrates that Taiwanese passengers had not yet gravitated towards one form of airline transportation to another, rather, whatever was most convenient. COVID-19 notwithstanding, it can be assumed LCCs will continue growing in Asia during 2021-2025 (More, 2021). In addition to Scoot and Japan's All Nippon Airways (ANA), flights have resumed between Taipei Songshan Airport and Tokyo's Haneda Airport in 2020 (Strong, 2020).

The results do not indicate, at least in 2019, that there was a clear preference for either LCCs or FSAs, however, FSAs emerge as the first choice (36.28%) and LCCs (24.19%) as the second choice. For the sample population, which reflects a Vacation/Holiday/Leisure travelling population, it appears that passengers flew with the most convenient option.

This study shows that while LCCs have made a significant impact on Taiwanese air traffic, the majority of travellers in 2019 still preferred FSAs as their primary air carriers. Though LCCs clearly have a large percentage of the market, it remains to be seen whether the industry will overtake the FSA market, but it is likely. This data can provide crucial information about Taiwanese air passengers and their decision-making processes in the Taiwanese market. In fact, other than sources cited in literature review, there is limited information and statistics available regarding the choice factors and preferences of Taiwanese travellers. Lu stated that LCCs in Taiwan represent a newer market than in other parts of the world, specifically Europe and North America. As a result, there are fewer statistics available on the subject of traveller habits in Taiwan (Lu, 2017). Therefore, the information in this study is potentially useful to airline marketing endeavours. In addition, airline companies or travel agencies can provide more discount or travel benefits to women who make economic decision for travel. They are potential customers in the market of the future. However, more research is needed involving larger numbers of Taiwanese air passengers, including business travellers, and for broader periods of time.

5.2 Limitations

Three main limitations can be observed in this study. One is that the number of female respondents is higher than male respondents. Frequently in other studies male respondents are higher in numbers than female respondents (Atalik and Özel, 2007). Second, as previously stated, few business travellers responded to the questionnaire.

Third, there are also limitations found in the data collection process. More and more Taiwanese people do not like to respond to questionnaires because they are afraid someone will steal online information about them. Even friends or relatives do not want to share information (Regmi *et al.*, 2016). That is why it took over one month to collect information online for this questionnaire.

As the digital revolution grows, trends in travel and choice factors/preferences will grow and change along with it. The travel industry must be prepared for this evolution. Along these same lines future research should continue to analyse if the current choice factors identified by academics remain reflective of travellers' preferences, or have

become obsolete. Numbers of Taiwanese air travellers are growing in the tourism sector. Because of this, academics and marketing researchers must continue their research on the topic in order to be aware of travellers' trends.

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Appendix 1: Taiwanese Air Passengers' Experiences in 2019 - Questionnaire

Appendix 1: Survey

Thank you for taking the time to complete our survey! This survey will give us a better understanding of Taiwanese air travellers' experiences and preferences relating to types of airlines.

The questionnaire is fully confidential and anonymous and the final results will not enable the identification of the respondent. The data collected will only be used within the context of this study.

SECTION 1- Please answer questions related to Low-Cost Carriers

(If you didn't fly LCCs in 2019, go to Q2):

Q 1a): In 2019 approximately how many LCC flights did you take? (one way flights)

_____ (open answer; respondent should enter the number)

Q 1b): In 2019 approximately how many LCC flights did you take? (roundtrip)

_____ (open answer; respondent should enter the number)

Q 1c): Where did you fly to?

_____ (open answer, please write city and country)

Q 1d): In 2019 what was your primary motivation for travelling?

- Business
- Vacation/ Holiday/ Leisure
- Visit friends and relatives
- Study/training
- Other

Q 2: Consider the Low-Cost Carriers you know. Please rate the importance of these items when choosing an airline, on a scale of 1 - 5, (1 = not important at all; 5 = very important)

	1	2	3	4	5	Don't know
1. Convenience of schedule						
2. Price						
3. Airline's safety record						
4. Seat comfort						
5. Airline image						
6. On-time departure and arrival						
7. Airline loyalty programs						
8. Availability of free in-flight meals/ snacks						
9. In-flight service						
10. Flight frequency						
11. Ground staff service						
12. Convenient online booking system						
13. Reliability/dependability in terms of flight cancellation						
14. Online check-in						
15. Carry-on baggage allowance included in the fare						
16. Customer care/service						
17. Avoiding loss / misplaced baggage						
18. Reliability/trust of airline						
19. In-flight entertainment						
20. Direct or connecting flights						

SECTION 2- Please answer questions related to Full Service Airlines

(If you didn't fly FSA in 2019, go to Q4):

Q 3a): In 2019 approximately how many FSA flights did you take? (one way flights)

_____ (open answer; respondent should enter the number)

Q 3b): In 2019 approximately how many FSA flights did you take? (roundtrip)

_____ (open answer; respondent should enter the number)

Q 3c): Where did you fly to?

_____ (open answer, please write city and country)

Q 3d): In 2019 what was your primary motivation for travelling?

- Business
- Vacation/ Holiday/ Leisure
- Visit friends and relatives
- Study/training
- Other

Q 4: Consider the Full Service Airlines you know. Please rate the importance of these items when choosing an airline, on a scale of 1 - 5, (1 = not important at all; 5 = very important)

	1	2	3	4	5	Don't know
1. Convenience of schedule						
2. Price						
3. Airline's safety record						
4. Seat comfort						
5. Airline image						
6. On-time departure and arrival						
7. Airline loyalty programs						
8. Availability of free in-flight meals/ snacks						
9. In-flight service						
10. Flight frequency						
11. Ground staff service						
12. Convenient online booking system						
13. Reliability/dependability in terms of flight cancellation						
14. Online check-in						
15. Carry-on baggage allowance included in the fare						
16. Customer care/service						
17. Avoiding loss / misplaced baggage						
18. Reliability/trust of airline						
19. In-flight entertainment						
20. Direct or connecting flights						

SECTION 3- Please answer questions related to your socio-demographic characteristics:

Q 5: Gender:

- Female
- Male
- Prefer not to say

Q 6: How old are you? (open ended question)

Q 7: Home / Where do you usually reside?

- North Taiwan (Taipei city, New Taipei City, Yilan, Taoyuan, Hsinchu)
- Central Taiwan (Miaoli, Taichung, Changhua, Nantou, Yunlin)
- South Taiwan (Chiayi, Tainan, Kaohsiung, Pingtung)
- East Taiwan (Hualien, Taitung)
- Overseas

Q 8: Highest level of education:

- Primary school or below
- High School (including junior high school and senior high school)
- University degree
- Postgraduate degree

Q 9: Employment status:

- Employed
- Self-employed
- Not currently working
- Government/ Public sector
- Retired
- Student

Q 10: Net monthly income:

- NT\$ 30,000 or less
- NT\$ 30,001-NT\$ 40,000
- NT\$ 40,001-NT\$ 50,000
- NT\$ 50,001-NT\$ 60,000
- NT\$ 60,001-NT\$ 70,000
- NT\$ 70,001 or more

臺灣航空旅客體驗調查

感謝您抽出寶貴的時間來完成我們的調查! 這項調查將使我們對台灣航空旅客的經歷和與航空公司類型有關的偏好有更進一步的了解。

問卷是完全保密和匿名的,最終結果將無法識別受訪者。

收集的數據將僅在本研究的背景下使用。

第 1 部分-請回答與廉價航空公司有關的問題, 如果您在 2019 年未搭乘廉價航空, 請到 Q2 :

1a): 在 2019 年, 您大約搭乘多少次廉價航空? (單程)

1b): 在 2019 年, 您大約搭乘多少次廉價航空? (來回)

1c): 您飛往哪裡?

1d): 在 2019 年, 您旅行的主要動機是什麼?

- 商務
- 度假
- 探親/訪友
- 學習/培訓

Q2: 根據您所知道的廉價航空公司。選擇廉價航空公司時，請以 1-5 的等級對這些項目的重要性進行評分 (1 =根本不重要; 5 =非常重要)

	1	2	3	4	5	不知道
1. 時間表的便利						
2. 價格						
3. 航空公司的安全記錄						
4. 座位舒適度						
5. 航空公司形象						
6. 準時的啟程和到達						
7. 航空公司會員方案						
8. 免費提供機上餐點/點心						
9. 機上服務						
10. 航班頻率						
11. 地勤人員服務						
12. 線上訂票系統						
13. 取消航班彈性						
14. 網上辦理登機手續						
15. 票價中包含隨身行李限額						
16. 客戶服務						
17. 避免遺失/錯放行李						
18. 航空公司的可靠性/信任						
19. 機上娛樂						
20. 直飛或轉機						

第 2 部分-請回答與全服務航空公司有關的問題，如果您在 2019 年未搭乘全服務航空，請到 Q4:

3a): 在 2019 年，您大約搭乘多少次全服務航空? (單程)

3b): 在 2019 年，您大約搭乘多少次全服務航空? (來回)

3c): 您飛往哪裡?

3d): 在 2019 年，您旅行的主要動機是什麼?

- 商務
- 度假
- 探親/訪友
- 學習/培訓

Q4: 根據您所知道的廉價航空公司。選擇廉價航空公司時，請以 1-5 的等級對這些項目的重要性進行評分 (1 =根本不重要; 5 =非常重要)

	1	2	3	4	5	不知道
1. 時間表的便利						
2. 價格						
3. 航空公司的安全記錄						
4. 座位舒適度						
5. 航空公司形象						
6. 準時的啟程和到達						
7. 航空公司會員方案						
8. 免費提供機上餐點/點心						
9. 機上服務						
10. 航班頻率						
11. 地勤人員服務						
12. 線上訂票系統						
13. 取消航班彈性						
14. 網上辦理登機手續						
15. 票價中包含隨身行李限額						
16. 客戶服務						
17. 避免遺失/錯放行李						
18. 航空公司的可靠性/信任						
19. 機上娛樂						
20. 直飛或轉機						

第 3 部分-請回答與您有關的社會人口特徵的問題:

Q5: 性別

- 女
- 男
- 不想說

Q6: 年齡

Q7: 住處/ 您通常居住在哪裡?

- 北台灣 (台北市, 新北市, 宜蘭, 桃園, 新竹)
- 中台灣 (苗栗, 台中, 彰化, 南投, 雲林)
- 南台灣 (嘉義, 台南, 高雄, 屏東)
- 東台灣 (台東, 花蓮)
- 旅居海外

Q8: 最高學歷

- 小學以下
- 中學 (包括國中和高中)
- 大學
- 碩/博士

Q9: 就業狀況

- 受僱
- 自僱
- 待業
- 政府/公共部門
- 退休
- 學生

Q10: 每月淨收入

- NT\$ 30,000 以下
- NT\$ 30,001-NT\$ 40,000
- NT\$ 40,001-NT\$ 50,000
- NT\$ 50,001-NT\$ 60,000
- NT\$ 60,001-NT\$ 70,000
- NT\$ 70,001 以上

**Appendix 2: Outbound Departures of Nationals of the Republic of China by
Gender, 2019**

108年中華民國國民出國按性別分
Outbound Departures of Nationals of the Republic of China by
Gender, 2019

首站抵達地 First Destination	男 Male		女 Female		合計 Total	
	人數 No. of Visitors	占合計百分比 Share(%)	人數 No. of Visitors	占合計百分比 Share(%)		
亞洲地區	香港 Hong Kong	912,552	54.44	763,822	45.56	1,676,374
	澳門 Macao	334,169	56.00	262,552	44.00	596,721
	大陸 Mainland China	2,369,523	58.60	1,674,163	41.40	4,043,686
	日本 Japan	2,136,964	43.51	2,774,717	56.49	4,911,681
	韓國 Korea, Republic of	395,043	32.67	814,019	67.33	1,209,062
	新加坡 Singapore	173,004	44.65	214,481	55.35	387,485
	馬來西亞 Malaysia	144,160	48.06	155,799	51.94	299,959
	泰國 Thailand	387,987	46.74	442,179	53.26	830,166
	菲律賓 Philippines	171,591	51.72	160,201	48.28	331,792
	印尼 Indonesia	76,954	49.31	79,106	50.69	156,060
	汶萊 Brunei	2,799	44.31	3,518	55.69	6,317
	越南 Vietnam	462,156	54.16	391,101	45.84	853,257
	緬甸 Myanmar	14,079	56.16	10,992	43.84	25,071
	柬埔寨 Cambodia	48,980	54.44	40,995	45.56	89,975
	阿拉伯聯合大公國 United	53,375	39.07	83,228	60.93	136,603
土耳其 Turkey	32,251	37.00	54,917	63.00	87,168	
亞洲其他地區 Others	54,233	46.71	61,863	53.29	116,096	
亞洲合計 Total	7,769,820	49.31	7,987,653	50.69	15,757,473	
美洲地區	美國 United States of Amer	262,564	47.65	288,414	52.35	550,978
	加拿大 Canada	51,698	41.20	73,776	58.80	125,474
	美洲其他地區 Others	66	97.06	2	2.94	68
	美洲合計 Totals	314,328	46.46	362,192	53.54	676,520
歐洲地區	法國 France	30,052	39.73	45,590	60.27	75,642
	德國 Germany	32,579	47.20	36,442	52.80	69,021
	義大利 Italy	11,259	40.62	16,458	59.38	27,717
	荷蘭 Netherlands	27,064	42.73	36,270	57.27	63,334
	瑞士 Switzerland	3	50.00	3	50.00	6
	英國 United Kingdom	14,034	36.94	23,958	63.06	37,992
	奧地利 Austria	30,889	37.88	50,648	62.12	81,537
	歐洲其他地區 Others	3,242	38.90	5,092	61.10	8,334
歐洲合計 Total	149,122	41.01	214,461	58.99	363,583	
大洋洲	澳大利亞 Australia	74,078	41.14	105,970	58.86	180,048
	紐西蘭 New Zealand	13,386	41.24	19,071	58.76	32,457
	帛璠 Palau	7,836	50.52	7,675	49.48	15,511
	大洋洲其他地區 Others	115	96.64	4	3.36	119
	大洋洲合計 Total	95,415	41.82	132,720	58.18	228,135
非洲	南非 S.Africa	9	69.23	4	30.77	13
	非洲其他地區 Others	13	92.86	1	7.14	14
	非洲合計 Total	22	81.48	5	18.52	27
其他 Others	35,721	47.25	39,876	52.75	75,597	
總計 Grand Total	8,364,428	48.91	8,736,907	51.09	17,101,335	

Source: Annual Statistical Report on Tourism 2019 Taiwan, Republic of China (2019)

**Appendix 3: Outbound Departures of Nationals of the Republic of China
by Age, 2019**

108年中華民國國民出國按年齡分
Outbound Departures of Nationals of the
Republic of China by Age, 2019

單位:人次
Unit: Persons

首站抵達地 First Destination		12歲以下 12 and Under	13歲至19歲 13-19	20至29歲 20-29	30至39歲 30-39	40至49歲 40-49	50至59歲 50-59	60歲及以上 60 and Over	合計 Total
亞洲地區	香港 Hong Kong	84,284	47,809	212,562	357,261	400,826	317,894	255,738	1,676,374
	澳門 Macao	44,509	17,422	77,420	121,608	134,414	111,912	89,436	596,721
	大陸 Mainland China	167,340	100,685	335,968	594,461	917,241	980,226	947,770	4,043,686
	日本 Japan	489,566	212,074	803,116	1,113,194	927,888	700,350	665,493	4,911,681
	韓國 Korea, Republic of	84,196	73,800	253,381	278,486	242,561	157,377	119,201	1,209,062
	新加坡 Singapore	33,096	17,876	67,620	83,677	77,913	57,310	49,993	387,485
	馬來西亞 Malaysia	20,383	14,146	49,089	59,496	61,501	51,354	43,990	299,959
	泰國 Thailand	44,159	30,597	165,349	198,615	162,912	129,109	104,425	830,166
	菲律賓 Philippines	17,205	13,696	89,524	83,578	59,128	39,657	29,004	331,792
	印尼 Indonesia	10,873	5,670	27,372	36,598	32,824	23,797	18,926	156,060
	汶萊 Brunei	251	226	562	649	874	1,215	2,540	6,317
	越南 Vietnam	47,179	27,670	81,388	186,313	187,712	169,913	153,082	853,257
	緬甸 Myanmar	1,088	562	1,941	3,764	5,227	6,267	6,222	25,071
	柬埔寨 Cambodia	2,417	2,441	11,082	17,016	19,067	20,465	17,487	89,975
	阿拉伯聯合大公國 United A	3,166	4,319	18,797	26,166	22,630	29,613	31,912	136,603
土耳其 Turkey	1,339	1,910	8,316	14,053	15,531	22,687	23,332	87,168	
亞洲其他地區 Others	128	1,599	21,525	27,123	23,154	23,138	19,429	116,096	
亞洲合計 Total	1,051,179	572,562	2,225,007	3,197,058	3,291,403	2,842,284	2,577,980	15,757,473	
美洲地區	美國 United States of America	28,213	22,067	70,041	94,947	100,620	97,055	138,035	550,978
	加拿大 Canada	6,745	6,646	16,436	17,157	18,240	26,196	34,054	125,474
	美洲其他地區 Others	0	0	16	15	11	10	16	68
	美洲合計 Totals	34,958	28,713	86,493	112,119	118,871	123,261	172,105	676,520
歐洲地區	法國 France	2,380	2,341	11,230	16,999	16,089	15,025	11,578	75,642
	德國 Germany	1,946	2,402	9,005	14,461	14,625	14,922	11,660	69,021
	義大利 Italy	698	854	3,705	6,957	5,121	5,802	4,579	27,717
	荷蘭 Netherlands	2,596	2,101	9,276	14,377	12,741	12,015	10,228	63,334
	瑞士 Switzerland	0	2	0	0	2	0	2	6
	英國 United Kingdom	1,916	1,879	7,355	8,042	7,118	6,928	4,754	37,992
	奧地利 Austria	1,945	2,313	8,311	13,494	14,795	20,680	20,029	81,537
	歐洲其他地區 Others	103	228	472	677	1,152	2,040	3,662	8,334
歐洲合計 Total	11,584	12,120	49,355	75,007	71,643	77,382	66,492	363,583	
大洋洲	澳大利亞 Australia	12,705	9,480	33,253	32,863	29,750	28,809	33,188	180,048
	紐西蘭 New Zealand	1,901	1,220	3,788	5,971	4,559	6,450	8,568	32,457
	帛琉 Palau	911	817	3,335	3,991	3,285	2,013	1,159	15,511
	大洋洲其他地區 Others	0	1	14	20	33	24	27	119
大洋洲合計 Total	15,517	11,518	40,390	42,845	37,627	37,296	42,942	228,135	
非洲	南非 S.Africa	0	1	2	1	4	2	3	13
	非洲其他地區 Others	0	0	1	3	3	1	6	14
	非洲合計 Total	0	1	3	4	7	3	9	27
其他 Others	3,774	2,108	6,223	9,200	15,255	19,258	19,779	75,897	
總計 Grand Total	1,117,012	627,022	2,407,471	3,436,233	3,534,806	3,099,484	2,879,307	17,101,335	
百分比 Share(%)	6.53	3.67	14.08	20.09	20.67	18.12	16.84	100.00	

註: 因國人出境數據以飛航到港首站為統計原則, 另含不固定包機航程等因素, 故國人赴各國實際數據請以各目的地國家官方公布入境數字為準。

Source: Annual Statistical Report on Tourism 2019 Taiwan, Republic of China (2019)

Appendix 4: Employment by Level of Education

2-10a. Employment by Level of Education

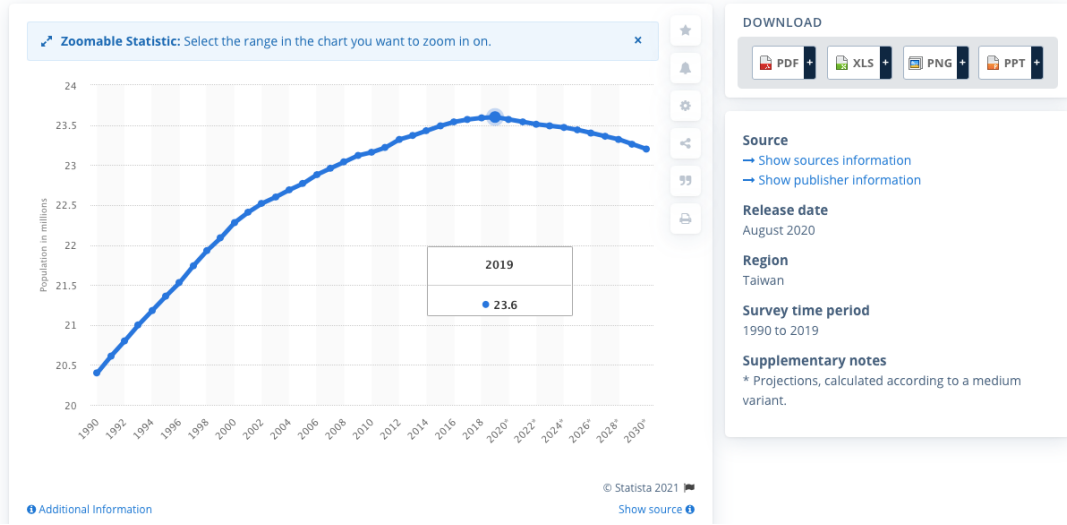
Period	Total	Junior High & Below			Senior High & Vocational			Junior College & Above		
		Subtotal	Primary & Below	Junior High	Subtotal	Senior High	Vocational	Subtotal	Junior College	College & Above
L Number (1,000 persons)										
1980	6,547	4,588	3,360	1,228	1,279	449	829	681	350	331
1985	7,428	4,703	3,228	1,475	1,797	533	1,264	928	510	419
1990	8,283	4,456	2,807	1,649	2,473	704	1,770	1,354	758	596
1992	8,632	4,414	2,654	1,760	2,691	745	1,946	1,527	884	643
1993	8,745	4,265	2,516	1,750	2,822	759	2,064	1,658	954	704
1994	8,939	4,262	2,458	1,804	2,925	774	2,151	1,751	1,019	732
1995	9,045	4,180	2,361	1,819	2,999	767	2,232	1,866	1,066	800
1996	9,068	3,953	2,194	1,759	3,095	786	2,309	2,019	1,162	858
1997	9,176	3,877	2,112	1,765	3,110	805	2,304	2,189	1,250	938
1998	9,289	3,762	1,985	1,778	3,214	854	2,359	2,313	1,308	1,005
1999	9,385	3,609	1,815	1,794	3,317	874	2,443	2,459	1,394	1,065
2000	9,491	3,520	1,724	1,797	3,375	877	2,498	2,596	1,473	1,123
2001	9,383	3,318	1,602	1,716	3,371	859	2,512	2,694	1,525	1,169
2002	9,454	3,179	1,532	1,647	3,424	857	2,567	2,851	1,581	1,271
2003	9,573	3,063	1,452	1,611	3,491	869	2,622	3,019	1,628	1,391
2004	9,786	2,975	1,376	1,598	3,592	883	2,709	3,220	1,677	1,542
2005	9,942	2,880	1,300	1,581	3,605	873	2,732	3,458	1,724	1,733
2006	10,111	2,770	1,206	1,564	3,631	865	2,766	3,711	1,759	1,951
2007	10,294	2,689	1,137	1,553	3,680	886	2,794	3,925	1,764	2,161
2008	10,403	2,560	1,063	1,497	3,667	881	2,786	4,176	1,787	2,389
2009	10,279	2,392	971	1,421	3,551	859	2,692	4,336	1,767	2,568
2010	10,493	2,361	945	1,415	3,583	871	2,712	4,549	1,798	2,752
2011	10,709	2,312	910	1,402	3,645	894	2,751	4,752	1,814	2,938
2012	10,860	2,268	885	1,383	3,674	910	2,764	4,917	1,812	3,106
2013	10,967	2,226	855	1,371	3,661	908	2,753	5,080	1,807	3,273
2014	11,079	2,124	787	1,337	3,675	928	2,747	5,280	1,805	3,474
2015	11,198	2,061	750	1,311	3,692	946	2,746	5,445	1,805	3,640
2016	11,267	2,009	718	1,291	3,688	951	2,737	5,571	1,801	3,770
2017	11,352	1,959	686	1,274	3,694	953	2,742	5,698	1,806	3,892
2018	11,434	1,913	656	1,258	3,706	958	2,749	5,814	1,815	3,999

Source: See Table 2-8a.

Source: Taiwan Statistical Data Book, 2019

Appendix 5: Population of Taiwan

Total population of Taiwan from 1990 to 2019 with forecasts until 2030 (in millions)



Source: Statista.com (2021)

Appendix 6: Visitors Arrival in Taiwan

108年1至12月來臺旅客人次—按搭乘交通工具及入境港口分
 Visitor Arrivals by Mode of Transport & Port of Entry,
 January-December, 2019

單位:人次
 Unit: Persons

居住地 Place of residence	合計 Total	飛機 Air									輪船 Sea								
		小計 Subtotal	高雄 Kaohsiung	桃園 Taoyuan	松山 Songshan	臺中 Tai-chung	花蓮 Hualien	澎湖 Penghu	其他 Others	小計 Subtotal	高雄 Kaohsiung	基隆 Keelung	臺中 Tai-chung	金門 Kinmen	馬祖 Matsu	澎湖 Penghu	花蓮 Hualien	蘇澳 Suao	其他 Others
港澳澳門 HongKong, Macao	1,758,006	1,722,255	257,487	1,286,620	5,937	166,089	4	0	13,148	28,751	4,342	10,655	79	13,206	301	12	85	0	111
大陸 Mainland China	2,714,065	2,243,302	253,246	1,716,265	223,549	46,397	750	127	1,975	471,756	12,659	14,307	16,431	391,554	10,733	1,901	136	88	23,947
日本 Japan	2,167,952	2,119,080	122,171	1,550,262	437,183	3,914	90	0	5,460	48,872	1,079	45,091	20	1,717	88	5	351	0	521
韓國 Korea, Republic of	1,242,598	1,239,129	103,553	1,083,389	62,165	27,255	2,723	0	64	3,469	255	1,695	75	1,220	6	0	7	4	207
印度 India	40,353	38,582	3,892	33,830	306	522	0	0	32	1,771	927	321	194	12	0	0	20	5	292
中東 Middle East	24,030	22,783	887	21,203	487	194	0	0	12	1,247	150	930	31	19	0	0	76	0	41
馬來西亞 Malaysia	537,492	532,198	51,428	476,950	2,191	1,495	52	0	84	5,494	105	1,264	200	3,867	9	1	24	0	24
新加坡 Singapore	460,635	454,621	40,849	409,556	3,099	1,067	5	0	45	6,014	252	605	64	4,950	78	6	24	0	35
印尼 Indonesia	229,960	215,916	31,123	183,618	509	611	23	0	32	14,044	9,116	708	197	330	0	0	23	382	3,288
菲律賓 Philippines	509,519	495,703	59,621	454,602	464	986	2	0	28	13,816	8,099	3,092	1,092	538	1	0	125	37	842
泰國 Thailand	413,926	413,182	16,282	375,238	354	21,282	0	0	26	744	135	340	6	201	2	0	7	0	53
越南 Vietnam	405,396	404,361	75,954	247,348	204	60,480	4	0	20,371	1,035	511	405	42	38	1	0	2	0	36
東南亞其他地區 Others	36,284	33,658	2,456	29,663	114	1,077	281	0	67	2,696	1,527	291	265	94	0	0	12	8	408
東南亞小計 Sub-Total	2,593,392	2,549,639	257,711	2,176,975	6,935	86,998	367	0	20,653	43,753	19,745	6,705	1,867	10,008	91	7	217	427	4,686
亞洲其他地區 Others	21,303	20,852	1,439	18,517	316	562	0	0	18	451	164	181	33	32	0	0	3	0	38
亞洲合計 Total	10,561,689	9,961,629	1,000,586	7,847,061	736,878	331,881	3,934	127	41,362	600,070	39,321	79,885	18,730	417,768	11,219	1,925	855	524	29,843
北美洲 Canada	136,681	128,656	6,321	114,079	4,443	3,542	4	0	267	7,995	807	4,928	25	1,427	229	18	529	0	32
美國 United States of America	605,684	582,277	20,947	530,795	24,673	5,444	14	0	404	22,777	2,007	14,042	177	3,161	1,414	183	1,663	1	129
墨西哥 Mexico	4,033	3,418	228	3,019	134	33	0	0	4	615	31	542	1	5	0	18	18	0	0
巴西 Brazil	5,417	5,072	272	4,593	155	45	0	0	7	345	12	302	3	11	0	3	10	0	4
阿根廷 Argentina	1,284	1,109	105	959	31	10	0	0	3	175	4	161	2	3	0	0	3	0	2
美洲其他地區 Others	13,815	13,300	719	12,167	319	170	0	0	15	425	30	520	9	41	0	0	22	1	2
美洲合計 Total	766,254	733,922	28,593	665,612	29,755	9,244	18	0	700	32,332	2,891	20,295	217	4,648	1,643	222	2,245	2	169
比利時 Belgium	8,980	8,615	701	7,567	232	101	3	0	11	365	17	200	80	22	4	6	21	0	15
法國 France	57,393	56,641	3,173	50,580	1,993	820	1	0	74	752	80	478	32	119	8	2	21	0	12
德國 Germany	72,708	65,160	4,616	57,327	2,222	937	4	0	54	7,548	631	6,439	57	171	15	28	180	0	27
義大利 Italy	20,115	19,160	1,545	16,632	596	352	0	0	35	955	92	688	15	123	3	0	6	7	21
荷蘭 Netherlands	27,640	26,538	1,307	24,373	565	264	1	0	28	1,102	339	474	100	112	8	8	240	0	21
瑞士 Switzerland	12,021	11,370	790	9,954	408	210	0	0	8	641	73	519	3	19	0	7	18	0	2
西班牙 Spain	14,298	13,638	1,116	11,833	437	234	1	0	17	690	53	442	17	110	17	2	18	0	1
英國 United Kingdom	76,994	69,247	4,614	58,823	1,827	3,840	2	0	141	7,657	588	5,590	508	462	28	52	376	3	50
奧地利 Austria	9,160	8,670	407	7,856	301	99	0	0	7	490	18	409	4	39	3	0	17	0	0
希臘 Greece	2,050	1,712	462	1,155	37	55	0	0	3	338	182	38	57	9	0	0	2	9	41
瑞典 Sweden	9,522	9,043	609	7,936	362	122	0	0	14	479	10	333	5	102	17	1	10	1	0
俄羅斯 Russian Federation	17,621	16,119	1,252	14,055	457	314	9	0	32	1,502	217	529	176	425	9	2	53	0	91
歐洲其他地區 Others	58,350	54,006	4,029	47,217	1,227	2,000	6	0	67	3,744	765	2,098	409	215	14	5	56	8	174
歐洲合計 Total	386,752	360,519	24,621	315,308	10,664	9,408	27	0	491	26,233	2,865	18,237	1,463	1,928	126	113	1,018	28	455
澳大利亞 Australia	111,788	100,979	6,539	89,756	2,259	2,283	3	0	139	10,809	2,872	5,928	38	992	94	68	793	0	24
紐西蘭 New Zealand	19,831	18,204	984	16,799	517	364	2	0	18	1,127	228	694	22	121	9	6	45	0	2
大洋洲其他地區 Others	3,241	3,157	299	2,705	117	14	0	0	2	84	69	4	4	1	0	0	3	0	3
大洋洲合計 Total	134,860	122,840	7,782	109,520	2,933	2,661	5	0	159	12,020	3,169	6,626	64	1,114	103	74	841	0	29
南非 S. Africa	5,872	5,665	568	4,882	65	147	0	0	4	206	8	189	24	7	0	1	12	1	4
非洲其他地區 Others	6,665	6,561	648	5,728	75	92	0	0	18	104	40	55	2	0	0	0	0	0	7
非洲合計 Total	12,537	12,227	1,216	10,610	140	239	0	0	22	310	48	204	26	7	0	1	12	1	11
未列明 Unstated	2,003	1,816	200	1,340	198	68	0	0	10	187	22	15	2	30	0	0	0	28	90
總計 Grand Total	11,884,305	11,192,953	1,062,798	8,949,251	780,548	353,501	3,984	127	42,744	671,152	48,316	125,202	20,502	425,495	13,091	2,335	4,971	583	30,977

Source: Annual Statistical Report on Tourism 2019 Taiwan, Republic of China (2019)