AN EVALUATION OF THE FACTORS INFLUENCING THE ADOPTION OF E-COMMERCE IN THE PURCHASING OF LEISURE TRAVEL BY THE RESIDENTS OF CASCAIS, PORTUGAL

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ABSTRACT

The emergence of the Internet has enabled the development of e-commerce, which is defined as the process of buying and selling or exchanging products, services and information via computer networks (Turban *et al*, 2002). Since the early stages of the development of the Internet there were claims that travel had the potential to become one of the most sold e-commerce products (Buhalis, 1998; Turban *et al*, 2002). The reality, however, is that in the first years of the twenty first century only a minority of travel purchasing is conducted over the Internet. By 2002 only 3.6 percent of worldwide travel sales were made over the Internet in 2002, with this figure expected to increase to 7.4% by 2006 (Marcussen, 2003). Moreover, although the trend in overall online market size in Western Europe is positive, the annual growth rates have decreased in recent years.

This research arose from an interest in obtaining an insight into the reasons for the lower than anticipated rate of adoption of electronic commerce in the purchasing of leisure travel. The main aim of the research was to evaluate those factors influencing the adoption of e-commerce in the purchasing of leisure travel. The study was developed based on the adoption of innovations paradigm because e-commerce can be regarded as an innovative practice. The research attempted to explicitly develop and test the concept of innovation interdependence. The assumption underlying innovation interdependence is that some innovations are developed upon other innovations and hence the adoption of certain innovations tend to be connected. Following on from this rationale, besides the factors related to the adoption of purchasing leisure travel over the Internet, factors related to the adoption of computers and of the Internet were also included as component parts of the conceptual framework. In addition, the conceptual framework also outlined product-category behaviour as an important factor influencing the adoption of e-commerce in the purchase of that product-category.

In order to achieve the research aim, a representative sample of residents in the Borough of Cascais (Lisbon, Portugal) was surveyed. The analysis and discussion of the results was centred on the practical significance of the descriptive data and on the results of the hypothesis testing, based on the following definition of three stages in the e-commerce adoption path: individuals who had never used the Internet (stage 1), individuals who used the Internet but had never purchased by the means of e-commerce (stage 2), and individuals who purchased a product/service over the Internet (stage 3). Those in stage three of the e-commerce adoption path were further divided into two sub-groups: those who had never purchased travel over the Internet and those who had purchased.

The findings of this research indicate that the factors influencing the adoption of e-commerce in the purchasing of leisure travel vary according to the stage in the e-commerce adoption path. They demonstrate that there is, indeed, a positive relationship between the adoption of computers and the Internet and the adoption of e-commerce in the purchasing of leisure travel. However, the results suggest that the adoption of computers and the Internet play a secondary role and might serve as a facilitator rather than motivator. Rather, the travel and purchasing behaviour of the individual may be the more important influence in their decision to use e-commerce in the purchasing of leisure travel. The study discusses both the theoretical and practical implications and provides some future areas of research in the field of consumer adoption of e-commerce in the purchasing of leisure travel.

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LIST OF ABBREVIATIONS

DAI	Diffusion and Adoption of Innovations
DGT	National Tourism Board
ICT	Information and Communication Technologies
INE	National Statistics Institute
TAM	Technology Acceptance Model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UMIC	Portuguese Agency for the Knowledge Society

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1. Introduction

This thesis is concerned with the adoption of electronic commerce by consumers and more specifically with understanding the factors influencing the adoption of e-commerce in the purchasing of leisure travel.

The emergence of the Internet has enabled the development of Electronic Commerce (e-commerce), which is defined as the process of buying and selling or exchanging products, services and information via computer networks (Turban *et al*, 2002). Since the early stages of the development of the Internet there were claims that travel had the potential to become one of the most sold e-commerce products (Buhalis, 1998; Turban *et al*, 2002). Several reasons were advanced to support the assumption that travel would become one of the leading products purchased over the Internet.

The *first* was the high levels of Information and Communication Technologies (ICT) adoption by the tourism industry. The tourism industry has a long tradition in the use of ICT, notably for distribution purposes. Airlines were one the first industries to make use of the potential of ICT, by developing Computerised Reservation Systems (CRS's) in the 1950s (Sheldon, 1997). Since these early stages, ICT and tourism have evolved and ICT has been one of the most important facilitators of the expansion of the industry. As Buhalis (2002, p. 76) states *"ICT have become an imperative partner, increasingly offering the interface between consumers and suppliers globally"*. Notwithstanding the early achievement of high levels of ICT usage in the industry, distribution was dominated by Global Distribution Systems (GDS), only available to travel agents. The final consumer did not have access to those systems and remote communication between customers and principals/intermediaries was restricted to the phone and fax.

The *second* was the high degree of suitability of the tourism product to e-commerce (Peterson et al. 1997; Rosen and Howard, 2000). Some products are more suited than others to e-commerce. Choi et *al.* (1997) created a model to assess the extent to which any product was suited to e-commerce, based on the nature of (1) the product/service sold, (2) the process and (3) the delivery agent (intermediary). These three dimensions can be classified as either physical or digital. In traditional commerce all dimensions are physical whereas in pure e-commerce all dimensions are digital. Using this framework to evaluate

the e-commerce position of tourism products, it can be argued that tourism is well suited to e-commerce:

- The tourism *product* is intangible since it cannot be experienced before travelling actually happens. The tourism industry is highly information intensive and information is its lifeblood (Sheldon, 1997). Given that information can be digitalised, the tourism product can be considered a digital product.

- When it comes to travel products, all the stages that online consumers go through (Kalakota and Whinston, 1996) when buying over the Internet can be completed through the network and therefore the *process* of purchasing can be classified as digital.

- The travel supplier does not need to have a physical door open to the public. This is the case of many intermediaries (e.g. Expedia, Lastminute.com), whose only contact with the public is made through their virtual store. Thus, the *agent* can be digital.

Finally, a *third* reason, related to the economics of the distribution channel, further supports the assumption that purchasing tourism products over the Internet would become frequent. As Cooper *et al.* (1998) and Reinders and Baker (1998) argued, the linkages between suppliers and customers have traditionally been imperfect, and this resulted in a need for the middleman as a way for consumers to reach the tourism suppliers (and vice-versa). However, as authors like Williams and Palmer (1999) and Hoffman (1994) suggested, ICT (specially the Internet) created the opportunity for consumers and businesses to use direct channels and, thus, avoid intermediaries.

Many principals are making the most of this opportunity and are developing direct distribution channels in order to reduce dependence on intermediaries. Hence, by eliminating intermediaries travel providers would reduce their costs and would be able to pass the savings on to consumers.

Given the above, it was not surprising that the tourism industry was one of the first to recognise the opportunity presented by the commercial availability of the Internet and to develop and implement e-commerce projects. In fact, the origin of the first virtual stores goes back to the early stages of commercial exploitation of the Internet, both at the

intermediary (e.g. Travelocity in 1995) and the supplier (e.g. Delta Airlines in 1996) levels. Today, at the international level there is a widespread use of e-commerce by the tourism industry: all sectors (Airlines, Travel Agencies, Rent-a-car, Rail, Cruise, Attractions), companies of all sizes (small, medium and large) and at all levels of the distribution chain (principals and intermediaries) are competing in the electronic marketplace.

From a consumer point of view, the Internet has the potential to bring many advantages to consumers, and travellers are no exception (Korgaonkar and Wolin; 2002; Vijayasarathy; 2002; Buhalis, 1998; Lin, 1998; Reinders and Baker, 1998). These include access to reliable and accurate information, greater convenience, lower cost, greater participation in product design and access to a multitude of product/service providers.

Bearing in mind the high degree of suitability of tourism products for online transactions, the widespread use of ICT and e-commerce by the industry and the potential advantages for the consumers, one should expect a high level of adoption of e-commerce in the purchasing of travel products. The reality, however, is that in the first years of the twenty first century only a minority of travel purchasing is conducted over the Internet. According to a study by Marcussen (2003) only 3.6 percent of worldwide travel sales were made over the Internet in 2002. The same author expected this figure to increase to 7.4% by 2006. Moreover, Marcussen's study also concluded that although the trend in overall online market size in Western Europe is positive, the annual growth rates have decreased since 1998 and this tendency was expected to continue at least until 2006.

Therefore, the early predictions about the potential of electronic commerce adoption appeared to have had a more emotional than rational basis. These predictions were usually endorsed by individuals, mostly academics or business managers, who tended to view their personal perceptions and experiences as representative of a large part of the consumers, with little empirical evidence given to support such claims (Morganosky and Cude, 2002). As a consequence, at the time this research began a need for more research on the adoption of e-commerce by consumers was evident.

This research arose from an interest in obtaining an insight into the reasons for the lower than anticipated rate of adoption of electronic commerce in the purchasing of leisure travel. The initial question that guided this research was *"why are only a small proportion of the travel purchases conducted by the means of e-commerce?"*. One of the issues to be addressed was to

select the perspective to investigate the subject: a consumer perspective, a business perspective or a mixed approach. It was decided to focus on the consumer perspective because, since the early stages of the research, it was evident that little attention was being paid to understanding purchasing by means of e-commerce in general, and specifically leisure travel, from the consumer point of view.

Since the outset of this study the body of research on the adoption of e-commerce by consumers has grown considerably. However, most of this research has been related either to the adoption of e-commerce in general or to the adoption of product categories other than travel. As will be demonstrated in Chapter Four, only a few studies focusing on the adoption of e-commerce in the purchasing of travel were identified during the time this research was undertaken. This was surprising bearing in mind that travel is one of the products most frequently purchased by the electronic consumer. Hence, it is argued that the option for adopting a consumer perspective remains valid not least because the area is still poorly documented.

1.1. The context of research

The research was developed in Portugal and more specifically in the borough of Cascais in the district of Lisbon. No research takes place in a vaccum and this one is no exception. This section aims to set out the context in which this research was developed. The context is reviewed in five sections, similar to an extended PEST analysis. PEST analysis is used because it helps to establish the background against which the adoption of e-commerce takes place (Pettinger, 2004). These environmental conditions and circumstances have informed some of the methodological decisions taken throughout the research and will assist the interpretation of the findings of the research. The five factors that are regarded as important for setting up the context refer to the Political, Economic, Social and Technological and Travel factors. Although the focus of this research was a specific municipality, the national context is presented as it is difficult to isolate the municipality from the rest of the country. However, whenever information about the Lisbon Region or the Borough of Cascais were available, this is presented.

1.1.1. The political context

The political history of the XX and XXI centuries in Portugal is marked by several important events which can be briefly summarised as follows. The first phase, following the introduction of the Republic system in 1910, was characterised by permanent political instability. In 1933 the 'first republic' came to an end when a dictatorship emerged. In the beginning the system was stable but towards the end the dictatorship became increasingly unstable and was finally overthrown, in 1974. The post-revolutionary period up to 1986 was a period of political uncertainty as governments usually lasted no more than a few months. This had a strong influence on the pace at which the modernisation of Portugal took place as there was little long-term strategy or consistency in policy. Since 1986 two hallmark events have influenced the political course in Portugal. One was the achievement of political stability in 1987, when a single party gained for the first time an absolute majority in the Parliament which lasted until 1995. In fact, between 1987 and 2001 the elected governments were able to complete their terms in office. The other event was the admission of Portugal as a full member of the European Union (EU) in 1986. This influenced the course of modernisation in Portugal by providing an opportunity for Portugal to make up for lost time, making major structural changes with financial support from EU development programs.

1.1.2. The economic context

Like many other countries, the Portuguese economy has changed considerably over the last one hundred years. Mateus (1998) identified two major periods of Portuguese economic growth in the last century. The first from 1910 to 1950 was characterised by low economic growth, with the economy only growing, on average, 1.4 percent per annum. This low economic growth resulted in Portugal being one of the poorest countries in Europe. The second stage from 1950 to 1997, was a period when the economy went through a remarkable period of growth, approaching 4 percent annual average growth per annum.

The period from 1950-1997, however, was not uniform and Mateus (1998) further divided it in two periods, with the cut-off point being the 1973 oil crisis. The period 1950-1973 is

usually referred as to the 'golden' period of the Portuguese economy as the economy grew on average 5.6 percent per annum. This growth was not unique to Portugal; rather, it matched the growth of the world economy (Mateus, 1998). The distinguishing features of the 1973-1997 period included a slow down in the growth, perhaps related to the two political events that characterised the period (oil crisis and the 1974 revolution). The end result of the economic slow down in this period was an increase in the economic gap between Portugal and the countries of European Union between 1973 and 1985. However, in 1986 with the accession to the European Economic Community, the economy achieved rapid economic growth. One of the consequences of this growth was that by the early nineties Portugal was able to fulfil the conditions usually employed to classify a country as developed. The stability and development of the economy resulted in Portugal being able to fulfil the Maastricht criteria and consequently was one of the countries that adopted the Euro. The period after the introduction of the Euro has been characterised by poor economic growth, a pattern that is not unique to Portugal.

According to INE (2002), in 2000 the region of Lisbon (where Cascais is situated) had a greater average household income (18.203 Euros) when compared to the average of the country (16.189). Although data is not available for Cascais, it is anticipated that the borough exceeds the average of the Lisbon region and hence Cascais households were expected to be more affluent when compared to Greater Lisbon and Portugal.

1.1.3. The social context

As far as education is concerned, there is a great dissimilarity among the residents of the Borough of Cascais (Table 1.1). At one end there is a group comprising around 40 percent of the residents with little or no formal education (no education or only the primary school, i.e. if with formal education left school at the age of ten). On the other hand there is a group comprising a similar proportion with high formal education (had completed high school or a university degree). The remaining 20 percent of the residents had completed the middle school (left school at about when they were 15 years old). Hence, the Borough has a highly heterogeneous population as far as the educational level is concerned.

Table 1. 1: Highest level of education completed by age groups (Portugal and Cascais, values in percentages)

		No formal education	Primary School (4 years)	Middle School (9 years)	High School (12 years)	University degree	Total (%)
Total	Portugal	18.0	44.0	16.3	13.9	7.7	100
	Cascais	9.9	30.6	19.8	22.2	17.4	100
15-24 years	Portugal	2.4	28.1	40.8	25.5	3.2	100
	Cascais	1.8	5.0	54.2	33.2	5.7	100
25-34 years	Portugal	4.3	39.5	18.8	21.4	16.0	100
	Cascais	3.0	17.4	20.2	29.0	30.4	100
35-44 years	Portugal	6.4	52.8	15.3	14.6	10.8	100
	Cascais	4.4	28.2	18.5	23.7	25.2	100
45-54 years	Portugal	10.3	61.1	10.0	9.9	8.7	100
	Cascais	6.7	41.5	14.6	18.4	18.9	100
55-64 years	Portugal	28.6	52.6	7.3	6.6	5.0	100
	Cascais	13.9	44.5	13.2	15.5	13.0	100
65-74 years	Portugal	49.0	38.8	4.8	4.7	2.7	100
	Cascais	25.1	38.8	11.6	14.5	10.0	100
> 74 years	Portugal	60.6	30.4	3.5	3.5	2.0	100
	Cascais	35.6	35.6	9.5	11.4	7.9	100

Source: INE (2001)

It is also evident that the residents of Cascais had a higher education level when compared to the average of the country. For example, the proportion of university graduates, the group that has been systematically reported as the more open to e-commerce adoption, was more than twice the national average.

Not surprisingly, the younger tend to be more educated than the older. Despite education levels increasing twofold between 1950 and 1974, the average number of years in school in 1974 was 2.66 (Mateus, 1998). Until the 1970's it was not uncommon for children to be taken out of school after completing their compulsory education (primary school). Hence, either due to economic factors or cultural reasons, for decades many children did not have the opportunity to continue their studies. With the establishment of democracy (1974), 'democratisation' of education became a priority. In the 1970's compulsory education was advanced to 8 years (previously it was 6) and in the 1990s to 9 years. The educational levels have been improving considerably to the extent that at present only a very small minority leave school with no formal education (only 2.5% of the 15 to 24 year olds have not completed at least primary school). On the other end of the educational spectrum it can be observed that the proportion with an university degree is steadily increasing. Only 2

percent of the over 74 year olds had completed a university degree, whereas 16 percent of the 15 to 24 year olds had done so. If the current compulsory education years (9 years or middle school) are used as a threshold value, at present more than two thirds of the Portuguese complete this level of education. This is in contrast with the less than 10 percent of the over 74 years old who completed middle school. As far as Cascais is concerned, the results also suggest that the educational level has been growing over time.

1.1.4. The technological context

This section seeks to set the technological context in Portugal, notably regarding the use of computers, the Internet and of e-commerce. This section is based on annual national survey carried out by UMIC (Unit for Knowledge and Information, a governmental agency) between 2000 and 2002 (UMIC, 2000, 2001, 2002). The data is based on the residents in mainland Portugal aged between 15 and 65 years old and focuses on the number of users and non-users, the demographic characteristics and the usage patterns, as well as the access to the technology.

In 2002 the proportion of Portuguese with at least one computer at home was 37 percent. Almost half (45%) of the residents in mainland Portugal were users of computers, with the vast majority of these being frequent users. As far as Internet access and usage is concerned, in 2002 less than 20 percent of the residents in mainland Portugal had access to the Internet at home. Less than one third (30%) of residents in mainland Portugal were users and one quarter of these were not frequent users of the Internet. Thus, in 2002, when the data collection was undertaken, it was evident that the majority of the Portuguese had no access to computers at home and the vast majority no access to the Internet. Moreover, the majority were neither computer nor Internet users.

The demographic patterns of computer use in 2002 appear to mirror those of Internet user regarding gender, education, age and economic status. Users of these technologies tended to have higher levels of formal education, be younger and were students or economically active. In addition, a gender divide was also apparent, with a greater proportion of males using computers and the Internet when compared to females.

The number of Portuguese using e-commerce by 2002 was very small, not exceeding 3 percent of the population. Generally speaking, the most frequently purchased products over the Internet were 'books, magazines and newspapers', 'music and video' and 'software'. In 2002, travel ranked as the 7th most purchased category. The evolution in the proportion of e-commerce users purchasing travel has been erratic, increasing in one year and decreasing in the other. In 2002 the proportion of Portuguese purchasing travel over the Internet was 0.33 percent (11 percent of the 3 percent who used e-commerce).

Although between 2000 and 2001 progress towards a society more involved in using computers, the Internet and e-commerce was remarkable, in 2002 there was virtually no growth regarding the number of users of these technologies.

1.1.5. The travel context

The product-category studied by this research was leisure travel. In this section a brief analysis of the supply of travel in Portugal is carried out, followed by a description of the travel habits of the Portuguese.

1.1.5.1. The supply of travel

It is difficult to characterise the supply of travel products over the Internet for the Cascais residents since outbound tourism consists of companies (providers and intermediaries) based both in Portugal and abroad. However, a short presentation of the online presence of the companies or brands that were likely to be influential within the Portuguese travel industry by 2002 will be presented as it can help in setting up the context of the travel distribution in Portugal. Portugal had six country-based scheduled airlines and three charter airlines. While TAP Air Portugal had been using the Internet for direct selling for a number of years, other 'full service' airlines were not offering this service to consumers. It can be argued that one of the main drivers of e-commerce adoption by consumers in several European countries (notably the UK) was the availability of low cost travel products, notably air travel. By focusing their distribution strategy on direct selling to consumers over the Internet, low cost companies (notably airlines) have exerted a strong influence upon

consumers to use e-commerce. However, in Portugal (with the exception of the Algarve) the arrival of low cost airlines was slow. Cascais is served by the Lisbon airport and in 2002 only one low cost airline (Virgin Express, flying to/from Brussels) was operating in the airport. Thus, at the time the primary data collection was undertaken the online supply of airline transportation was not only limited in number, but it was restricted to a few 'traditional' players, whose tickets could also be bought offline.

As far as the accommodation sector is concerned, all the major Portuguese hotel chains (e.g. Vila Galé, Pestana, Tivoli) had online booking facilities by 2002 (Publituris, 2003b). Their importance within overall sales varied significantly: online sales only accounted for one percent of the Vila Galé sales but Tivoli reported that in 2003 six percent of their sales turnover came from online sales. However, these sales volumes came from both domestic and overseas markets.

Similar to the transportation and hospitality sectors, there are not many studies on the use of electronic commerce by Portuguese-based intermediaries. Inacio (2002) studied the use of the Internet by Portuguese travel agencies. According to this study, in 2000 the majority of intermediaries (including incoming and outgoing travel agencies as well as tour operators) had Internet at their offices but nearly three quarters of the respondents did not use it regularly. More importantly, the majority did not have an Internet site and those that had updated them very infrequently. The respondents argued that their regular customers needed a face and were not prepared to assume a more active role in the reservation process. Hence, they regarded the development of an online presence as being of little importance.

A more comprehensive study by Gaio (2002) further highlighted the slow adoption of e-commerce by travel agencies in Portugal. Using content analysis techniques, she found that nearly one out of four travel agencies with an Internet presence was at level one of adoption, that is, had a very simple site, making available only basic information usually related to the company's background and contacts. The majority of travel agencies were at stage two of adoption (70.9%), since they used the Internet to promote their products without allowing the purchase to be completed online. Only a very small percentage (4.7% or 4 travel agencies) enabled consumers to identify, choose, reserve and pay for products online (stage three of adoption). From the four online travel agencies identified by Gaio, only two had a brand associated with a physical traditional company. Moreover, the core

business of these two agencies was business travel. The three main travel retail groups (Abreu, Top Tours and Space Travel) were at stage two using Gaio's classification scheme: had an Internet site which contained their products but did not provide online booking facilities.

Unlike many other countries (such as the UK), tour operators in Portugal do not use direct selling approaches. Their sales rely entirely on travel agents. By 2002 several tour operators provided consumers with information about their products at their Internet sites but travellers had to resort to a travel agency to make the reservation.

In conclusion, by 2002 the pressure exerted by the suppliers of travel products upon the residents of Cascais was almost non-existent. To a large extent, consumers were neither being prompted, nor being given the opportunity, to buy their leisure travel online.

1.1.5.2. The demand for travel

Very little is known about the demand for travel by Portuguese residents in general and in particular the demand for leisure travel. Most of the academic research undertaken in the field of travel and tourism in Portugal is from an inbound perspective. The only data available refers to an annual survey carried out by the National Tourism Board (DGT) in conjunction with the National Statistics Institute (INE).

Two thirds of the residents aged over 15 took a holiday in 2002. However, not all took a holiday away from home: only slightly more than half of the residents in Portugal did so. Hence, there is a large proportion of the population that does not take a holiday and an even larger proportion (nearly half) who do not go on holiday away from home. However, when compared to Portugal as a whole, the residents in Greater Lisbon (in which Cascais is included) were more likely to take a holiday (around 80 percent). Perhaps not surprisingly, the decision for not taking a holiday is mainly based on economic considerations. However, professional and health motives also prevented people from doing it. The proportion of residents going on a holiday abroad was low, not exceeding 12.6 percent (less than 1 million tourists), while nearly half of those who travelled abroad did so to Spain.

According to a DGT survey, in 2002 the proportion of Portuguese going on a holiday away from home who used the services of travel agencies was 21.1 percent. Hence, a logical conclusion would be that travel agencies were not very important for the distribution of the travel product in Portugal. However, the above percentage is based on the number of residents taking a holiday away from home. The same survey showed that the majority of residents taking a holiday away from home used non-paid accommodation (family and friends house and second home) or paid accommodation not sold through travel agencies (camping and un-official holiday flats). It is also likely that most of the time these places are located in Portugal or Southern Spain and hence their own car is used as the main transportation. Hence, it is only logical that many do not use travel agencies because they are either not buying any travel services or the services they are buying are not (camping) or cannot be (non-official holiday flats) sold by travel agencies. If the proportion of residents using travel agencies was based on those who had purchased transportation (notably flights) and/or commercial accommodation (Hotels, official holiday flats), a much larger proportion of the residents would be shown to use to travel agencies.

1.2. Aims and objectives

The main aim of this research is to **evaluate the influences on the adoption of e-commerce in the purchasing of leisure travel**. In order to achieve the research aim, the residents in the Borough of Cascais (Lisbon, Portugal) were surveyed. In an attempt to achieve the research aim, the following research objectives were formulated:

- To develop a conceptual framework for researching the adoption of e-commerce in the purchasing of leisure travel;
- To examine the extent to which the factors influencing the adoption of e-commerce change along the ladder of adoption;
- To investigate the relationship between the adoption of computers and the Internet and the adoption of e-commerce in the purchasing of leisure travel;

- To determine the relationship between the travel purchasing and consumption behaviour and the adoption of e-commerce in the purchasing of leisure travel;
- To evaluate the barriers and opportunities for the adoption of e-commerce in the purchasing of leisure travel.

1.3. Structure of the thesis

The first three chapters of this thesis review the literature on consumer behaviour and consumer adoption of e-commerce. The literature review begins with an overview of the approaches to, and models of, consumer behaviour, with a view to identifying their suitability to the study of the adoption of e-commerce (**Chapter Two**). In addition, the research identifies the variables these models postulate as influencing consumer behaviour and classifies them into four categories: society and circulation of knowledge, the characteristics of the individual, the evaluation of the product and the characteristics of the object.

Although it can be argued that most of the variables posited to influence consumer behaviour are potentially relevant for explaining the adoption of electronic commerce, no research can accommodate such a vast array of variables. **Chapter Three** is devoted to analysing the content of the models, specifically the variables that were selected for inclusion in the conceptual model adopted in this research: demographics, experience, attitude, motives and involvement. Past research related to each of these variables is reviewed in detail in order to identify the different conceptualisations and operationalisations of each variable.

Having discussed the models of consumer behaviour and their content (in Chapters Two and Three, respectively), **Chapter Four** focuses on how e-commerce has been studied from an innovation interdependence point of view (see section 2.9.1 for a review of the concept). This involves reviewing research on the adoption of each of the innovations comprising the adoption network: computers, the Internet and purchasing over the Internet. This chapter also demonstrates the importance of the characteristics of the

product category in the adoption of e-commerce, notably leisure travel as this was the focus of the research.

In **Chapter Five** the overall methodology of the research is presented. This includes the presentation of the framework and operationalisation of the variables, the discussion of the research process and the description of the the main methodological steps necessary to achieve the objectives of the study.

The data resulting from the primary data collection are presented in Chapters Six to Ten. In **Chapter Six** the demographic characteristics of the respondents, their experience with computers, the Internet and Internet purchasing and the credit card ownership are presented, while **Chapter Seven** is devoted to the presentation of data regarding the consumption and purchasing of travel. **Chapter Eight** focuses on the attitude toward using each of the innovations comprising the conceptual framework and **Chapter Nine** presents the data regarding the motives for, and the involvement with, using the innovations. Finally, **Chapter Ten** looks at one specific stage, the Internet purchasers, by dividing the individuals at this stage into two sub-groups: the e-travel adopters and the e-travel non-adopters.

In **Chapter Eleven** the evaluation and discussion of the research is undertaken. The first part of this chapter is devoted to the evaluation of the theoretical, methodological and analytical approaches of the research, while the second part focuses on the discussion of the results emerging from the primary data analysis. The last chapter of this thesis (**Chapter Twelve**) provides the overall conclusions and the implications of the research.

2. Consumer behaviour: approaches and models

2.1. Introduction

This thesis aims to aid in the understanding of those factors influencing consumer adoption of e-commerce in the purchasing leisure travel products. Therefore, it is appropriate to begin by reviewing how consumer behaviour has been modelled over time. This chapter reviews the main theories of consumer behaviour that have developed over the last 50 years. More specifically, two approaches (behaviourist and cognitive) and three types of models (descriptive, analytic and prescriptive) are presented. The main assumptions of each of these approaches and models are critically evaluated with a view to identifying their suitability for the current research. The last section is devoted to two issues emerging from the literature that are relevant for this research. The first is the limitation of the scope of existing models of consumer behaviour as they fail to adequately accommodate behavioural interdependence. The second issue is the type of variables that are postulated to influence behaviour. These variables are identified and classified according to four caregories: society and circulation of knowledge, the characteristics of the individual, the evaluation of the product and the characteristics of the object.

This chapter is divided in 10 sections:

2.1. Introduction;

2.2. Defines the concept of consumer behaviour;

2.3. Presents two types of research on consumer behaviour according to the unit of analysis: the individual and the family/household;

2.4. Discusses the theoretical approaches to the study of consumer behaviour, notably the cognitive and behaviourist;

2.5. Identifies some of the most influential cognitive consumer behaviour models and classifies them into descriptive, analytic and prescriptive;

2.6. Presents one descriptive model, notably the S-Shaped;

2.7. Examines three analytic models: (1) the Theory of Buyer Behaviour, (2) the Consumer Decision Model and (3) the Diffusion and Adoption of Innovations;

2.8. Analyses three prescriptive models: (1) the theory of Reasoned Action, (2) the Theory of Planned Behaviour and (3) the Technology Acceptance Model;

2.9. Identifies some issues emerging from the literature relevant for the current research;

2.10. Provides a summary of the chapter.

2.2. The concept of consumer behaviour

Consumer behaviour as a field of study began in the 1950s, although it had been of interest for a long time (Wilkie, 1990). The literature on consumer behaviour has expanded substantially in the past decades and over the years the notion of consumer behaviour has changed. According to Loudon and Della Bitta (1993), for many years the notion of consumer was defined from an economic perspective, while a more recent view recognises that monetary exchange is not essential to the definition of consumer. Consequently, research on consumer behaviour shifted from studying the buying process to the study of a broad range of consumption activities beyond purchasing. The activities associated with the consuming and disposing of products, besides buying, are also seen as an integral part of consumer behaviour. This holistic perspective of consumer behaviour, which is adopted in this thesis, is supported in most of the contemporary books of consumer behaviour. For example, Blackwell et al. (2001) defines consumer behaviour as:

> *"the activities people undertake when obtaining, consuming and disposing of products and services" (p. 6).*

In a similar vein, Solomon et al. (2002) suggests that consumer behaviour is:

> *"The study of the process involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires" (p. 5)*

This research adopts this contemporary definition of consumer behaviour due to the fundamental reason that the study of consumer adoption of electronic commerce can benefit from an understanding of the activities beyond purchasing over the computer and

the Internet. Besides purchasing, the adoption of electronic commerce is influenced by several other behaviours, such as the adoption of computers and the Internet and the consumption of the product category.

2.3. Models of consumer behaviour

In order to understand and explain consumer behaviour, many models have been proposed. Most of these recognise the specificities of the context in which the consumption decision takes place, notably those of the unit of analysis. Based on the unit of analysis, two main types of consumer behaviour model have been put forward:

- Individual consumer behaviour models;
- Family/household consumer behaviour models.

As the name suggests, individual consumer behaviour models concentrate on individuals as decision makers. Over the years, most research conducted in the field of consumer behaviour has focused on individuals as decision-making units. In individual consumer research, the factors related to family/household have been studied but only to the extent that they influence the decision of the individual, such as his/her attitudes, motives and ultimately decisions. The 'grand' models of consumer behaviour, such as those of Engel et al. (1995) and Howard and Sheth (1969) have been put forward to explain individual consumer behaviour.

Nevertheless, several researchers have devoted their attention to the study of the family/household, in opposition to the individual, as the unit of consumption. Some authors (e.g. Henthorne et al., 1997) have even placed the family/household, not the individual, as the primary consumer decision-making unit. According to Blackwell et al. (2001), the importance of the family or household unit in consumer behaviour arises for two reasons:

- Many products are purchased by a family/household;

- Individuals' buying decisions may be heavily influenced by other family/household members.

The modelling of household/family consumer behaviour has received some attention, though not as much as individual consumer behaviour. Comprehensive models of family/household consumer behaviour are scarce. One of the exceptions is the model put forward by Sheth (1974). However the model is based upon Howard and Sheth's (1969) model of buyer behaviour, which focuses on individual consumer behaviour.

Although family/household consumer behaviour research has focused on different issues, according to Commuri and Gentry (2000) there are some dominant themes. These include the relevance of the family life cycle, decision roles and relative influence, conflict resolution, consumption by households with working wives as opposed to those without working wives, and consumer socialisation. Among these, decision roles and the relative influence of the household/family members are perhaps the most developed areas. The seminal work of Davis and Rigaux (1974) has given an important contribution by stimulating research in these two areas.

This investigation could have been approached from a family/household point of view. There are several reasons that suggest this as an appropriate course of action:

- The product category under study – leisure travel – is frequently consumed jointly by members of a family/household;

- The decisions associated with a vacation tend to be jointly made (Belch and Willis, 2002; Martinez and Polo, 1999), including the selection of travel agent and the actual purchase of the holiday (Stafford et al., 1996);

- The Internet has changed family decision making (Belch and Willis, 2002).

However, the current investigation approaches the adoption of e-commerce in the purchasing of leisure travel from an individual point of view. Research on family/household buying behaviour is theoretically and methodologically more complex than individual buying behaviour. As Kang and Hsu (2005) recently noted:

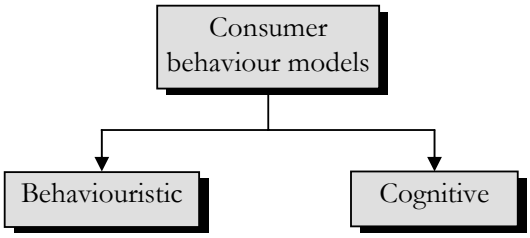
> *"The family decision-making process is (…) more complicated than the individual-decision making process in that involves multiple individuals and is likely to encompass interactions among family members" (p. 571)*

Given that consumer adoption of e-commerce is a recent field of research, knowledge regarding consumers adoption of e-commerce is still scarce. Therefore, by starting the examination of the phenomenon at the individual (and more simple) level, researchers can build enough knowledge that will enable them, in the future, to move on to more complex research, such as that carried out from a family/household point of view.

2.4. Theoretical approaches to the study of consumer behaviour

There are two main streams of research for studying consumer behaviour (Figure 2.1): the cognitive and the behaviourist (Foxall, 1999). In recent years the application of behaviour analytic principals to consumer behaviour, as well as the theory underpinning these applications, has become more systematic (DiClemente and Hantula, 2003). However, cognitive theorising remains the dominant perspective in consumer behaviour research (Foxall, 1999; Erasmus et al., 2001; DiClemente & Hantula, 2003). The following section concentrates on describing the main assumptions of each of these approaches. Although both approaches can potentially cover both individual and family decision making, behaviourist research tends to concentrate on individual consumer behaviour whereas cognitive approaches have been applied on to both individual and family consumer behaviour research.

Figure 2. 1: Two main theoretical approaches to the study of consumer behaviour
(Source: Foxall, 1999)



2.4.1. Behavioural theories

The behavioural school of thought (or behaviourism) owes its roots to logical positivism, which holds that the objective and empirical methods of the physical sciences can be applied to the analysis of consumer behaviour (Foxall, 1993b; Eysenck and Keane, 1990). Logical positivists argue that theories are only to be justified by an appeal to observed facts and that theoretical constructs are meaningful only to the extent that they can be observed (Eysenck and Keane, 1990). Behaviourists maintain that only observable variables, such as the stimulus presented to the organism and any consequent response to that stimulus, should be considered (Morris, 1974; Skinner, 1974; Foxall, 1990; Eysenck and Keane, 1990; Groome and Dewart, 1999). Skinner (1974), based on logical positivism and Watson's (1913) behaviourism, adopted a radical behaviourism perspective. Unlike logical positivism, which did not accept introspection as a scientific practice, radical behaviourism does not deny the importance of the intrapersonal processes, but rather questions whether what is felt or introspectively observed is the cause of behaviour.

The application of behaviourism principals to consumer behaviour has been undertaken by authors such as Foxall (Foxall, 1990; Foxall, 1993a; Foxall, 1993b; Foxall, 1999). Relying heavily on a critique of Skinner's (1974) radical behaviourism, Foxall's Behavioural Perspective Model of purchase and consumption postulates that the aspects of consumer behaviour are predictable from two dimensions or situational influences: the consumer behaviour setting and the reinforcement signalled by the setting.

2.4.2. Cognitive theories

Purchasing leisure travel by the means of electronic commerce is a complex action. The conceptual model adopted in the research postulates that purchasing by means of e-commerce is the result of the cumulative adoption of three elements (the computer, the Internet and the purchasing over the Internet). Additionally, the adoption is also influenced by the purchasing and travelling patterns of the individuals, which the literature has also shown to be a complex phenomenon. Foxall (1993b) argued that in the study of complex actions it is

> *"impossible to ascertain the contingencies that control response with the accuracy and precision available to the scientist who can assiduously control and monitor both dependent and independent variables" (p. 116).*

Hence, the complexity of the behaviour being researched suggests that behaviouristic models are not suitable for achieving the objectives of the research.

Given the above, this research adopts a cognitive approach to the study of consumer adoption of electronic commerce in the purchasing of leisure travel. The cognitive approach is well established in consumer behaviour and, despite criticisms of cognitive theories, most researchers recognise the relevance of intrapersonal processes in consumer behaviour. Even behaviourists such as Foxall recognise the value in cognitive models and argue that behaviouristic models are a complement rather than a substitute to cognitive theories (Foxall, 1999).

The most widely accepted and influential models of consumer behaviour derive in large part from cognitive psychology, which has assumed the status of the dominant paradigm (Foxall, 1990). Cognitive psychology originated from the failure of behaviourism to satisfactorily measure the science of human cognition (Eysenck and Keane, 1990). Cognitive psychology is the discipline that studies the way in which the brain processes information, that is, it focuses on the way individuals take in information from the outside world, how they make sense of that information and how they make use of it (Groome and Dewart, 1999). Cognition refers to the different kinds of information processing that occurs at different stages (Groome and Dewart, 1999; Eysenck and Keane, 1990). Hence, the cognitive approach views humans as rational animals who systematically utilise and process the information made available to them (Fishbein and Ajzen, 1975).

Cognitivism postulates that observed behaviour is explained by intrapersonal information processing (Foxall, 1990), whereby people are viewed as autonomous, intentional beings who interact with the external world (Eysenck and Keane, 1990). Initially, researchers modelled the information process as 'input – processing – learning and memory storage – retrieval – thinking' (Eysenck and Keane, 1990; Groome and Dewart, 1999). However, the acceptance of this (bottom-up) sequence as the unique possibility assumes (wrongly) that stimuli impinge on an inactive and unprepared organism (Eysenck and Keane, 1990). Bearing in mind that information processing is conducted by an active organism which has past experiences, most modern theorists assume that information processing will involve

stimulus driven processing (bottom up) as well as concept driven processing (top-down). This second type of processing is based on the generation of schemas acquired from past experience, which are sent down the nervous system for comparison with the incoming stimulus (Groome and Dewart, 1999). To a certain extent, this assumption that learning from past experiences influences information processing (and thus behaviour) is similar to that of behaviourism. However, while behaviourism focuses on the effects of this learning on behaviour, for cognitivists the relevance of past experience is the extent to which learning influences information processing.

Foxall (1990) argued that the strengths of the cognitivism as an explanatory device of consumer behaviour are fourfold:

- Its closeness with the common-sense explanations of everyday discourse make it an intuitively attractive means of offering explanations of everyday behaviours (such as purchasing and consumption);
- The ability of consumers to describe their experiences in terms of their attitudes, wants, needs and motives ensures that explanation proceeds in the same terms as the description of what is explained;
- It brings a measure of unity and consensus to the field; and
- The extensive use made by other social science and humanities disciplines of cognitive explanation has assisted the conceptual development of this line of consumer research by making possible the borrowing of theoretical and methodological inputs.

However, Foxall (1990) also criticised cognitive consumer behaviour theories due to the untestability of many of the propositions and the fact that some of the depictions rely on a high level of abstraction. Additionally, he argued that the low correlational consistency between measures of the components of the theories and overt purchase choice confirms their limited ability to describe or predict actual consumer behaviour. A logical consumer decision-making process, an assumption underlying cognitive models, has also been criticised. Erasmus et al. (2001), in their critique of consumer decision-making models, pointed out three main criticisms of these models:

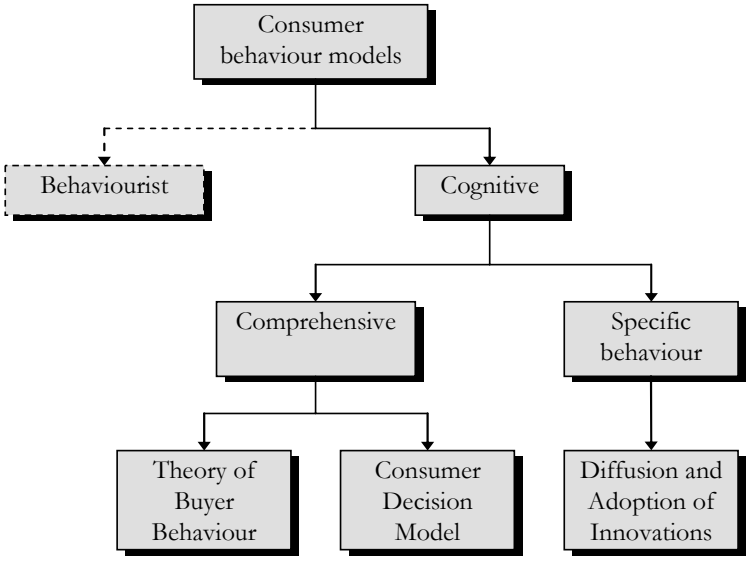
- An assumption of rational consumer decision-making behaviour;
- A generalisation of the decision making process;
- The limitations resulting from a positivistic approach (p. 84-85).

In summary, the cognitive approach (adopted in this research) focuses on how people think about things and what factors influence their decisions by understanding of interpersonal processes. The behaviourist approach attempts to understand how people behave in specific situations by placing emphasis on the environment as an explanatory variable.

2.5. Cognitive consumer behaviour models

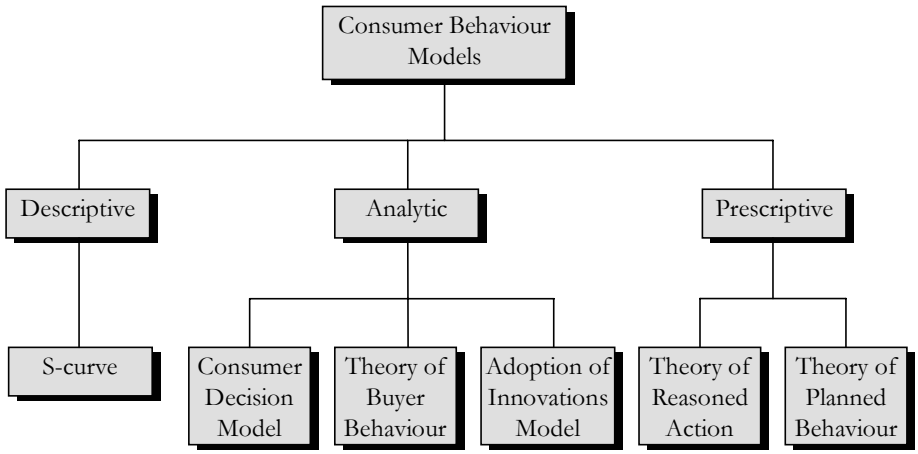
Over the years, a number of consumer behaviour models based on the cognitive approach have been put forward. These models can be classified according to the scope of the behaviour they intend to model (Figure 2.2). The *comprehensive models* aim at addressing a broad range of consumer behaviours, from initial to repeat behaviour. The Theory of Buyer Behaviour by Howard and Sheth (1969), the Consumer Decision Model by Engel et al. (1995) and the Theories of Reasoned Action (Fishbein and Ajzen, 1975) and Planned Behaviour (Ajzen, 1988) fall into this category. The second group of consumer behaviour models concentrates on explaining *specific types of behaviours*, such as repeat buying or innovative behaviour. Repeat buying behaviour models focus on the way in which consumers buy products which are bought fairly frequently. Since purchasing leisure travel through e-commerce is considered to be an infrequent activity, repeat buying models are not appropriate for attaining the objectives of this investigation. Consequently, the remainder of this chapter will concentrate on reviewing some of the most influential comprehensive models of consumer behaviour.

Figure 2. 2: Types of cognitive consumer behaviour models according to the scope of behaviour
(Source: Author)



As Figure 2.3 demonstrates, consumer behaviour models can be further classified according to their purpose (Kurstedt, 2000; Fawcett and Downs, 1992). *Descriptive models* aim at describing a consumption phenomenon. Their main concern is on *what* and hence they should reproduce the behaviour of concern. One example of a descriptive model is the S-curve (Rogers, 1995). *Analytical models* aim at providing a framework for identifying the elements that might explain/understand a given consumption behaviour. These types of models usually provide tentative relationships between some or all of the components of the model. The Theory of Buyer Behaviour (Howard and Sheth, 1969), the Consumer Decision Model (Engel et al., 1995) and Adoption of Innovations (Rogers, 1995) are examples of analytic models. *Prescriptive models* provide guidelines or frameworks to organise how consumer behaviour is structured, including the order in which the elements should appear. These models prescribe certain cause(s) to get a given effect, that is, they concentrate on what to do to get a given result. Examples of Prescriptive models include the Theory of Reasoned Action (Fishbein and Ajzen, 1975) and the Theory of Planned Behaviour (Ajzen, 1988), as well as their derivates such as the Technology Acceptance Model (Davis, 1989; Davis et al., 1989). These models, despite not having been specifically developed for studying consumer behaviour, have been widely used for this purpose.

Figure 2. 3: Types of cognitive consumer behaviour models according to their purpose
(Source: Adapted from Kurstedt, 2000; Fawcett and Downs, 1992)



The next sub-sections review in detail the models according to this tripartite classification (descriptive, analysitcal and prescriptive).

2.6. Descriptive models

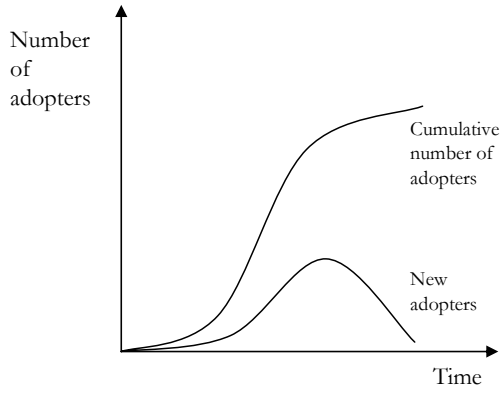
Descriptive lifecycle models characterise how a specific behaviour develops in a particular setting. Rogers (1995) put forward a model that describes the rate of adoption of innovations, that is, the relative speed with which the members of the social system adopt the innovation. The traditional adoption curves are presented in Figure 2.4. As can be observed, one of the curves describes the number of new adopters over time and has traditionally been postulated to follow a bell-shaped curve. The other curve shows the cumulative number of adopters and follows an S-shaped curve. The rationale behind these curves is that acceptance is initially slow, then grows rapidly, and then decreases.

The S-Shaped diffusion curve has received many criticisms. For example, Reynolds and Wells (1977) argued that this might be the case of discontinuous innovations, but continuous innovations tend to exhibit an exponential growth curve. However, one of the main criticisms to the traditional adoption curves is the linearity that it assumes, which gives the impression that the different stages or adopter segments in the diffusion process

almost automatically succeed each other (Lieven and Gino, 2004). Lieven and Gino (2004) also criticised the bell-shaped adoption pattern for its failure to account for adoption in the current ICT environment. They argued that *"for most [ICT] innovations, there mostly appears to be a segment of innovators and some early adopters, but for more and more [ICT] innovation adoption suddenly stops somewhere at those early adopters"* (p. 5). In order to continue its adoption course, this critical stage somewhere between early adopters and the majority, which Moore (1999, in Lieven and Gino, 2004) called 'The Chasm', needs to be crossed. The slow down in the increase in adoption is due to the failure of the innovation to meet the expectations of other potential users. The continuation of adoption takes places only if the product is able to match the expectations created, which is likely to require adjustments to the innovation. Hence, the innovation's amenability to modification (Ram, 1987) is one of the key aspects in crossing 'The chasm'.

Figure 2. 4: The traditional adoption curves

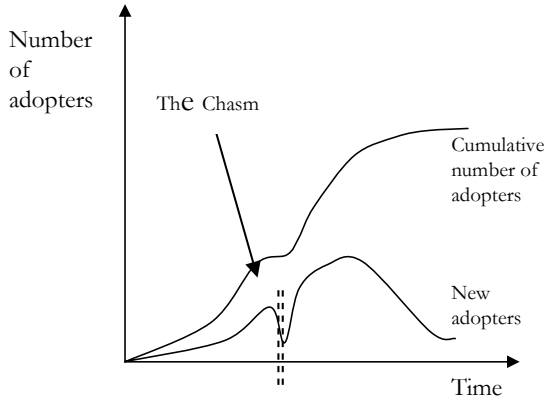
Source: Adapted from Rogers (1995)



Based on the evidence that most innovations fail to reach mass adoption and that many innovations during their lifecycle go through a critical stage characterised by a decrease in rate of adoption, Lieven and Gino (2004) suggested a revision of the traditional adoption curve. Instead of the one peaked and bell-shaped curve, they proposed a doubled-peaked curve (Figure 2.5). The first peak arises from market enthusiasm and the second from mass market adoption.

Figure 2. 5: The adoption and diffusion curves 'adjusted'

Source: Adapted from Lieven and Gino (2004)



2.7. Analytical models

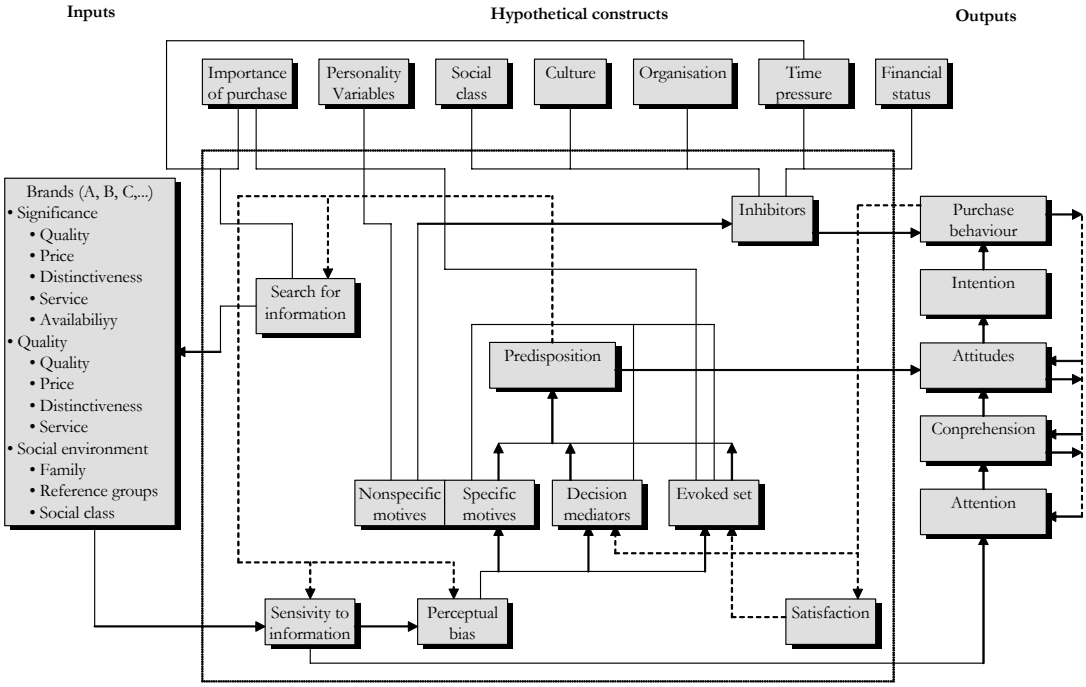
Analytical models go beyond simply describing by suggesting the variables that might explain/understand a given consumption behaviour. In this section, three of these models will be presented: The Theory of Buyer Behaviour (Howard and Sheth, 1969), the Consumer Decision Model (Engel et al., 1995) and Adoption of Innovations (Rogers, 1995).

2.7.1. The Theory of Buyer Behaviour

The Theory of Buyer Behaviour (Howard and Sheth, 1969), shown in Figure 2.6, postulates that four major components are involved in the consumer decision-making: input variables, output variables, hypothetical constructs and exogenous variables (Howard and Sheth, 1969).

Figure 2. 6: The Theory of Buyer Behaviour

Source: Loudon and Della Bitta, 1993



Input variables are the stimuli a consumer is subjected to, that is, the information that is communicated to the buyer by different sources. The social stimuli is generated by the social environment, such as family and groups. Output variables are the behavioural manifestations associated with the purchasing, that is, they are the buyer's observable responses to stimulus inputs. These variables are attention, comprehension, attitude, intention and purchase behaviour.

The hypothetical constructs are the various internal-state variables and processes that combined together show the state of the buyer. These constructs can be classified in two categories: those associated with perceptions (sensivity to information, perceptual bias and search for information) and those associated with learning (motives, brand potential of the evoked set, decision mediators, predisposition, inhibitors and satisfaction). Finally, the exogenous variables are postulated to be causally related to the output variables through their effect on the hypothetical constructs. As Howard and Sheth (1969) noted, exogenous variables contain the history of the buyer up to the beginning of the period of observation.

Seven exogenous variables are suggested: importance of purchase, personality variables, social class, culture, organisation [reference groups], time and financial status.

One of the strengths of this model is its sophisticated integration of various social, psychological and marketing influences on consumer choice into a coherent sequence of information processing (Foxall, 1990; Lunn, 1974). Additionally, the model identifies many of the variables influencing consumers and details how they interact with each other. The model also recognises for the first time different types of consumer problem solving and information seeking behaviours. Moreover, it recognises that outcomes of consumer's decisions are more than just purchases (Loudon and Della Bitta, 1993).

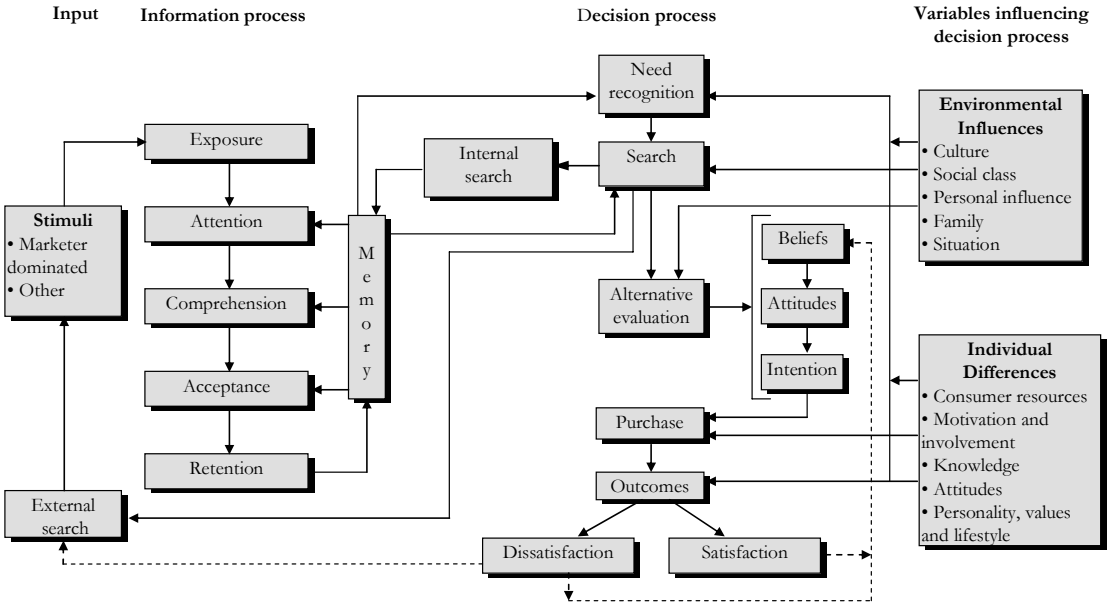
The model has been criticised for its complexity and for not making sharp distinctions between exogenous and other variables (Loudon and Della Bitta, 1993). Moreover, it has been argued that some of the variables are not well defined and are difficult to measure. The model's generalisability has also been questioned, since it is not highly useful in explaining, for example, joint decision making between family members or other members of an organisation (Loudon and Della Bitta, 1993).

2.7.2. The Consumer Decision Model

The Consumer Decision Model (or Engel, Blackwell and Miniard (EBM) model) (Engel et al., 1995), depicted in Figure 2.7., suggests that consumer decision making is influenced and shaped by three categories of factors and determinants: environmental influences, individual differences and psychological processes. Consumers live in a complex environment and thus environmental factors can influence the consumer decision process. The EBM model suggests that there are five types of environmental influences (culture, social class, personal influence influences, the family and situations). Individual differences are the characteristics of the individual. They include factors such as consumer resources, motivation and involvement, knowledge, attitudes, personality, lifestyle and values. The stimuli received by a consumer undergo psychological processes and it is these processes that shape all aspects of human motivation and behaviour. The model recognises the existence of three central psychological processes: information processing, learning and attitude and behaviour change.

Figure 2. 7: The Engel, Blackwell and Miniard model

Source: Engel et al., 1995



The model is activated when the consumer recognises a discrepancy between his/her current situation and the situation he/she wants to be in, that is, when a need is felt. After the model is activated, the individual engages in information search. The first search is internal with memory used to determine what is known about the alternatives and how to choose among them. If internal information is not sufficient, he/she activates the external search and the information processing activities are used to derive meaning from the stimuli arising from the external world. Engel et al. (1995) suggest that information goes through a process comprising five stages: exposure, attention, comprehension, acceptance and retention.

The information retained is used to evaluate alternatives**,** which refers to the comparison of the attributes offered by each of the alternatives with his or her desired outcomes from purchase and consumption, that is, the evaluation criteria. Presumably, the intake of information leads to changes in beliefs about the product. A change in beliefs about the product will, in turn, lead to changes in attitudes. The alternative evaluation leads to an intention to make a purchase of the most favourable evaluated product. Unless situations

(lack of money, uncertainty about future income) intervene to postpone or stop the process, intentions will lead to actual purchase behaviour.

Following purchase, the product is consumed and post-consumption alternative evaluation takes place. The usage will lead to an evaluation of the experience with the performance of the product being compared to expectations. If the option meets expectations then it is a case for satisfaction. If it does not, then the individual will be dissatisfied. Whatever the outcome, the result may lead to further search for information about the product and/or changes in beliefs. Thus, the process is seen as a continuous one that does not stop with a purchase.

This model has been praised for its comprehensiveness in accounting consumer behaviour, as it includes numerous theories of behaviour (e.g. information processing, motivation, and attitude change) and many relevant variables influencing consumers (Loudon and Della Bitta, 1993). Additionally, it associates the levels of consumer involvement to the different types of decision processes. However, the model has been criticised for the vagueness regarding the role of some variables, such as the environmental variables and motives, and by its mechanistic treatment of the decision process (Loudon and Della Bitta, 1993).

2.7.3. The Diffusion and Adoption of Innovations

Whereas the Howard and Sheth and EBM models attempt to explain a broad range of behaviours (hence they are often termed comprehensive), presumably including innovative behaviour, the diffusion and adoption of innovations model concentrates on a specific type of behaviour – innovative behaviour.

The roots of diffusion and adoption research extend back to the work of Tarde (1903) on the laws of imitation. Tarde (1903) viewed the diffusion and adoption of innovations as a basic and fundamental explanation of human behaviour change. Among other contributions, Tarde (1903) identified the adoption or rejection as crucial outcome variables, observed that the rate of adoption followed an S-shapped curve and related the evolution of the adoption curve to opinion leadership (Rogers, 1995). He was also the first

to note the presence of cosmopolitism (intersocietal orientation) in the innovators (Boone, 1970).

It was during the 1940's that the diffusion and adoption paradigm was formed, following the work of Ryan and Gross (1943) on the adoption of hybrid corn (Rogers, 1995). Up until the 1960s research on the diffusion and adoption of innovations was limited and lacked systematisation, as most research fields were developing with little influence from other fields (Rogers, 1995). However, in 1962 Rogers published a book on the Diffusion of Innovations, integrating the research from the different fields in a coherent theory. The net result was a sharp growth in published research. By 1992 nearly four thousand studies had been published on the topic (Rogers, 1995). These include studies conducted in a variety of contexts, such as public health and education, and perspectives, such as anthropology, marketing, geography and sociology. His contribution to the development of diffusion and adoption theory is so great that his model still prevails as the main theoretical source in the study of diffusion and adoption of innovations.

It was in the 1970s that the take-off of research on diffusion and adoption from a marketing perspective occurred (Rogers, 1995). Part of this research used mathematical models to predict the rate of adoption. The most important of these models was developed by Bass (1969). The model assumes that potential adopters of an innovation are influenced by mass media and word-of-mouth. Using a coefficient of mass media influence, a coefficient of word-of-mouth influence and an index of market potential, the marketer can calculate the rate of adoption.

Commercial marketing was not the only field that was making use of the diffusion and adoption theory. Social marketing also made extensive use of the theory as theoretical underpinning (Rogers, 1995). These include studies on smoking habits, literacy, health practices, family planning and anti-littering. Social marketing is essentially a type of planned communication process (Rogers, 1995), and since diffusion theory is concerned with the communication process underlying the spread of innovations, it was not surprising that social marketers resorted to it when planning social change.

2.7.3.1. Diffusion and adoption

The diffusion and adoption of innovations model consists of two different, but inter-related, processes: diffusion and adoption. Hence, when discussing the nature of the process by which innovations spread, the concept of diffusion must be distinguished from that of adoption. The adoption process is related to the sequence of mental stages that leads to the adoption (i.e. making full use of an innovation as the best course of action available) or to the rejection (not to adopt) of an innovation (Rogers, 1995). Diffusion, on the other hand, refers to a group phenomenon, indicating how knowledge about an innovation spreads among consumers (Loudon and Della Bitta, 1993).

Midgley (1977) refers to adoption as the cognitive processes, that is, those internal to the individual. He views diffusion as the social processes, the aggregation of the individual processes within a communication network. The adoption process is essentially micro in nature and the diffusion process is macro (Kerby, 1975).

In short, diffusion is the communication of information about an innovation. The diffusion of an innovation influences its awareness among potential adopters and hence diffusion precedes adoption. In other words, the aim of diffusion is to create awareness, after which adoption develops. Therefore, diffusion and adoption are different but linked processes, not least because diffusion itself is partially dependent on adoption and adoption is partially dependent on diffusion. This research concentrates at the individual level and hence the focus is on adoption.

2.7.3.2. The adoption process

As noted in the previous section, the adoption process focuses on the cognitive processes, those internal to the individual. Central to the adoption process is the decision process that a person goes through in considering the adoption of a new idea or product. This process consists of a series of actions and decisions over time through which an individual evaluates the new idea and decides whether or not to incorporate the innovation into ongoing practice (Rogers, 1995).

The decision process associated to the adoption of innovations has been characterised as a special type of hierarchy of effects. An early view on the *decision process* viewed it as encompassing five stages: awareness, interest, evaluation, trial and adoption (Rogers and Shoemaker, 1971). However, this version was criticised, notably because it implied that the process should always end with adoption. Recognising this limitation, Rogers and Shoemaker (1971) proposed a model comprising four stages: knowledge, persuasion, decision and confirmation. Unlike the preceding sequence, the innovation-decision model did not imply a specific outcome (adoption) but rather encompassed the two possible outcomes: adoption and rejection. Rogers and Shoemaker (1971) pointed out that this process was more consistent with the learning process.

A more recent version (Figure 2.8) of this learning model, which Rogers named as the 'innovation decision process', proposes a process consisting of five stages (Rogers, 1995). A stage between the decision and confirmation stages (the implementation stage) was introduced to account for the situation where the individual puts an innovation into use without full commitment. Although the innovation process suggested by Rogers is knowledge-persuasion-decision, he acknowledges that the process can also follow different patterns, notably it can be knowledge-decision-persuasion.

Figure 2. 8: The adoption process

Source: Rogers (1995)

Being viewed in many ways as a learning process, one of the underlying assumptions of the innovation-decision process is that the process is oriented towards the reduction of uncertainty about not only how to use the innovation, but also about the consequences of adoption and rejection. Hence, learning plays a central role in that it is through learning (acquired either from communication or experimentation) that uncertainty is reduced (Rogers, 1995).

An alternative conceptualisation of the innovation decision process was put forward by Klonglan and Coward (1970). They presented a two stage model of the adoption process,

based on the premise that a new product necessarily involves both an idea and an object, with corresponding symbolic and action forms of adoption (Mittelstaedt et al., 1976). The first stage involves the symbolic adoption or rejection of the idea, after evaluating it. Symbolic acceptance is a necessary condition to proceed to the second stage of the model, which involves overt action. Trial always precedes use adoption, but does not necessarily lead to use adoption. The emphasis on symbolic adoption results from the fact that individuals may symbolically accept the idea associated with the product but, for a number of reasons, be unwilling or unable to move onto the overt action stage (i.e. trial) (Mittelstaedt et al., 1976).

The Klonglan and Coward (1970) model was criticised for implicitly denying the possibility that some people may use a trial as their informational input for evaluation (Mittelstaedt et al., 1976). Mittelstaedt and colleagues reject this assumption because, they argue, there are individuals who seek direct experience and are predisposed to form their evaluation on the basis of a trial purchase. They showed that sensation seeking was associated with the predisposition for direct action (i.e. trial), with high sensation seekers tending to push through the evaluation phase to actual trial.

Whatever the model, there is some debate on what is 'adoption'. Rogers (1995) argues that adoption refers to the decision to incorporate the innovation into ongoing practice. However, as Mittelstaedt et al. (1976) and Antil (1988) noted, most studies on consumer adoption of innovations have purchase of a product as criterion for defining adopters. Antil (1988) and Gatignon and Robertson (1985) pointed that adoption is conceptually defined as continuous use but operationally defined as initial use. Similarly to Kronglan and Coward (1970), Antil (1988) proposed the distinction between psychological adoption and behavioural adoption. However, while to Kronglan and Coward (1970) psychological adoption is an antecedent of behavioural adoption, Antil (1988) argues that adoption involves both psychological and behavioural commitment over time.

Gatignon and Robertson (1985) supported the view that for many products repeat purchase is key to adoption and added that it is important to assess adoption in terms of both width and depth. According to the authors, width is the number of different uses for the product and depth the amount of usage or the purchase of related products.

A brief explanation of each stage is will be carried out with reference to the work of Rogers (1995), complemented by the work of others.

1st stage - knowledge

Knowledge occurs when an individual is exposed to an innovation's existence and gains some understanding of how it functions. There are three broad types of knowledge (Rogers, 1995). Awareness-knowledge is the knowledge associated with the understanding that the innovation exists. How-to knowledge refers to the knowledge about how to use the innovation. Finally, principles-knowledge refers to the functioning principles of the innovation. In other words, this last type of knowledge addresses why things work the way they do. To adopt an innovation the first two types of knowledge are sufficient.

The formation of knowledge is influenced by several factors. One such factor is the *predispositions* of the individuals, notably the degree of self-exposure and selective perception (Rogers, 1995). The existence of *communication channels* from which the individual can receive information is another factor that influences the formation of knowledge. Communication channels can de divided into two main groups: mass media channels and interpersonal channels (Rogers, 1995). Awareness-knowledge is usually gained through mass media channels. In contrast, how-to knowledge and principles knowledge are likely to be gained through either mass media or interpersonal means. In general, impersonal sources are more prevalent early in the decision process and personal sources later in the decision process (Rogers, 1995; Midgley, 1977; Reynolds and Darden, 1972; Robertson, 1971). Therefore, the extent to which the innovation is covered in the media affects awareness, and consequently, the adoption of the innovation.

Besides the predispositions of the individual and the communication channels, the awareness of an innovation is also influenced by the *social context* of the individual. For example, the social system in which the individual lives may, or may not, provide the opportunities to contact with messages regarding the innovation. Within a social system, the greater the number of adopters of an innovation, the greater the probability of an individual to be exposed to messages about the innovation. Hence, belonging to a social system which has partially adopted the innovation facilitates the development of awareness about that innovation.

One underlying assumption of the adoption process is that the individual adopts the innovation when the level of knowledge is sufficient to reduce the uncertainty of the outcomes of adoption to acceptable levels. The reduction of uncertainty is achieved through the collection of more information about the innovation. As Daghfous et al. (1999) noted, individuals are usually faced with an abundance of information (advertising, word-of-mouth). However, it has been pointed out that this can lead to information overload. In simple terms, information overload involves too much information too soon with not enough time to digest it (Herbig and Kramer, 1994). Information overload can inhibit user decision-making, and consequently have a deterrent effect on the adoption process (Ostlund, 1974; Herbig and Kramer, 1994; Agarwal and Prasad, 1998; Rogers, 1995).

The basic contention is that consideration of a new idea does not go beyond the knowledge function if the individual does not regard the information as relevant to his or her situation or if sufficient knowledge is not obtained to become adequately informed so that persuasion can take place (Rogers, 1995).

2nd stage - persuation

The second stage in the innovation-decision process is *persuasion*, which occurs when an individual forms a favourable or unfavourable attitude toward the innovation. At this stage exposure to the innovation remains important (Midgley and Dowling, 1978). However, as noted earlier, whereas at the initial stages in the adoption process mass media are likely to be the main source of information, from the persuasion stage onwards individuals are more likely to be influenced by both mass media and interpersonal channels. The main reason for this change is due to the fact that interpersonal channels tend to emphasise more the personal value of the innovation (Rogers, 1995; Agarwal and Prasad, 1998). Therefore, the adoption of an innovation is influenced by the extent to which individuals have discussion opportunities with others from which re-inforcement of their beliefs about the innovation can be obtained (Rogers, 1995; Midgley and Dowling, 1978). Some examples of interpersonal sources include opinion leaders (Rogers, 1995; Feick and Price, 1987), market mavens (Feick and Price, 1987) and innovative communicators (Baumgarten, 1975).

Whether originating from opinions leaders, market mavens or innovative communicators, there is a positive relationship between the signal of the message received and the probability of purchase, with favourable word-of-mouth increasing the probability of purchase and unfavourable word-of-mouth decreasing it (Arndt, 1967). In general, non-adopters and rejectors tend to be more subject to, and convey more, negative messages (Leonard-Barton, 1985; Reynolds and Darden, 1972; Arndt, 1967).

During the persuasion stage the individual is expected to engage in the process of vicarious trial (Rogers, 1995). This mental trial is carried out to assess the extent to which the innovation has the potential to become the best course of action. The more the innovation is evaluated as the best course of action, the more positive the attitude will be. In the study of the adoption of innovations, attitude has been assessed in terms of perceived innovation attributes, such as relative advantage, compatibility and complexity. These and other attributes will be fully examined in section 3.3.2.

3rd stage - decision

The third stage of the adoption process is *decision*, which occurs when an individual engages in activities that lead to the verdict of whether to adopt or reject the innovation (Rogers, 1995). Adoption is the decision to make full use of an innovation as the best course of action available while rejection is a decision not to make use of the innovation. According to Rogers (1995), there are two types of rejection. Active rejection consists of not adopting an innovation after considering its adoption. If an individual never considers the use of the innovation, then it is a case of passive rejection.

One major influence on the decision of whether to adopt or not is the extent to which an innovation can be experimented with before a full commitment is made (Rogers, 1995), that is, if trial of the innovation is possible. The adoption process is characterised by the reduction of uncertainty about an innovation's consequences and trial is a way of reducing this level of uncertainty. It does not commit the individual to any great extent and enables him/her to assess the outcomes based on his/her own experience.

The decision to adopt or not the innovation is also influenced by a number of psychological factors. These include the innovativeness of the individual and his/her

creativity, which is the ability of the individual to see opportunities in using the innovation (Hirschman, 1980). In addition, the decision to adopt or reject the innovation is guided by the extent to which it will influence his/her position in the social system (Rogers, 1995; Fisher and Price, 1992; Gatignon and Robertson, 1991; Ram and Sheth, 1989; Robertson, 1971). For example, an individual might have developed a positive attitude towards adopting the innovation but if the innovation is not in harmony with the norms of reference groups, the decision is likely to be for rejecting the innovation.

4th stage – implementation

If a decision to use the innovation is made (adoption), the individual is likely to put that decision into practice, unless it is held up by the lack of resources, such as, in the case of ICT, the lack of the technology or the lack of knowledge on how to use it. This is the *implementation* stage. The innovation decision process distinguishes between initial use (implementation) and continuous use (confirmation) for two main reasons. First, initial usage of the innovation may not always be sufficient to fully derive the benefits desired from it (Agarwal and Prasad, 1997). Second, initial usage may take place with the single aim to gather information about the innovation so that a final decision to fully use it or not can be reached (Mittelstaedt et al., 1976; Park and Mittal, 1985). Often, the innovation encompasses more than one function. In such cases, individuals can adopt only selected aspects of the innovation and reject others.

5th stage – confirmation

Implementation may continue for a lengthy period of time, depending on the nature of the innovation. Up to the decision stage, the process is purely psychological. Conversely, the implementation stage involves overt behaviour. However, the point at which implementation becomes *confirmation* is more controversial. The central tenet is that the confirmation stage starts when the new idea becomes an institutionalised and regularised part of the adopter's ongoing practice. More specifically, confirmation starts when the individual seeks reinforcement of an innovation-decision already made, either by confirming a previous decision to adopt (continued adoption) or by rejecting the

innovation (discontinuance). Discontinuance may be caused by a number of factors, such as replacement by a new idea and disenchantment.

LaTour and Roberts (1992) suggest that the confirmation stage starts when the innovation is culturally anchored, that is, *"when a product becomes inextrinsicably part of a consumer's life and sociocultural surroundings"* (p. 29). LaTour and Roberts (1992) argue that an innovation that is culturally anchored leads to a greater dependency over time, leading to a grater propensity to replacement or 're-anchoring' by the next generation of technological innovations.

There are several elements that influence the adoption process. One of these elements is the *nature of the innovation*. One of the earliest definitions of innovation was put forward by Rogers (1962). Innovation was defined as '*an idea, practice, or object that is perceived as new by an individual or other unit of adoption'* (Rogers, 1962). However, this conceptualisation of innovation was criticised by authors such as Reynolds and Wells (1977) and Gatignon and Robertson (1991) who argued that the definition was difficult to operationalise, omitted important considerations and relied on the potential adopter perception.

In order to identify the boundaries of the concept of innovation, and to reduce its ambiguity, several authors have attempted to provide a classification for innovations. Robertson (1971) suggested that an analysis of the effects of innovation upon established patterns of consumption would contribute to the operationalisation of the concept. He suggested three categories based on an innovation continuum:

- Discontinuous innovations involve the establishment of a new product and the establishment of new behaviours. The innovation differs from other products in several relevant features;

- Dynamically continuous innovations have some disrupting effects upon established patterns, but does not generally alter established patterns;

- Continuous innovations have the least disruptive influence of established patterns. Usually involves the alteration of an existing product rather than a completely new one.

This continuum was criticised by Reynolds and Wells (1977), because an innovation that is continuous for one consumer may be discontinuous for another. To face this critic, Rogers

(1995) argued that the classification should be based on the perceptions of the majority of the individuals in the social system. The principle associated with innovation research is that any innovation creates a degree of change in consumer's day-to-day existence and disrupts their established patterns. Hence, it can be expected that the higher the discontinuity (i.e. the higher the change and disruption) the higher the resistance is likely to be (Ram and Sheth, 1989).

A different perspective was put forward by Hirschman (1981). She suggested approaching the nature of innovations not in terms of the proportion of common or non-common attributes but on the dimensions along which those attributes are added to the product. The framework posits that innovations are generated primarily along two major dimensions: symbolism and technology. She argued that the source of innovation influences the properties of the innovation and the principles by which it diffuses. An innovation that is symbolic in nature *"is one which communicates a different social meaning than it did previously"* (p. 537). Symbolic innovations are already physically present in the market and they are regarded as innovations because they assume a new social meaning. In other words, the intangible attributes of the product, not the tangible ones, are what makes an innovation to be symbolic. Conversely, an innovation that is technologically new *"possesses some tangible features never previously found in that product class"* (p. 538). While symbolic innovations may have been physically present in the society for a period of time, technological innovations have never existed in their present form prior to creation. The innovations can be classified according to the level of social symbolism and technology. She used this framework to criticise research on adoption, which has concentrated on the adoption of technological innovations and has neglected the adoption of symbolic innovations.

The adoption of innovations is a dynamic process which goes from first hearing about an innovation to its adoption or rejection (Rogers, 1995; Midgley, 1977). Hence time is closely linked with the innovation-decision process. Some individuals may pass through the innovation decision process in a short period of time, while for others this process may be lengthy. However, despite the importance of time in the study of adoption of innovations, most studies are static and do not make any attempt at studying the process over time (Rogers, 1995; Midgley, 1977; Rogers and Shoemaker, 1971). The few longitudinal studies conducted include Midgley and Dowling's (1993) study on the relationship between innovativeness and social messages.

As an external input to the adoption process, the *marketing of the innovation* exerts a strong influence on the adoption process (Gatignon and Robertson, 1991; Robertson, 1971). The marketing activities are related to issues such as price, product, placement and promotion of the innovation (Kotler et al., 1998). Yet, this has been a largely forgotten area in the adoption of innovations literature (Gatignon and Robertson, 1991; Frambach et al., 1998). Moreover, the little research focusing on marketing has been developed within an organisational context rather than a consumer context.

Implicit in past research is a monopolistic marketing activity, with a single change agent involved (Gatignon and Robertson, 1991). However, innovations diffuse within a competitive environment whereby multiple suppliers provide the same innovation with differentiated products or brands. One of the consequences of a highly competitive environment is that (Gatignon and Robertson, 1991, p. 341)

> *"additional resources [are] devoted to [the] communication of the innovation, [which] improve consumer knowledge about the product and, therefore, help [to] develop the market potential and enhance the speed with which this potential is realised".*

Competing activities influence adoption notably when there are network externalities involved. Network externalities occur when the adoption of an innovation depends (positively) on the extent to which prior adoption by other individuals has occurred (Gatignon and Robertson, 1991).

2.7.3.3. Innovation resistance

One of the strongest criticisms of the adoption of innovations model is its pro-change or pro-innovation bias (Rogers, 1995; Ram, 1987; Leonard-Barton, 1985; Sheth, 1981). These authors argue that this is confirmed by the over–study of innovators and early adopters as opposed to followers or late adopters, in the emphasis on developing communication and other strategies to facilitate the process of adoption, in the utilisation of early adopters as change agents and in labelling the non-adopters or late adopters as people somewhat behind the times. The pro-innovation bias, as Rogers (1995) points out:

> *"is the implication in [adoption] research that an innovation should be adopted by all members of a social system, that it should be [adopted] more rapidly and that the innovation*

> *should be neither re-invented nor rejected. Seldom is the pro-innovation bias straightforwardly stated in [adoption] publications. Rather, the bias is assumed and implied" (p. 100).*

The pro-innovation/pro-change bias has led researchers not only to ignore the study of ignorance about innovations, but also to under-emphasise the rejection and discontinuance of innovations (Rogers, 1995). In light of this criticism, a few researchers have attempted to address innovation resistance (Szmigin and Foxall, 1998; Ram and Sheth, 1989; Ram, 1987; Sheth, 1981). Innovation resistance research postulates that human behaviour is directed to form and sustain habits rather than to innovate. In other words, innovation resistance seems to be the norm rather than the exception.

One early attempt to model innovation resistance was carried out by Sheth (1981). Sheth's model emphasises two psychological constructs as core influences on innovation resistance: habit and the perceived risks associated with innovation adoption, with the first *"being hypothesised as the single most powerful determinant in generating resistance to change"* (p. 275). Based on the two sources of innovation resistance, Sheth developed a typology of innovation resistance:

- *Dual resistance* innovations face very strong resistance from people because they change strong prior habits and yield high risk perceptions.
- *Habit resistance* innovations are low in perceived risk but demand strong changes in existing habits.
- *Risk resistance* innovations face resistance primarily due to the high risk they generate.
- *No resistance* innovations contain neither any risks nor attempt to change existing habits.

Ram and Sheth (1989) proposed a similar model in that the degree of change or discontinuity brought about by the innovation is one of the sources of innovation resistance. However, instead of a very specific source (the perceived risks), the cause is broadened to incorporate the extent to which the innovation conflicts with the consumer's belief structure. Based on the assumption that the degree of resistance is a function of the change it creates and the conflict with prior beliefs, Ram and Sheth (1989) proposed a barrier scheme for innovation resistance. Two types of barriers are identified: functional

barriers (usage barrier, value barrier and risk barrier) and psychological barriers (tradition barrier and image barrier).

Ram's (1987) model is perhaps the most complete one attempting to depict innovation resistance. Ram views innovation resistance as dependent on several factors. First, the perceived innovation characteristics, including Rogers' (1995) scheme as well as other characteristics (e.g. reversibility and perceived risk). Second, the consumer psychological and demographic characteristics. Psychological characteristics include motivation, personality, value orientation and previous innovative experience. Finally, the characteristics of the propagation mechanisms (i.e the communication channels as portrayed by the diffusion of innovations model) also influence the degree of resistance. Both the type (e.g. marketer controlled vs. non-marketer controlled) and the characteristics (e.g. credibility and source similarity) of the propagation mechanisms are postulated to affect the level of innovation resistance.

Despite these theoretical developments, very little empirical research has been conducted from an innovation resistance stance. One of the exceptions is the study by Szmigin and Foxall (1998). Using an unstructured methodology, they attempted to understand usage of various payment methods (credit card, debit card, store cards). One important finding of this study was the demonstration that rejection could be explained by the innovative use given to the 'old' innovation. In fact, the 'old' innovation could perform the same function as the 'new' innovation. Moreover, in certain cases, the 'old' innovation had certain important advantages when compared to the 'new' one. As the authors concluded

> *"those who may appear to be laggards in a particular product area may have very good reasons for so being and their apparent resistance may belie a deeper understanding of how the product works and indeed extensive innovative behaviour" (p. 466)*

2.8. Prescriptive models

Prescriptive models provide guidelines or frameworks to organise how consumer behaviour is structured, including the order in which the elements should appear. These models prescribe certain cause(s) to get a given effect, that is, they concentrate on what to do to get a given result. Examples of prescriptive models include the Theory of Reasoned Action

(Ajzen and Fishbein, 1980) and the Theory of Planned Behaviour (Ajzen, 1988) which, although have not having been specifically developed for studying consumer behaviour, have been widely used for this purpose. The Technology Acceptance Model (Davis, 1989), developed specifically to study user acceptance of information systems, is also prescriptive as it is based on the Theory of Reasoned Action.

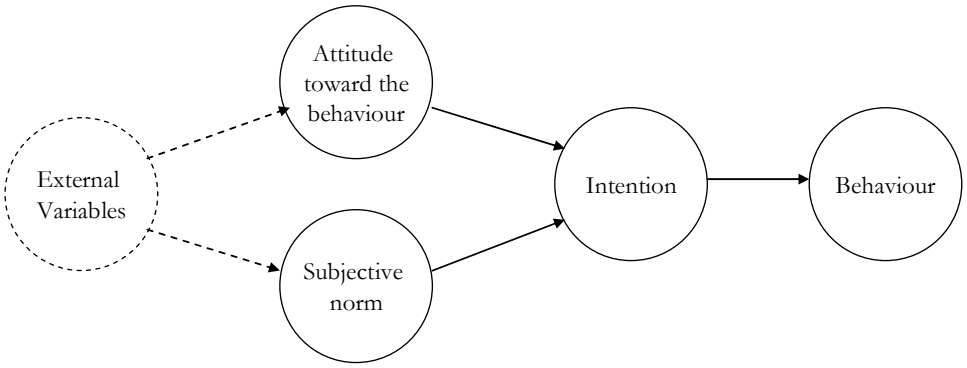
2.8.1. Theories of Reasoned Action (TRA) and Planned Behaviour (TPB)

The Theory of Reasoned Action (Ajzen and Fishbein, 1980) postulates that a person's behaviour is determined by his intention to perform the behaviour (Figure 2.9). Intention is, thus, seen as the best predictor of behaviour. This intention is, in turn, a function of two basic determinants. The first determinant is an individual's attitude toward the behaviour. Attitude is the person's general feeling of favourableness or unfavourableness for that behaviour and is formed based on the person's salient beliefs that the behaviour leads to certain outcomes and the evaluation of the outcomes. In other words, whether the outcome of his behaviour will be positive or negative. The second determinant is subjective norm and is related to the influence of the social environment on intentions and behaviour. More specifically, it refers to the opinions of the person's social environment about him performing the behaviour. The subjective norm is a consequence of the beliefs that specific referents think about whether the individual should, or should not, perform the behaviour, as well as the motivation to comply with these referents. The relative importance of attitudinal and normative components will vary according to the intention under consideration and from one person to another (Ajzen and Fishbein, 1980). However, research suggests that most behaviour is controlled mainly by attitude than by social influence (Cooper and Donald, 2001).

In order to accommodate the influence of variables other than attitude and subjective norm, TRA suggests that additional variables, such as demographics and personality traits, influence intention. However, these variables are regarded as external to the model. According to Ajzen and Fishbein (1980), *"an external variable will have an effect on behaviour only to the extent that it influences the determinants of that behaviour"* (p. 9).

Figure 2. 9: The Theory of Reasoned Action

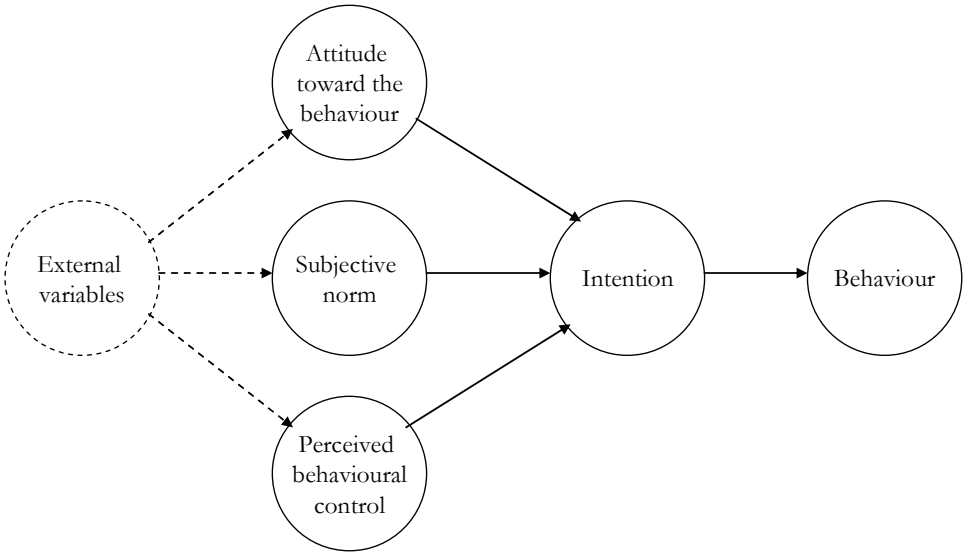
Source: Ajzen and Fishbein, 1980



One of the main criticisms to the TRA was the assumption that behaviour is volitional and under control (Ajzen, 1991). In order to overcome this criticism, Ajzen (1988) put forward the Theory of Planned Behaviour. This theory, shown in Figure 2.10, extends TRA by postulating that a third determinant (Perceived Behavioural Control) influences intention. Perceived Behaviour Control refers to *"perceived ease or difficulty of performing the behaviour"* (Ajzen, 1988; p. 132).

Figure 2. 10: The Theory of Planned Behaviour

Source: Ajzen, 1980



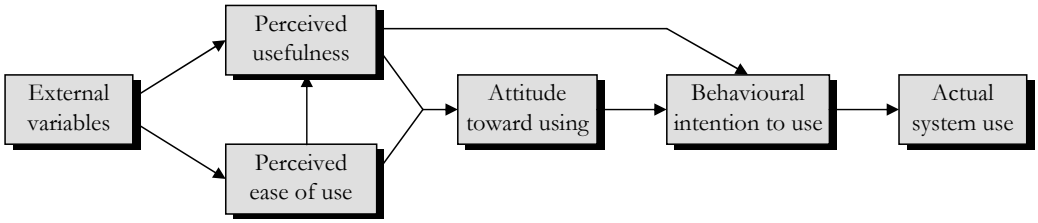
2.8.2. Technology Acceptance Model

The Technology Acceptance Model (TAM) was first introduced by Davis and colleagues (Davis, 1989; Davis et al., 1989) for predicting user acceptance of information systems. Theoretically developed upon Fishbein and Ajzen's TRA,

> *"the goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being parsimonious and theoretically justified"* (Davis et al., 1989, p. 985).

In essence, the model posits that two variables fundamentally determine user acceptance of the technology: perceived usefulness and ease of use (Figure 2.11). Perceived usefulness is the individual's perception that using the information system will improve his/her performance, whereas ease of use refers to the extent to which the individual expects the information system use to be free of effort (Davis, 1989; Davies et al., 1989; Keen et al., 2004). One important difference between the two variables is that usefulness refers to the outcome of using the system whereas ease of use refers to the process leading to the final outcome (Childers et al., 2001).

Figure 2. 11: Technology Acceptance Model (TAM)
Source: Davis et al. (1989)



Similar to TRA, in TAM system usage is determined by behavioural intention. However, behavioural intention is jointly determined by the individual's attitudes towards using the system and perceived usefulness, with the relative weights estimated by regression instead of self-stated evaluation weights (Davis et al., 1989).

The model also postulates that external variables influence internal beliefs, attitudes and intentions (Davies et al., 1989, p. 988). Yet, a recent literature review (Legris et al., 2003) concluded that there is no clear pattern with respect to the choice of the external variables considered.

The first TAM model posited that the two beliefs about using the innovation (ease of use and usefulness) impacted on intention through attitude. In this sense, this is different from Adoption of Innovations model, who postulates that beliefs about the innovation have a direct impact on the decision to adopt the innovation. However, recently Venkatesh and Davis (2000) proposed a revision of the TAM (usually referred to as TAM2) in which the attitude construct is removed so that the beliefs about ease of use and usefulness are viewed as directly influencing intention (George, 2002). Several researchers have accommodated this change (e.g. Horton et al., 2001; Liaw, 2002; Featherman and Pavlou, 2003; Pavlou, 2003; Luarn and Lin, 2005) whereas others still refer to the original model (e.g. Chen et al., 2002; Ho et al., 2003; Chen and Tan, 2004; Bruner II and Kumar, 2005).

TAM was originally put forward and tested to explain user acceptance of information systems within a work environment. However, a few researchers have attempted to suggest changes that would make it suitable for consumer research. One such initiative was the introduction of a third category of beliefs, tapping the hedonic component of the experience: perceived enjoyment or fun (e.g. Childers et al., 2001; Bruner II and Kumar, 2005). Both studies found perceived enjoyment to be a strong predictor of attitudes toward using the technology.

The TAM model has many strengths that make it potentially suitable for studying the adoption of technological innovations. It is a reliable and robust model, with empirical data extensively supporting and validating the theory (Agarwal and Prasad, 1999; Mathieson et al., 2001; Chen et al., 2002; Henderson and Divett, 2003; Legris et al., 2003; Pavlou, 2003; Vijayasarathy, 2004; Bruner II and Kumar, 2005). Moreover, it possesses the theoretical property of parsimony (Agarwal and Prasad, 1999; Mathieson et al., 2001) and is focused on technology-based behaviours (Mathieson et al., 2001).

However, there are some limitations associated with using TAM for studying the adoption of technological innovations in a leisure context. First, most of the research has been conducted within a business environment and studies have used either students or workers

to test the model (Legris et al., 2003). Second, there is an assumption that there are no barriers to prevent an individual from using the system if he or she chose to do so (Agarwal and Prasad, 1999; Mathieson et al., 2001; Oh et al., 2003). Thus, it is assumed that the individual has the resources necessary to use, notably access to the technology. Finally, research suggests that the two sets of beliefs may not be sufficient to predict technology adoption in a leisure context, that is, in a context where usage is volitional (Vijayasarathy, 2004; Legris et al., 2003; Agarwal and Prasad, 1999). The general contention is that a richer set of beliefs, such as those found in the work of Moore and Benbasat (1991), might be more appropriate to predict acceptance.

There is some empirical evidence supporting the claims that usefulness and ease of use are not sufficient to adequately explain adoption of a technology for a leisure activity. Several researchers proposed the inclusion of additional sets of beliefs, which have resulted in more predictive models (e.g. Childers et al., 2001; Featherman and Pavlou, 2003; Chen and Tan, 2004; Bruner II and Kumar, 2005). In addition to perceived enjoyment (e.g. Al-Gahtani and King, 1999; Anandarajan et al., 2002; Liaw, 2002; Hsu and Chiu, 2001), other beliefs include social pressure (e.g. Anandarajan et al., 2002), self-efficacy (e.g. Liaw, 2002; Hsu and Chiu, 2001) and perceived playfulness (Moon and Kim, 2001). Mathieson et al. (2001), proposed the construct of perceived resources which overlaps with Perceived Behavioural Control of TPB. Several researchers incorporated attributes from DAI in TAM, including image (e.g. Al-Gahtani and King, 1999; Venkatesh and Davis, 2000), result demonstrability (Venkatesh and Davis, 2000; Oh et al., 2003), visibility (Oh et al., 2003), compatibility (Al-Gahtani and King, 1999; Oh et al., 2003) and trialability (Oh et al., 2003). Therefore, it can be argued that if the researcher aims to understand the outcomes of the adoption process in a leisure context, the DAI set of beliefs is likely to be more appropriate. Not only are the two basic beliefs of TAM included, but also an array of other beliefs that have been shown to influence adoption.

2.9. Issues emerging from the literature

Consumer behaviour is a complex phenomenon and not surprisingly its study has been approached from different perspectives. Yet, the cognitive approach pervades most of the research on consumer behaviour. This is largely due to the fact that most researchers

accept the idea of a consumer as a rational decision making individual. From the analysis of the different cognitive models of consumer behaviour, several issues emerge. Given that this research aims at developing an analytic model for studying the adoption of e-commerce by consumers, an analysis of the issues emerging from the literature review on models of consumer behaviour serves two purposes. First, it enables the establishment of the main shortcomings of consumer behaviour research for studying the adoption of e-commerce with a view to exploring research opportunities. Second, it provides the basis for identifying a number of concepts that can help to explain the consumers' adoption of electronic commerce in the purchasing of leisure travel. The ultimate goal of both types of analysis is the development of the conceptual framework of the current research.

2.9.1. Scope of the models and innovation interdependence

The models presented in the previous section were not put forward to specifically explain the adoption of a purchasing channel. The Howard and Sheth and EBM models were developed to study the choice of products/brands by consumers. As far as TRA and TPB are concerned, they aim to address all human behaviour, whether related to consumption or not. The TAM, in turn, focuses on explaining user acceptance of information systems. Finally, the adoption of innovations model was developed to help studying how innovations are adopted, either products, ideas or practices.

A further characteristic of all these models is that they were put forward to analyse a single behaviour. Hence, it is not surprising that they fail to incorporate the influence of other behaviours upon the main behaviour. The Howard and Sheth model treats the variables not related to the behaviour being researched as inhibitors, while the EBM model treats them as individual differences. The TRA, TPB and TAM models are based on the premise that the context, action and target of all measures are the same (Fishbein and Ajzen, 1975). Therefore, these models cannot accommodate any variables related to behaviours other than the behaviour they intend to study. For example, if the behaviour being studied is purchasing leisure travel by the means of e-commerce, all the other measures must refer to the purchasing leisure travel by the means of e-commerce. Variables related to the adoption of related behaviours, such as using the Internet, cannot be incorporated as a component of the model. Instead, they must be treated as external variables.

As far as the adoption of innovations is concerned, the model was also developed to study one innovation at a single time. Consequently, as Rogers (1995) outlines:

> *"Past diffusion research has generally investigated each innovation as if it were independent from other innovations" (p. 15)*

However, Rogers (1995) further points out that:

> *"This is a dubious assumption, in that an adopter's experience with one innovation obviously influences that individual's perception of the next innovation to diffuse through the individual's system. In reality, a set of innovations diffusing at about the same time in a system are interdependent. It is much simpler for diffusion scholars to investigate the spread of each innovation as an independent event, but this is a distortion of reality. More scholarly attention should be paid to technology clusters." (p. 15)*

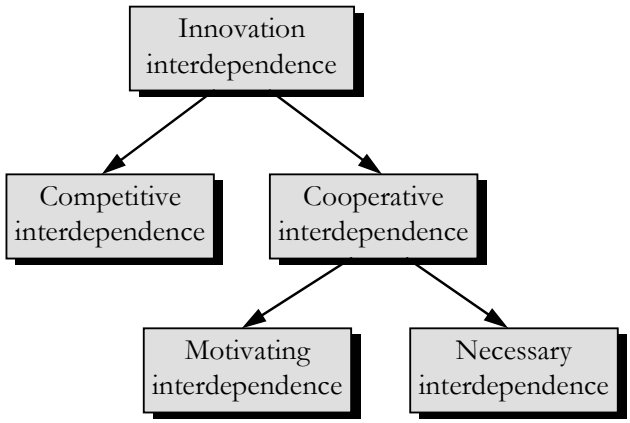
In a similar perspective, Gatignon and Robertson (1991) argue that:

> *"The adoption context is composed not only of substitute products, but also of other interrelated innovations, with interdependent processes of diffusion. Consumer research should analyse the behavioural processes underlying the adoption and diffusion of competing and related innovations". (p. 342)*

If it is a case of innovation interdependence, one basic step is to identify the network of innovations. This network comprises the innovation at the centre of the research (the primary innovation) and those orbiting around the primary innovation (the satellite innovations). Figure 2.12 presents a possible typology of innovation interdependence. As can be observed, innovation interdependence may take one of two forms. Competitive interdependence takes place when two or more innovations cater for a similar need and compete throughout the adoption process. The extent of competitive interdependence is a function of the level of the differentiation that an innovation is able to achieve (Gatignon and Robertson, 1991). If two innovations fulfil the same need, the adoption of one might prevent the adoption of the other. In contrast, in cooperative interdependence two or more innovations cooperate to promote the adoption of each. If this is the case, it can be expected that the adoption of one facilitates the adoption of the other. The extent of cooperative interdependence is a function of the level of an innovation's reliance on other innovations.

Figure 2. 12: A typology of innovation interdependence

Source: author



The typology postulates that there are two forms of cooperative interdependence. Necessary interdependence exists when the adoption of the primary innovation requires the adoption of the satellite innovation(s). In other words, the adoption of the primary innovation cannot take place without the adoption of the satellite innovation(s). Motivating interdependence refers to those cases when the adoption of the primary innovation does not require the adoption of the satellite innovation. Rather, the role of the satellite innovation is to provide an additional motive to the adoption of the primary innovation. This is usually put in practice by adding a new function to an (primary) innovation which already performs other functions.

Within the ICT field, interdependence is certainly an important issue. For example, the extent to which Windows-based computers are adopted influences the extent to which Apple computers are adopted. Hence, if a researcher wants to study the adoption of Apple computers, one important variable to address would be the adoption of other competing innovations, for example, the adoption of Windows-based computers.

Electronic commerce provides a good example of cooperative interdependence among innovations. To purchase over the Internet (primary innovation), an individual must adopt a communications network (the Internet). In turn, to adopt a communications network, an individual must adopt an interface (for example, the computer). Hence, there is a necessary interdependence between the purchasing over the Internet (primary innovation) and the adoption of the computer and the Internet (satellite innovations). Therefore, research

focusing on the adoption of e-commerce (i.e. the purchasing over the computer and the Internet) should endeavour to understand the adoption of the computer and the Internet.

If, for example, the primary innovation was the adoption of the Internet, then there would be a necessary interdependence between the adoption of the Internet and the adoption of the computer. However, there would also be a motivating interdependence between the adoption of the Internet and the adoption of e-commerce. This is because although the adoption of e-commerce is not necessary for the adoption of the Internet, the adoption of the first can motivate the adoption of the latter.

Unlike the decision about buying a product/brand, the choice of a purchasing channel is a means of obtaining those product/brands he/she wants. Therefore, a research model developed to understand the adoption of a purchasing channel needs to incorporate the influence of the behaviour related to the purchasing of the product category under study. Ultimately, the adoption of the purchasing channel may not take place because the individual does not purchase that product category at all. Yet, due to the reasons mentioned earlier in this section, existing consumer behaviour models are not structured to adequately accommodate this influence as they concentrate on a single behaviour.

In summary, any conceptual model developed to study the adoption of a technology mediated purchasing channel, such as the case of electronic commerce, must consider (1) the adoption of the technologies required for using it, as well as (2) the behaviour related to the purchasing and consumption of the product category being studied. Yet, consumer behaviour models, perhaps because they were not developed to study the adoption of purchasing channels, have failed to accommodate the characteristics of purchasing channels. Therefore, this research aims to fill this gap by putting forward a conceptual framework for studying the factors influencing the adoption of electronic commerce that incorporates both the innovation network and the product-category behaviour (the framework is presented in Chapter Five).

2.9.2. Variables influencing consumer behaviour

As mentioned earlier, this research aims to put forward an analytical model for analysing the influences on the adoption of electronic commerce in the purchasing of leisure travel. Having pointed out that the adoption of electronic commerce is influenced by the adoption of related innovations and the purchase behaviour, the next decision that was made was the choice of variables to study each of the specific behaviours. As far as this research is concerned, these variables are related to the outputs and outcomes of the adoption process, rather than to the process of adoption. Descriptive models are not taken into consideration in this analysis because they simply describe how things evolve (the output/outcomes) without explaining which variables influenced that result. The analysis of the analytical and prescriptive models revealed that their components can be separated into four groups (Table 2.1):

- Society and circulation of knowledge
- The characteristics of the individual
- The evaluation of the product
- The characteristics of the object

Most consumer behaviour models recognise that the **social system** in which the individual lives influence his/her consumption decisions. However, while analytic models provide a comprehensive account of these influences (including elements such as the family/household, culture, reference groups, norms and social class), in prescriptive models, notably TRA and TPB, the societal influences are restricted to the subjective norm. This societal influence is not present at all in TAM. As far as the **circulation of knowledge** is concerned, analytic models recognise that, and attempt to explain how, knowledge is shared within the social system. Circulation of knowledge encompasses the variables such as whether the knowledge is acquired from mass media or interpersonal sources (adoption of innovations), or if it is marketing related or not (Howard and Sheth and EBM). Conversely, prescriptive models say nothing about how circulation of knowledge influences consumer behaviour.

Table 2. 1: Variables posited to influence consumer behaviour

(Source: Author)

	Society and Circulation of Knowledge	Characteristics of the Individual	Evaluation of the object	Characteristics of the object
Howard and Sheth	Social Class; Culture; Reference groups	Importance of purchase; Personality; Time pressure; Financial status; Motives; Intention; Purchase behaviour.	Attitudes	Comprehension
Engel, Blackwell and Miniard	Marketing and other Stimuli; Culture; Social Class, Personal Influence; Family.	Lifestyle; Demographics, Consumer Resources; Motivation; Involvement; Personality; Intention Purchase;	Attitude; Satisfaction	Knowledge Beliefs
Adoption of Innovations	Mass media; Interpersonal Channels; Opinion leadership; Norms of the social system; Communication behaviour; Social context.	Previous practice; Felt needs/problems; Innovativeness; Socio-economic Personality; Resources; Decision; Implementation; Confirmation	Attitude	Knowledge
Theory of Reasoned Action	Subjective norm	Demographics; Personality; Intention; Behaviour	Attitude	Beliefs
Theory of Planned Behaviour	Subjective norm	Demographics; Personality; Perceived behavioural control; Intention; Behaviour.	Attitude	Beliefs
Technology Acceptance Model		Intention; Behaviour	Usefulness; Ease of use; Attitude	

The models of consumer behaviour also posit that the **characteristics of the individual** influence his/her behaviour. These characteristics include personality (Howard and Sheth, EBM, Rogers, TRA/TPB), resources such as time and money (Howard and Sheth, EBM, Adoption of innovations), lifestyle (EBM) and socio-demographics (EBM, Adoption of innovations, TRA/TPB). In addition, both the Howard and Sheth and the EBM models postulate that motivation and involvement are important consumer characteristics that influence consumer behaviour. To the extent that motives are linked to needs, the Adoption of Innovations model also includes motives but under the name of felt needs/problems. However, this model does not include a measure of the intensity of motives, such as involvement. Neither motives nor involvement are a component of the TRA and related models. Finally, the adoption of innovations model is the only one clearly suggesting that previous practice/experience influences an individual's behaviour.

Both analytic and prescriptive models include variables related to the **evaluation of the object** of research. Central in the analysis of the evaluation of the object are attitudes, a concept included in every model. Some models include further variables to evaluate the object. This is the case of the Howard and Sheth and the EBM models which include the concept of satisfaction.

Finally, the models also postulate that the **characteristics of the object** influence behaviour. These characteristics refer to the features of the object, such as their purpose, function and physical characteristics. Consumer behaviour models have covered the characteristics of the object under comprehension (Howard and Sheth), beliefs (EBM, TRA, TPB) and knowledge (EBM, Adoption of Innovations). Some examples might illustrate the distinction between the characteristics of the object from its evaluation. Using computers as an example, the characteristics of the object would be, for example, describing a computer in terms of its physical aspect, such as colour and shape, or the functions it can perform, such as storing information and writing texts. The evaluation of computers would be to provide an evaluation of those characteristics, such as whether computers aesthetically attractive machines or whether they are a way of writing neat texts.

In summary, there are several variables common to all the models. However, some models are more restrictive than others in the range and type of variables they encompass. Analytic models tend to emphasise more variables and variables pertaining to the four categories (society and circulation of knowledge, consumer characteristics, evaluation of the object

and the characteristics of the object), whereas prescriptive models emphasise only a little number of variables and mainly related to the characteristics and evaluation of the object.

2.10. Summary

This chapter has reviewed the concepts of consumer behaviour and its evolution over time, as well as the theoretical underpinnings of the main streams of research. Consumer behaviour is the study of the individual's activities related to evaluating, purchasing, consuming and disposing of products. Two main streams of research influencing the study of consumer behaviour can be found: behaviouristic and cognitive. However, the cognitive approach, which assumes a rational consumer who deliberately makes decisions, has gained prominence and was adopted in this research.

Next, the review moved on to analyse several cognitive consumer behaviour models. Three types of cognitive models were presented: descriptive, analytic and prescriptive. Descriptive models attempt to describe a consumption phenomenon, while analytic models provide the elements that might explain/understand a given consumption behaviour. Prescriptive models, on the other hand, provide not only the variables likely to influence consumer behaviour but also the relationships between the elements and order in which the elements should appear. The descriptive model presented was the S-curve. Two comprehensive analytical models, the Howard and Sheth and the Engel, Blackwell and Miniard (EBM), and one specific to innovations, the Adoption of innovations, were presented. As far as the prescriptive models is concerned, TRA and two of its derivates (TPB and TAM) were described.

Both the Howard and Seth and the EBM were put forward to study all types of consumer behaviour from first purchases to repeat buying. Conversely, the adoption of innovations model attempts to explain innovative behaviour, that is, how and why consumers make use of innovations. The theory of innovation resistance is an alternative view to the theory of diffusion and adoption of innovations. One assumption of adoption research is that all innovations are good for the consumer and are improvements over existing product substitutes. Conversely, the basic assumption of innovation resistance research is that

consumer resistance is a natural response to change. However, this perspective has not gained prominence in research on adoption of innovations.

One of the main shortcomings of innovation research is the de-contextualisation of the adoption process. The adoption of one innovation is often dependent on the adoption of other innovations. This is the case of purchasing channels that require the use of innovative technologies, such as electronic commerce, since its adoption is dependent on the adoption of two other innovations: the computer and the Internet. In addition, bearing in mind that the usage of a purchasing channel is closely related to the purchasing of the product, research on adoption of electronic commerce should take into account the consumption patterns of the product category under study. However, existing models of consumer behaviour were put forward to study a single behaviour. They treat the variables not related to the main behaviour of research as inhibitors, external variables or individual characteristics. As a consequence, they fail to provide an appropriate representation for explaining the adoption of electronic commerce. In order to fill this void in the literature, the conceptual model of this research postulates that the adoption of electronic commerce is influenced by four main variables: the adoption of computers, the adoption of the Internet, the adoption of purchasing over the computer and the Internet and the consumption behaviour related to the product category.

The last section of this chapter was devoted to the analysis of the type of variables comprising the analytical and prescriptive models. These variables were categorised into four types: society and circulation of knowledge, the characteristics of the individual, the evaluation of the object and the characteristics of the object. It was shown that models have both similar and different variables. Analytic models tend to be more extensive in their account of variables influencing behaviour, encompassing a range of the four types of variables. Conversely, prescriptive models tend to focus on the characteristics and evaluation of the object rather than the societal or individual variables.

Although all the aforementioned variables are potentially important for understanding the adoption of electronic commerce, it is not possible to include all in the conceptual framework. Thus, it is important to select those which are likely to play a more important role. The next chapter describes the variables selected for inclusion in the conceptual model adopted for this research.

3. Consumer behaviour: content of the models

3.1. Introduction

The previous chapter reviewed several models of consumer behaviour, indicating the variables they posit as influencing consumer behaviour. This chapter reviews in detail some of the key variables that may explain why, and in which circumstances, consumers might adopt electronic commerce in the purchasing of leisure travel. These variables were chosen for inclusion in the conceptual framework for their relevance in explaining consumer behaviour. Given that there is usually more than one conceptualisation and operationalisation for each variable, analysing these different perspectives, and how they have been used in previous research, provides a basis for developing the methodology of this research.

The chapter is divided in five parts:

3.1. Introduction;

3.2. Identifies the variables influencing consumer behaviour that were selected for this research;

3.3. Provides an analysis of one variable related to the characteristics of the object, attitude, describing its several conceptualisations, and summarises the research on the perceived innovation attributes, affect and behavioural intention;

3.4. Summarises a range of variables influencing consumer behaviour pertaining to the characteristics of the individual, notably motives, involvement, experience and demographics;

3.5. Provides a summary of the chapter.

3.2. Variables influencing consumer behaviour

For the purposes of this research, two types of variables were selected for inclusion in the conceptual framework: the evaluation of the object and the personal characteristics. As far as the **evaluation of the object** is concerned, this research will study attitudes. Attitude is one of the most researched areas of consumer behaviour mainly because it has been recognised as having a major influence on behaviour (Engel et al, 1995). As Fishbein and Ajzen (1975) noted, attitudes are typically viewed as a latent or underlying variable that is assumed to guide or influence behaviour. In fact, as the previous chapter has shown, attitudes are a component of both analytical and prescriptive consumer behaviour models. Consequently, this study postulates that attitudes towards using computers and the Internet, as well as towards purchasing leisure travel using the computer and the Internet, influence the adoption of electronic commerce in the purchasing of leisure travel.

Four variables will denote the **characteristics of the individual**: motives, involvement, experience and demographics. Although **motives** are not a component of the theory of Diffusion and Adoption of Innovations, they play a central role in many other models of consumer behaviour. For example, for Howard and Sheth (1969) they are regarded as *"the most important of the learning subsystem constructs since they play a central role not only in learning and behaviour but also in regulating the input of information"* (p. 99). In Engel et al.'s (1995) theory they are treated as one of the individual variables that influence the decision process. As far as **involvement** is concerned, both the EBM and Howard and Sheth Models regard it as a key variable in explaining consumer behaviour. Involvement is typically viewed as the degree to which the object characteristics are associated to the needs, values and interests of the individual. However, similar to motives, the diffusion and adoption of innovations model does not explicitly regard involvement as a variable influencing behaviour. **Experience** influences consumer behaviour in many ways, one of which is its potential to influence perceptions. In fact, the cognitive models of consumer behaviour highlight the importance of experience in changing perceptions, usually through the process of evaluating the experience. In addition, experience can not only change perceptions but also the confidence with which attitudes held. Finally, **Demographics** were also gathered and these served two purposes. First, the comparison of the characteristics of the sample with that of the characteristics of the population is made based on the demographic

characteristics. Second, demographics may contribute to the interpretation of some of the findings of the research.

3.3. Evaluation of the object: attitude

The assumption that attitudes could explain social behaviour goes back to the early decades of the 20th century, notably after the work of Thomas and Znaniecki (1918, cited in Ajzen and Fishbein, 1980; p. 13). Since then, there has been much debate on what is an attitude. In order to clarify the multiordinality of the construct (multiordinality refers to several meanings, depending on the level of abstraction), Howard and Sheth (1969) suggested the separation of attitude into two constructs. The constitutive definition denotes the more abstract and hypothetical qualities of attitudes; the operational definition denotes the less abstract and measurable qualities of attitudes.

Most consumer behaviour models tend to posit a similar constitutive definition of attitude. In general, consumer behaviour researchers define attitudes as an overall evaluation of the object (Engel et al, 1995; Rogers, 1995; Loudon and Della Bitta, 1993; Assael, 1992; Fishbein and Ajzen, 1975; Howard and Sheth, 1969). Additionally, attitudes are viewed as predispositions to respond in a particular way toward a specified class of objects (Fishbein and Ajzen, 1975; Kerby, 1975; Rosenberg and Hovland, 1960).

Bearing in mind the constitutive definition of attitudes, it is possible to put forward some general characteristics or properties of attitudes. The acknowledgement of these characteristics enables the researcher to understand how attitudes influence behaviour and how they can be changed. The main characteristics of attitudes are (Aronson et al., 1999; Engel et al, 1995; Loudon and Della Bitta, 1993; Oppenheim, 1992; Howard and Sheth, 1969; Rosenberg and Hovland, 1960):

- Attitudes must have an *object*;
- Attitudes have *direction* (directed towards an object), *strength* (can be favourable or unfavourable) and *intensity* (can be held with differential levels of confidence);
- Attitudes are *learned* since they develop from personal past experiences;

- Attitudes are subject to change and hence they are *dynamic*;
- Attitudes have to be *inferred* as they are predispositions.

Further to the characteristics or properties of attitudes, it is important to understand the functions of attitudes for the individual. Katz (1960) suggested that attitudes perform four important functions for the person who holds them:

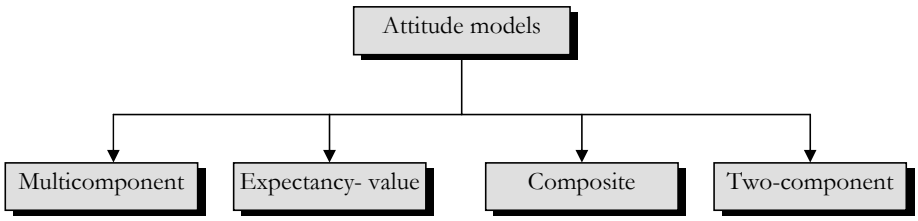
- *Adjustive function*: to the extent that previous experience provides a need-satisfying or unsatisfying experience, attitudes will be adjusted accordingly.
- *Ego-defensive function*.: these are developed to protect the individual's ego or self image from threats, such as the condemnation from peers for having done a mispurchase.
- *Value-expressive function*: enable the individual to express his central values and the type of person he conceives himself to be.
- *Knowledge function*: either by providing meaning to what would otherwise be an unstructured and disorganised world or to serve as an interpretational framework for new knowledge.

3.3.1. Attitude models

If there seems to be some agreement on the constitutive definition of attitude, as well as its characteristics and functions, less agreement exists on the operational definition of attitudes. Since attitudes are an integral part of most consumer behaviour models, consumer behaviour researchers have either endorsed one of the several operational conceptualisations or developed their own operationalisation over time. Four broad attitude operationalisations can be found in the literature: the tripartite (or multi-component) model, the expectancy-value model, the composite model and the two-component model (Figure 3.1). All these models distinguish three basic components: belief, affect and conation. However, they disagree in the relations between these constructs (Bodur et al., 2000), in the names given to each component, as well as at times in the

meaning of each component. A brief presentation of each model is described in this section.

Figure 3. 1: The four operationalisations of attitude
(Source: Author)



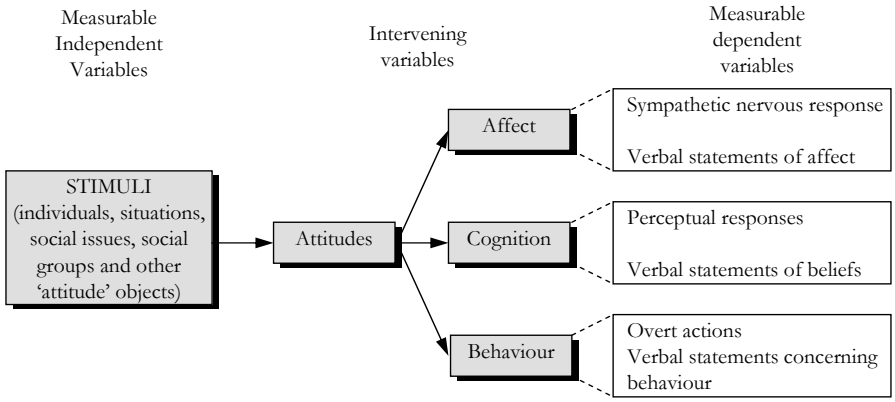
The **multicomponent model** of attitudes is one of the earliest operationalisations of attitude. This view conceptualises attitudes as comprising cognitive, affective and conative elements (Figure 3.2). The cognitive component comprises the beliefs about the object, that is, the characteristics ascribed to it. The beliefs about the object are multidimensional because they represent the attributes of the object perceived by the consumer. The affective component refers to the consumer's overall evaluation of the object. Opposite to the cognitive component, the affective component is one dimensional. It can be operationalised as an evaluation from 'poor' to 'excellent', 'prefer least' to 'prefer most' or 'like the least' to 'like the most'. The third component of attitude, the conative dimension, is the behavioural response and can take the form of overt actions and verbal statements concerning behaviour (Rosenberg and Hovland, 1960).

In the multicomponent view, all three components (cognition, affect, conation) are integral parts of a certain attitude and hence attitudes consist of various degrees of every component. Up to the 1960's this view of attitude was adopted almost universally by researchers (Ajzen and Fishbein, 1980). However, in the 1960's researchers started to criticise this view. The scepticism about the appropriateness of the multicomponent approach was based on the lack of definition as to whether the prediction of behaviour required assessment of all three components or whether it would be sufficient to obtain an index of the conative or behavioural component (Ajzen and Fishbein, 1980). Additionally, the model did not differentiate between overt behaviour and verbal statements concerning

behaviour. Ajzen and Fishbein (1980) also argued that the separate assessment of all three components of attitude was not likely to lead to improved behavioural prediction.

Figure 3. 2: The multicomponent view of attitudes

Source: Rosenberg and Hovland (1960)



An **expectancy-value model** of attitudes was first introduced by Rosenberg (1956), but it was the work by Fishbein and colleagues (Fishbein, 1963; Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980) that made this model one of the most used by researchers. Expectancy-value models postulate that a person's attitude toward the object is a function of his/her beliefs about the object and the implicit evaluative responses associated with those beliefs. In other words, an attitude toward an object will be determined by its need satisfying ability (expectancy) coupled with the importance of the need for which satisfaction is being sought (value) (Kerby, 1975). Only those beliefs that are readily accessible in memory are expected to influence attitude toward an object (Fishbein and Ajzen, 1975).

Fishbein's expectancy value model argues for a centrality of beliefs in determining attitude since it posits that attitudes contain only evaluative information (i.e. evaluative beliefs) regarding the object. Unlike the multicomponent model, in the Fishbein model the conative and cognitive components are removed from attitude and are treated as separate concepts that can be related to attitude. This shift was made in order to emphasise the affective component of attitude. Expectancy value models also distinguish between behavioural intentions and actual behaviour, because when dealing with attitudes, the researcher is interested in predispositions. Attitudes are built upon beliefs (associated with

the consequences of performing a given behaviour), whereas behavioural intentions are a function of attitudes.

During the 1960s another model of attitudes was introduced. In general, the **composite model** of attitude resembles that of expectancy value, but the valence of each evaluative belief is not regarded as necessary. Two different composite models can be identified, one suggested by Rogers (1962) and the other by Howard and Sheth (1969). The composite model was initially put forward by Rogers (1962) within the theory of Diffusion and Adoption of Innovations. Attitude was defined as *"a relatively enduring organisation of an individual's beliefs about an object that predisposes his or her actions*" (Rogers, 1995; p. 168). Based on a review of the literature, Rogers (1962, 1995) suggested that the attitude towards an innovation could be assessed by the subjective evaluation of that innovation in terms of five important characteristics: relative advantage, compatibility, complexity, trialability and observability. This subjective evaluation is posited to contain the affective elements associated to the object.

Another composite model of attitude was put forward by Howard and Sheth (1969). They defined attitude (toward a brand) as

> *"the verbal expression of consumer's evaluation of a brand or service on a set of bipolar scales defined in terms of the brand's potential to satisfy the buyer's motives that are relevant to the purchase of this product class" (p.62).*

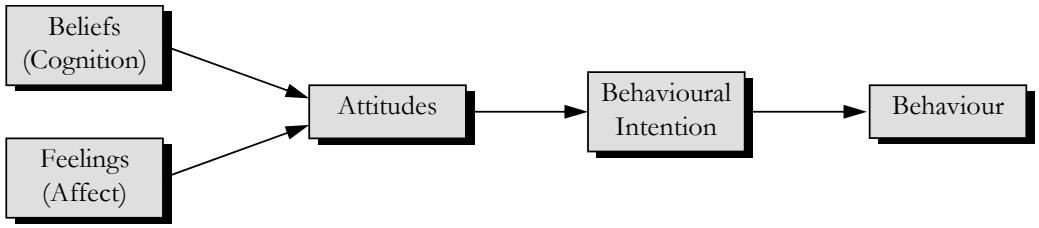
Two main assumptions are present in this definition. First, because only salient motives are included in the evaluation (i.e. attitude), weighting is considered unnecessary. Second, only the cognitive elements (knowledge) of the brand that are perceived as satisfying motives are used for evaluative purposes and hence only these are regarded as forming attitude. All the other cognitive elements are treated as brand comprehension. Additionally, brand ambiguity, which refers to the confidence with which the evaluation is held, also influences attitude. The general rule is that the less ambiguous is the meaning of the brand to the buyer, the more likely it is to be purchased (if the attitude is positive) or not purchased (if the attitude is negative).

Both the expectancy value and composite models argue for a centrality of beliefs, which is postulated to mediate the effects of affect on attitude. In these models feelings are implicit in attitudes since in this evaluation of the attitudinal object the individual also generates

feelings that are evaluative in nature. Hence, affect is not only assigned a more subordinate theoretical role (Cohen and Areni, 1991), but is also postulated to be a post-information processing (post-cognitive) outcome (Erevelles, 1998).

However, the past two decades have seen many researchers (e.g. Agarwal and Malhotra, 2005; Babin et al., 2004; Bodur et al., 2000; Desai and Mahajan, 1998; Cohen and Areni, 1991; Zana and Rempel, 1988) arguing that feelings, in addition to beliefs, also influence attitude. The **two-component model** of attitudes suggests that affect has a direct effect in determining attitudes beyond the effect of cognition (Bodur et al., 2000). Under the two-component model, attitude is defined as a summarised evaluative judgement (Agarwal and Malhotra, 2005; Cohen and Areni, 1991), such as whether performing the behaviour is good or bad, and is distinguished from its components, with each component being related to attitude (Engel et al., 1995). Attitude is determined by both the cognitive component (beliefs) and the affective component (feelings such as insecure, entertained and anxious). Figure 3.3 depicts the two-component model of attitudes.

Figure 3. 3: The two-component model of attitude
(Source: Engel et al., 1995)



As this research adopted the multicomponent model of attitude the next three sections review the research on perceived innovation attributes, affective feelings and intention (the choice of this model is explained in Chapter 5, Section 5.4.7). These three components were used in the current research with reference to the cognitive, affective and conative components of attitude, respectively.

3.3.2. Research on perceived innovation characteristics

The aim of innovation characteristic research within the diffusion of innovations theory is *'to describe the relationship between the attributes or characteristics of an innovation and the adoption and implementation of that innovation'* (Tornatzky and Klein, 1982; p. 721).

Many researchers suggest that the perceived characteristics of an innovation affect the adoption of that innovation (e.g. Gatignon and Robertson, 1991; Rogers, 1995). Graham's (1956) study was one of the earliest to demonstrate this relationship. Ostlund (1974) and Labay and Kinnear (1981) reinforced the importance of studying innovation attributes by arguing that perceptual variables are influential in determining purchase behaviour and are likely to function better than demographics in predicting innovative behaviour. The meta-analytical study by Tornatzky and Klein (1982) concluded that the perceived innovation attributes were consistently the most important predictors of adoption.

Despite the importance of the perceptions of innovation characteristics in the study of diffusion and adoption, over the years several researchers have pointed out that this field has been little studied (Rogers, 1995; Gatignon and Robertson, 1991; Lancaster and Taylor, 1986; Tornatzky and Klein, 1982). As Rogers (1995) outlines, "*much effort has been expended in studying 'people' differences in innovativeness and how little effort has been devoted to analysing 'innovation' differences (that is, in investigating how the properties of the innovation affect the rate of adoption)"* (p. 204). Not only is there a lack of research on perceived innovation characteristics, but most of the research that exists concentrates on organisations as the adopting unit.

The problems and difficulties in studying the influence of innovation attributes in diffusion and adoption have been outlined by a number of authors. Some of main difficulties in designing innovation characteristics studies are (Fliegel and Kivlin, 1966):

- Determining which aspects or attributes of innovations might be relevant;
- Measuring the selected attributes of innovations;
- Working out a method for considering the effects of each attribute in the context of other relevant attributes, since presumably no single attribute completely describes a given innovation.

Ostlund (1974) stressed another difficulty faced by perception studies within the diffusion and adoption of innovation - perceptions gathered after adoption are likely to be contaminated by whatever post-decision dissonance may exist; prior questioning (when possible) can stimulate adoption, which is more likely to happen with inexpensive, easily adopted innovations.

One area that has received great attention from researchers in the measurement of perceived innovation attributes. Rogers (1962), following a thorough review of studies on the attributes of innovations, concluded that there would be a set of perceived characteristics of innovations, not a single one, which would have impact on the rate of adoption. He identified five characteristics, empirically interrelated, but conceptually distinct: relative advantage, compatibility, complexity, trialability and observability. In the Tornatzky and Klein (1982) meta-analysis, almost half of the studies analysed used Rogers' framework as the principal source. These five characteristics have been shown to explain between 49 and 87 percent of the variance in the rate of adoption (Rogers, 1995). However, it has been argued that this is an oversimplification when applied to specific innovations (Lowrey, 1991). Rogers himself recognises this limitation, but argues that the desire for maximum generality and succinctness, and past writing and research, justifies the existence of such a typology.

Other authors extended Rogers' framework and outlined the importance of other innovation characteristics, such as initial and continuing costs (Fliegel and Kivlin, 1966), pervasiveness (Fliegel and Kivlin, 1966), perceived risk (Ostlund, 1974), Image (Moore and Benbasat, 1991), voluntariness of use (Moore and Benbasat, 1991) and result demonstrability (Moore and Benbasat, 1991). In their review of innovation characteristic studies, Tornatsky and Klein (1982) identified 30 different characteristics, *"a fact that raises serious questions about the independence of these dimensions"* (p. 33). In fact, sometimes authors refer to the same characteristic although through the use of different names (for example, complexity and ease of use). In other instances, they simply disaggregate one major innovation characteristic into two or more characteristics. For example, Fliegel and Kivlin (1966) used 'saving of time' and 'saving of discomfort' as perceived innovation characteristics but it can be argued that they are elements of 'relative advantage'.

This extension of the attribute set is in line with Rogers' (1995) recommendation that if the researcher believes that they are not the five most important perceived innovation

characteristics for a particular set of respondents, an elicitation of the main attributes of the innovation from the respondents prior to their measurement should be conducted. However, with few exceptions (e.g. Lowrey, 1991; Black et al., 2001), the selection of the relevant innovation attributes has been based on secondary data, past research and the intuition of the researcher, rather than being based on the elicitation from respondents.

The remainder of this section is devoted to reviewing the five innovation attributes put forward by Rogers (1995). In addition, two additional attributes – perceived risk and image – are also reviewed, as past literature suggests that these can also contribute to explaining the adoption of computer-based innovations, including e-commerce. The focus will be on how these attributes have been conceptualised and operationalised.

Relative advantage refers to the degree to which an innovation is perceived as better than the idea that it supersedes. In the field of Information Systems, researchers refer to it as perceived usefulness (Davis, 1989). It is postulated that the higher the degree of relative advantage, the greater the probability of the innovation to be adopted. Many researchers have used multiple and very specific measures of relative advantage, such as time (Plouffe et al., 2001; Verhoef and Langerak, 2001; Ostlund, 1974) and quality (Plouffe et al., 2001) and money (Ostlund, 1974). However, some researchers (e.g. Strutton et al., 1994) complemented specific descriptors with general ones (overall superiority).

Compatibility is the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of the receivers. Rogers (1995) argued that compatibility is important to adoption due its association with uncertainty: an idea that is more compatible is less uncertain and fits more closely with the individual's life situation. Hence, the higher the compatibility, the higher the probability of adoption. Besides existing values (Strutton et al., 1994) and past experiences (Strutton et al., 1994), other specific types of compatibility used by previous research include compatibility with current habits (Strutton et al., 1994; Ostlund, 1974), with preferences (Plouffe et al., 2001) and with self-image (Ostlund, 1974).

Complexity refers to the degree to which an innovation is perceived as relatively difficult to understand and use. This involves classifying the innovation along a complexity-simplicity continuum (Rogers, 1995). Davies (1989) refers to this continuum as 'perceived ease of use'. It is postulated that the complexity is negatively related to the innovation's rate

of adoption. Some researchers opted for general statements regarding complexity of understanding and use (e.g. Strutton et al., 1994), whereas others adopted a more contextualised approach drawing from the specific characteristics of the innovation they were studying (e.g. Verhoef and Lagerak, 2001). While most researchers tended to focus on the complexity of usage (Verhoef and Lagerak, 2001; Strutton et al., 1994), some (e.g. Plouffe et al., 2001) also explored how complex was the learning required to use the innovation.

Trialability captures the perception about the extent to which an innovation may be used on a limited basis. Usually the trial experience involves none or minimum commitment on the part of the adopter. Trialability of innovation is important because individuals may not be ready to adopt the innovation without evaluating it based on their own experience. In general, the trialability of an innovation and its rate of adoption are positively related. Operationalisations of trialability include items concerning trial of the innovation before purchase (e.g. Plouffe et al., 2001), ability to reverse to the previous status (e.g. Strutton et al., 1994), and opportunity to try the innovation is several contexts (e.g. Plouffe et al., 2001).

Rogers (1995) defines **observability** as the degree to which the results of an innovation are visible to others. However, Moore and Benbasat (1991) argue that observability was too broad a concept. They suggested it would be a better option to split the construct into two. Result demonstrability captures the tangibility of the results and the extent to which they can be communicated to others, whereas visibility refers to the extent to which the individual can see an innovation. One major difference between the two is that result demonstrability refers to the opportunity to communicate aspects of the innovation to others (outflux of information), whereas visibility refers to the opportunity to see others using the innovation (influx of information). The general contention is that the higher the demonstrability of the results and the visibility of the innovation, the greater the likelihood of an innovation to be adopted. Studies including observability tend to focus on result demonstrability, notably on the extent to which the results of using the innovation are apparent and communicable to others (e.g. Plouffe et al., 2001; Strutton et al., 1994). Visibility, on the other hand, has been operationalised through asking respondents to indicate whether they have seen the innovations being used (e.g. Ho et al., 2003; Agarval and Prasad, 1997).

Perceived risk, defined as the degree to which risks are perceived as associated with the innovation (Ostlund, 1974), is likely to be present in any adoption situation (Robertson, 1967). Studies on the adoption of innovations (e.g. Labay and Kinnear, 1981, Ostlund, 1974; Eastlick and Lotz, 1999) have shown a negative relationship between perceived risk and rate of adoption. Researchers have usually operationalised risk in terms of the specific risks that an innovation entails. There is some agreement that there are four broad types of risk (Ostlund, 1974; Labay and Kinnear, 1981; Lunsford and Burnett, 1992): physical, financial, social and functional (or performance).

Image represents the degree to which an individual believes than an innovation will bestow them with higher social approval among their relevant community (Plouffe et al., 2001). Some researchers (e.g. Rogers, 1995) subsume the social benefits associated to an innovation under relative advantage. However, others (e.g. Tornatsky and Klein, 1982; Moore and Benbasat, 1991; Plouffe et al., 2001) argue for the inclusion of image as an independent attribute because social approval is important and distinct from other constructs. Lunsford and Burnett (1991) stress that image is particularly important in the case of elderly segments, since the self image developed over a lifetime leads consumers to buy only those products consistent with the way they view themselves. Examples of social approval attributes include the individual's prestige, profile and status (Plouffe et al., 2001).

3.3.3. Research on affect

Research on affect was largely ignored until 25 years ago (Cohen and Areni, 1991). However, the past years have seen a considerable growth in interest in the role and effects of affect upon several facets of consumer behaviour. Many factors contribute to this change, with one of the most important being the increasing evidence that people also perform evaluations by monitoring their subjective affective responses (feelings, moods, and emotions) towards the target (Malhotra, 2005). In addition, the development in research methods has also provided researchers with a more solid theoretical ground on which to work. In particular, the development of measurement instruments, one the main barriers outlined by Cohen and Areni (1991), made possible the integration of the affective component into research design.

Zajonc (1980) was one of the earliest to stress that attitude was not necessarily formed by the utility paradigm that the expectancy-value models have embraced. He suggested that affect has primacy (i.e. takes precedence) over cognition in the formation of attitude. Although a more accepted position is that attitude (or overall evaluation) is influenced by affect and cognition, his work was very important in highlighting the importance of affect in attitude.

Hirschman and Holbrook (1982) were among the first to support the view that affect could serve as a primary motivator of consumption behaviour. They proposed the concept of 'hedonic consumption' to differentiate emotions resulting from the purchasing of the product and those associated with the consumption of the product purchased. According to these authors, experiencing emotive stimulation while purchasing may be an important end state for consumers.

Affect is a term used to refer to a valenced feeling state (Cohen and Areni, 1991). Affect can take many forms but moods and emotions are the common affective states researched. Emotions are distinguished from moods because they encompass different levels of intensity and specificity. Emotions are postulated to be more intense and stimulus specific than moods (Cohen and Areni, 1991).

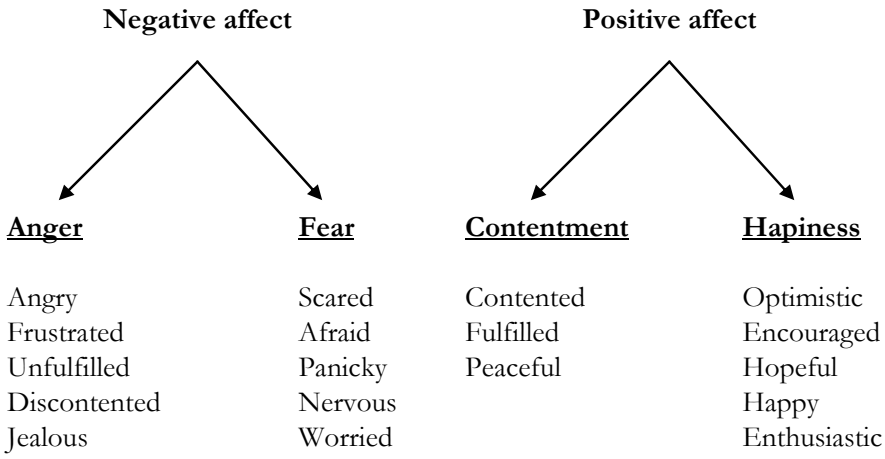
There are several methods for measuring emotions, but they can be grouped in two main categories (Cohen and Areni, 1991). Physiological measures focus on response patterns associated with, for example, the cardiovascular and respiratory systems, the brain wave activity and hemispheric lateralisations and the facial muscle activity. In consumer behaviour, however, researchers have taken an empirical approach (Bagozzi et al., 2002) and centred their attention on measuring affect as subjective experience (Cohen and Areni, 1991). Self-reports of emotions have been carried out using standardised measurement systems, whereby subjects are asked to rate or organise a set of affective adjectives associated to the attitude object (Cohen and Areni, 1991).

Measurement of affect within consumer behaviour has been hampered by a lack of agreement regarding how emotions should be structured. Several authors have supported the view that emotions have an hierarchical structure (e.g. Russell, 1980; Laros and Steenkamp, 2005). Figure 3.4 gives some examples of the hierarchical structure proposed

by Laros and Steenkamp (2005). Others have examined all emotions at the same level of generality.

Figure 3. 4: Hierarchy of consumer emotions

Source: Laros and Steenkamp (2005)



Russell and colleagues (Russell, 1980; Russell and Pratt, 1980) developed a scale to measure affective responses to places or environments. The Circumplex Model of Affect (CMA), one of the most well-developed representations of affect (Cohen and Areni, 1991), postulates that people's reactions to spaces can be located along a two dimensional bipolar space. There are two main affective dimensions - pleasure and arousal – and their combination can represent other affective states. For example, relaxing is a combination of pleasant and sleepy. The CMA has been used in many contexts, including assessing affective images of tourist destinations (e.g. Baloglu and Brinberg, 1997; Vaughan and Edwards, 1999; Baloglu and Mangaloglu, 2001), affective images of universities (Palacio et al, 2002) and affect while shopping at shopping malls (Taylor and Cosenza, 2002).

A researcher attempting to use some of the scales is confronted with long lists of emotions. For example, in Richins (1997) scale development started with a list of 285 words and ended with a scale comprising 47 emotions. Since it is very unlikely that every emotion is relevant for any single behaviour, Richins (1997) suggests that either theory or common sense need to be used to identify those words that are relevant for that context. In this sense, the CMA model has the advantage of simplicity, since the number of emotions is kept manageable while providing a fairly comprehensive account of emotions.

3.3.4. Behavioural intention

Behavioural intention to perform the behaviour has been shown to be an antecedent of the behaviour (Ajzen and Fishbein, 1980). Ajzen and Fishbein (1980) suggested several measures of behavioural intention, but two main approaches to behavioural intention can be identified: one covering the likelihood of performing the behaviour and the other the intention to perform the behaviour. Intention and likelihood are different phenomena. Whereas intention refers to a goal or purpose, likelihood refers to the subjective probability that the behaviour will take place. Intention refers to a predisposition while likelihood can be thought of as resulting not only from that predisposition but from other variables such as the perception of the adequate resources to perform the behaviour. For example, one may answer that one intends to own a Ferrari but say that it is very unlikely that it will happen (perhaps because he does not expect to have financial resources to do it).

3.4. Personal characteristics

3.4.1. Motives

Howard and Sheth (1969) define motives as *"the biogenic or psychogenic needs, wants or desires of the buyer in purchasing and consuming an item in a product class"* (p. 99). Engel et al. (1995) suggest that the term motive refers to the predisposition that arouses and directs behaviour toward certain goals. In other words, motives are the reasons why people perform a given behaviour.

Unlike attitude, which has only directive power, motives have both directive and arousal/energising functions (Engel et al., 1995; Howard and Sheth, 1969). The arousal component refers to the 'push' to behaviour, that is, it activates general tension or restlessness. For example, if an individual decides to travel, he/she will be pushed to purchase the necessary travel components. Since motives are derived from needs, the higher the intensity of the felt need the higher the likelihood of the individual to engage in action to satisfy the need. The directive aspect refers to the focus of such aroused energy

toward some goal-object, that is, the purchasing channel or channels that the individual perceives as potentially satisfying his/her needs.

Motives influence behaviour in four important ways (Engel et al., 1995; Assael, 1992; Howard and Sheth, 1969):

- Motives influence consumers to develop and identify their basic strivings, that is, the desired end states (i.e. terminal values) they seek to achieve;
- Motives serve to identify goal objects, since consumers usually see products or services as a means of satisfying their motives;
- Motives affect the evaluative criteria used to evaluate the object;
- Because motives affect choice criteria, they exert an influence on attitude.

In most buying situations more than one motive is operative, that is, more than one need requires satisfaction. Because the entire set of motives cannot usually be fulfilled, a hierarchy of motives (according to their intensity) is established. Motives can be very dynamic because once a purchase activity is completed it will satisfy that motive enough so that it drops to a subordinate position in the hierarchy. Thus, intensity of motives can be viewed in two ways: the absolute intensity of a motive and the motive's weighting relative to other motives (Howard and Sheth, 1969).

3.4.1.1. Classification of motives

In order to organise the great diversity of motives that have been identified in research, researchers have attempted to group them into a more manageable set of general categories (Loudon and Della Bitta, 1993). There seems to be an agreement that motives are associated to needs, either physiological (or biological) or psychological (American Marketing Association, 2004; Howard and Sheth, 1969). Although many researchers believe that some buying behaviour is motivated by the biological needs, the general contention is that learned motives are probably much more important (Howard and Sheth, 1969).

Further to the classification of physiological/psychological motives, the literature has provided other possible structures of motives. Some motives exert a positive influence in that they attract consumers towards a desired goal (approach motives) while others direct consumers away from undesirable consequences (avoidance motives) (Loudon and Della Bitta, 1993; Howard and Sheth, 1969). Motives can also fulfil a functional or hedonic need (Loudon and Della Bitta, 1993). Functional motives express the usefulness in meeting certain utilitarian needs whereas hedonic motives focus on the experiential aspects of consumption.

Another possible classification of motives is according to whether the motive is linked to personal or object factors (Loudon and Della Bitta, 1993). When asked about motives to perform a behaviour, an individual may think of the characteristics or properties of the object as their actual goal, without realising that they actually represent ways of satisfying motives. Others may refer to their preferences, habits, behaviours, lifestyles and lifecycle, which are motives associated to personal factors.

3.4.1.2. The means-end theory

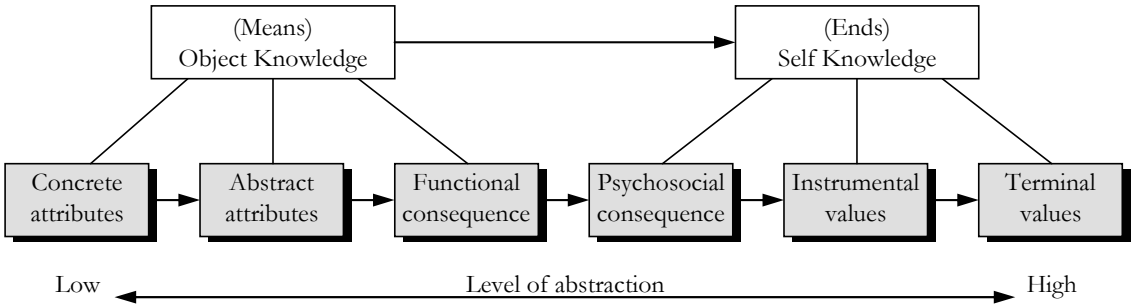
Means-end theory is based on expectancy-value theory (Gutman, 1997; Gutman, 1982) and aims to address the relationship between product attributes and purchase motives. It is a framework for understanding the associations that groups of consumers make between a product's attributes and more personally relevant and abstract consequences and values (Leppard et al, 2004; Fotopoulos, 2003; Nielsen et al, 1998). The MEC theory treats all the abstraction levels in the motivational chain up to needs as motives. These motives are then divided into attributes, consequences and values. This MEC is similar to that of Howard and Sheth (1969), but their three levels of motives are more ambiguous. They referred to them as 'very general motives', 'general motives' and 'less general motives'.

In an attempt to refine the structure of Gutman's model, the attributes, consequences and values were each further divided in two levels of abstraction. As Figure 3.5 shows, attributes can be classified as concrete or abstract attributes. Concrete attributes reflect the physical features of the object. Conversely, abstract attributes are more subjective representations of the object characteristics that represent several concrete attributes and

communicate more hedonic motives than concrete attributes (Snelders and Shoormans, 2004). Consequences are abstract meanings that reflect the perceived benefits (or costs) associated with specific attributes and can be classified as functional or psychological. Whereas functional consequences include direct, tangible outcomes derived from the purchase/use of the object, psychosocial consequences include intangible, personal less direct outcomes. Finally, personal values are highly abstract meanings that refer to centrally enduring beliefs (instrumental values) or end-states of existence that customers seek to achieve through their behaviour (terminal values). Attributes and functional consequences compose the object knowledge and form the means. Psychosocial consequences and values are part of the self knowledge and are the ends sought by the behaviour.

Figure 3. 5: Means-end chain model

Source: Thomson and Chen, 1998



MEC research is based upon several assumptions about how consumer behaviour is structured (Gutman, 1982; Manyuiwa and Crawford, 2002):

- The consumption-relevant cognitive structure is organised in terms of chains, which link the perception of concrete product attributes to self-relevant consequences and ultimately the attainment of life values;
- Values, as end states, play a dominant role in guiding choice patterns;
- People cope with a diversity of products that are potential satisfiers of their values by grouping them into sets or classes so as to reduce the complexity of choice;
- Consumers learn to associate particular consequences with particular actions.

The theory has been applied in consumer research, with previous studies focusing on food and drink choice (Fotopoulos et al., 2003; Grunert et al., 2003; Russel et al., 2004; Brunso et al., 2004; Hall et al., 2001, Vannoppen et al., 2002), luxury products (Valette-Florence, 1998) and brand equity (Wansink, 2003). Although not substantially, the theory has been applied in the tourism, hospitality and leisure fields. Specifically, it has been applied to study the motives underlying destination choice (Klenosky, 2002; Klenosky et al., 1993), the decision to visit museums (Jansen-Verbeke and Rekom, 1996) and the satisfaction with a hotel stay (Orsingher and Marzocchi, 2003). Only a few studies concentrated on motives to use purchasing channels. For example, Vannoppen et al. (2002) compared the motives for buying apples through either farm shops or supermarkets.

In evaluating MEC theory, one pattern that emerges is that virtually all the research has concentrated on the understanding of the motives for preferring the object, be it a product, a practice or a person. With a few exceptions (e.g. Zanoli and Naspetti, 2002; Bagozzi and Dabholkar, 2000), little research has been done regarding the 'de-motivation' process. While the 'motivation' process sheds light on the factors influencing the performing of the behaviour, the de-motivation' process enables an understanding of the factors influencing against the performing of that behaviour.

The motives to purchase can be of different nature from the motives to not purchase. For example, in the Zanoli and Naspetti (2002) study, the attributes to consume organic food were associated to the intrinsic characteristics of the product (e.g. quality of the food), whereas the attributes not to consume organic food were related to the extrinsic characteristics (packaging and price). In other words, the motives to perform a behaviour are usually related to perceptual factors, whereas the motives not to perform may or may not be, since they can also be associated to (a lack of) resources.

3.4.2. Involvement

The concept of involvement was put forward in 1947 by the social psychologists Sherif and Cantril. They viewed involvement as the relation between the ego and an object. Later (Sherif and Sherif, 1967) involvement was defined as the centrality of beliefs involved with

an individual. In social psychology, involvement has been used to understand the effect of persuasive communications on attitudes (Park and Mittal, 1985).

In consumer behaviour research, the first reference to the construct occurred in 1958 (Houston and Rothschild, 1978) but it was only adopted in marketing by Krugman in 1965. Researchers soon accepted the relevance of involvement for consumer behaviour to the extent that it became a basic component of some of the most influential consumer behaviour models (e.g. Howard and Sheth; 1969; Engel et al., 1968). Similar to other fields in consumer behaviour literature, there has been much debate about what is involvement. The different ways in which involvement has been conceptualised and consequently operationalised has favoured the continuation of this debate (Laaksonen, 1994; Rothschild, 1984). Laurent and Kapferer (1985) argued that nuances in the meanings of involvement derive from differences in the antecedent conditions producing involvement. Zaichkowsky (1985), on the other hand, suggests that this discussion arises from the different applications of the term involvement, that is, it has been applied to advertisement, products and purchase situations.

3.4.2.1. Approaches to involvement

Recognising the existence of numerous and different definitions of involvement, Laaksonen (1994) conducted an extensive revision of the literature on involvement and found that involvement definitions could be grouped in four broad approaches:

- The **cognitively-based definitions** view involvement as the degree to which the object characteristics are associated to the needs, values and interests of the individual and can be found in studies by O'Cass (2000), Mulvey et al. (1994), Mittal and Lee (1989), Celsi and Olson (1988), Slama and Tashchian (1985) and Zaichkowsky (1985).

- The **individual-state definitions** refer to involvement as *"a motivational state of an individual created by the exposure to a stimulus object within a specific context"* (Laaksonen, 1994: p. 64).

- The **response-based definitions** view involvement as a characteristic of an actualised response (either mental or behavioural) and not as a mediating variable (e.g. Ray, 1973). However, this approach has received strong criticism from many researchers (e.g. Laaksonen, 1994; Park and Mittal, 1985).

- The **pot-pourri** of ideas, which views involvement as a mixture of all previous definitions of involvement (Laaksonen, 1994). As Mittal and Lee (1989) noted, each of the ideas included in the pot-pourri conceptualisation *"has face validity, but taken together, somehow they look disjointed, and therefore, confusing"* (p. 364).

Despite the variety of terms for, and operationalisation of, the concept of involvement, there is a common thread among these definitions: involvement is the overall personal relevance of an object to an individual (Laaksonen, 1994; Mittal and Lee, 1989; Celsi and Olson, 1988).

Several authors endorsed the view that involvement is a composite concept, that is, that there is more than one type of involvement (e.g. Salam et al. 2000; Park and Mittal, 1985; Houston and Rothschild 1978). Houston and Rothschild (1978) suggested that there are three types of involvement: enduring, situational and response. Bloch and Richins (1983) also adopt the view that involvement is a composite concept comprising enduring and situational elements but regard response involvement not as a type of involvement but as an external variable (a consequence of involvement). Salam et al. (2000) and Park and Mittal (1985) suggested the dichotomy cognitive/affective involvement.

Following from the work of Cohen (1983), many authors (O'Cass, 2000; Celsi and Olson, 1988; Park and Mittal, 1985) argued that involvement is an unitarian concept, that is, there is only one type of involvement. Cohen's (1983) perspective is that involvement is a mediating concept that links the sources of personal relevance (i.e. the antecedents) to the behaviours of consumers (i.e consequences). Research has supported the mediating role of involvement in linking antecedents to consequences (e.g. Olsen, 2001; Evrard and Aurier, 1996; Mittal and Lee, 1989).

3.4.2.2. The antecedents and consequences of involvement

Many authors (e.g. Foxall and Maddock, 1998; Day et al., 1995; Zaichkowsky, 1985; Houston and Rothschild, 1978) suggest that three categories of factors (or **antecedents**) affect the level of involvement: personal, product and situational. Others (e.g. Mittal and Lee, 1989) postulate that involvement arises from three categories of values: sign value, hedonic value and utilitarian or performance value. Laurent and Kaprefer (1985) suggest five antecedents: risk importance, risk probability, interest, sign value and hedonic value. In line with Mittal and Lee (1989), they include both sign value and hedonic value as antecedents. However, they neither include the utilitarian value as antecedent nor provide an explanation for leaving this source out.

The **consequences** or responses of involvement refer to how a consumer behaves under different involvement conditions (Loudon and Della Bitta, 1993). These behaviours can be either mental processes or physical actions. Two categories of responses have captured the attention of researchers: (1) the information processing and decision making and (2) the hierarchy of communication effects (Park and Mittal, 1985). The first gave birth to the distinction between low-high involvement in explaining differences in behavioural outcomes and the second leads to a distinction between the learning hierarchy and the low involvement hierarchy.

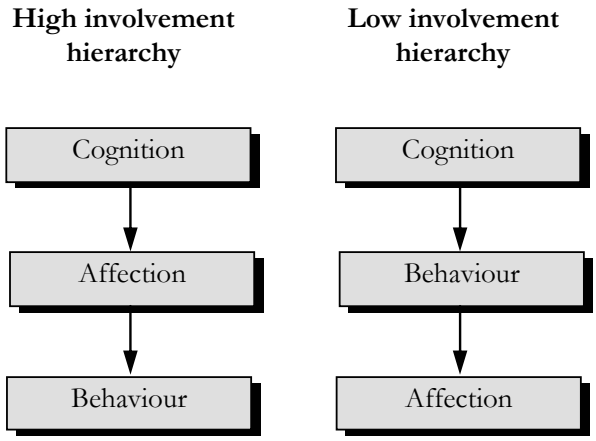
One of the most frequently studied *behavioural responses* is the level of external information search (McColl-Kennedy and Fetter, 2001; Salam et al., 2000; Dholakia, 1998; Smith and Carsky, 1996; Jain and Srinivasan, 1990; Mittal, 1989; Laurent and Kapferer, 1985). Other behavioural outcomes include dissemination of information (Dholakia, 1998), frequency of use of the product (Salam et al., 2000), money spent in the product-category (Flynn and Goldsmith, 1993) and intention to purchase (Beharrell and Denison, 1995). Involvement has also been found to be positively associated with the likelihood of shopping at separate stores for different categories of the product (Smith and Carsky, 1996) and with frequency of shopping (Flynn and Goldsmith, 1993; Traylor and Joseph, 1984).

In addition to behavioural outcomes, the impact of involvement on the *hierarchy of communication effects* has also received attention in the consumer behaviour literature. The debate has concentrated on the impact of involvement not only on the content of each

stage but also on the order of the hierarchy of effects. The basic assumption is that there are two types of hierarchies of effects. Most hierarchies that have been proposed share the common assumption that the consumer is highly involved (Rogers, 1995; Engel et al., 1995; Howard and Sheth, 1969; Lavidge and Steiner, 1961). Yet, an alternative hierarchy of effects was proposed by authors such as Krugman (1965) and Ray (1973) for low involvement conditions.

The high involvement hierarchy (or learning hierarchy) follows the cognition-affect-conation path, whereas low involvement hierarchy the cognition-behaviour-affect path. Hence, the basic assumption is that high involvement occurs when the conative development follows after the affective development, whereas the opposite is true for the low involvement (Laaksonen, 1994). Figure 3.6 displays the two hierarchies according to the level of involvement.

Figure 3. 6: The hierarchy of effects under low and high involvement conditions
Source: Engel et al. (1995)



3.4.2.3. Objects of involvement

When conducting research on involvement it is important to clearly identify the type of goal-object being studied. Table 3.1 provides an overview of the categories of goal-objects focus of involvement research.

Table 3. 1: Goal-objects of involvement

Source: author

Goal-object	Definition	Studies
Product involvement	The self relevance of a product class to the value system	Aldlaigan and Buttle, 2001 Gabbott and Hogg, 1999 Lochshin et al., 1997 O'Cass, 2000 Dholakia, 1997, 2001 Flynn and Goldsmith, 1993 Jain and Srinivasan, 1990 McColl-Kennedy and Fetter, 2001 McQuarrie and Munson, 1992 Laurent and Kapferer, 1985
Product involvement (2)	The perceived relevance of a product class on an ongoing basis	Quester and Lim, 2003 Richins and Bloch, 1986
Consumption involvement	The self relevance of using/consuming the product	O'Cass, 2000 Olsen, 2001
Purchase involvement (1)	The self-relevance of the purchasing activity to the individual	Lochshin et al., 1997 Slama and Taschian, 1985 Smith and Carsky, 1996
Purchase involvement (2)	The self-relevance of the shopping decision	Beharrell and Denison, 1995
Purchase involvement (3)	The self-relevance of purchasing a product	Foxall and Pallister, 1998 Hughes et al., 1998
Purchase involvement (4)	The self-relevance of making the brand selection (casual versus deliberative)	Mittal and Lee, 1989
Purchase decision involvement	The self-relevance of the purchase decision task of the individual	O'Cass, 2000 Mittal, 1989
Brand involvement	The self relevance of purchasing a specific brand	Lochshin et al., 1997
Brand-decision involvement	The self relevance of making a casual rather than a carefull brand selection	Mittal and Lee, 1989
Advertising involvement	The self-relevance of advertising communications	O'Cass, 2000
Involvement with practices	The self-relevance of practices/behaviours	Foxall and Maddock, 1998 (healthy heating) Mulvey et al., 1994; Celsi and Olson, 1988 (playing tennis)
Consumption process involvement	The self-relevance of (all the stages in) the consumprion process	O'Cass, 2000 Bell and Marshal, 2003
Consumer involvement	The self-relevance of purchasing and consumption occasions	O'Cass, 2000
User involvement	The self-relevance of using an information system	Kappelman, 1995
Response involvememt	The self-relevance of adopting a particular attitudinal response	Park and Mittal, 1985

Not only are these categories varied, but there are different definitions for the same term used. Additionally, different terms have been used to refer to the same type of goal-object. As can be further observed, the literature review revealed no studies on involvement with purchasing channels. This category of involvement – purchasing channel involvement – may be defined, in line with Zaickowsky's (1985) definition, as the perceived relevance of a purchasing channel based on inherent needs, values and interests. Hence, consumers are involved with a given purchasing channel when it fulfils their personal needs and values.

3.4.2.4. Measurement of involvement

Bearing in mind the diversity of definitions and the different types of objects to which involvement has been applied, it is not surprising that different instruments for measuring involvement exist. O'Cass (2000), in searching for major instruments of measuring involvement, identified 23 studies proposing scales for measuring involvement. Notwithstanding, he concluded that none of the scales served the purposes of his study and therefore proposed a new scale.

Early measures used single items to measure involvement. However, these measures were criticised because they were simplistic and could not fully capture the level of involvement (Traylor and Joseph, 1984). Composite scales, unlike single measures, would more fully approximate the meaning of involvement. Zaichkowsky's (1985) Personal Involvement Inventory (PII) and Laurent and Kapferer's (1985) Consumer Involvement Profile (CIP) are amongst the most frequently used by consumer behaviour researchers.

Two types of measures can be found in the literature: the unidimensional and the multidimensional. Zaichkowsky's (1985) PII treats involvement as an **unidimensional** construct. The PII comprises 20 bipolar adjectives, each measured on seven point scale, in which the respondent indicates the extent to which he or she perceives the object of involvement as relevant, important, essential and so on. Many authors have highlighted the strengths of this scale (Foxall and Pallister, 1998; Foxall and Maddock, 1998; Smith and Carsky, 1996; Day et al., 1995; Laaksonen, 1994; McQuarrie and Munson, 1992; Jain and Srinivasan, 1990; Zaichkowsky, 1985). First, it is context free and applicable over the range of pertinent stimuli. Second, it is useful for easy comparison of products along a

continuum, extremely reliable and has shown high predictive validity to discriminate across products and situations. Third, it is appealing in its simple structure and provides a convenient and straightforward measure with the capacity to assess involvement consistently with many of other theoretical constructs. Finally, it is rigorously constructed and scientifically tested. However, the PII is not without its critics. Some of the criticisms of the scale are the concerns about attitudinal contamination and its length (Aldlaigan and Buttle, 2001; Foxall and Pallister, 1998; Laaksonen, 1994; McQuarrie and Munson, 1992; Mittal, 1989).

Recognising its potential, and in an attempt to overcome some of the main weaknesses, McQuarrie and Munson (1992) and Zaichkowsky (1994) suggested a considerable reduction in the number of items. The two revised PII have shown to maintain the strengths of the original scale: high reliability levels (although slightly lower than the original scale), highly predictive of a broad range of behavioural outcomes associated with involvement, and able to discriminate felt involvement across several products and situations.

One of the main criticisms to the unidimensional approach to involvement is that it is not sufficient to capture its complexity (McQuarrie and Munson, 1992; Jain and Srinivasan, 1990; Laurent and Kapferer, 1985). The underlying assumption behind the **multidimensional approach** is that involvement should not be reduced to a single dimension, but rather analysed in terms of its multiple facets.

One of the most accepted scales pertaining to the multidimensional approach is that of Laurent and Kapferer (1985). Laurent and Kapferer (1985) identified the following dimensions, or facets, of involvement: the perceived importance of the product, the perceived risk associated with the product purchase (risk importance and probability), the symbolic value and the hedonic value of the product. The main criticism of this scale is that it confounds the level of involvement with the sources of involvement (Laaksonen, 1994; Mittal and Lee, 1989; Park and Mittal, 1985). The Laurent and Kapferer (1985) scale showed good reliability levels, but Aldlaigan and Buttle (2001) reported low Cronbach Alpha values for the facets of 'interest' and 'risk importance'. Overall, the CIP has shown lower reliability than the PII, though most of the times at acceptable levels.

One of the forces driving the development of scales to measure involvement has been the need to find an index of involvement. Finding an index enables the researcher to place consumers along a continuum of involvement. Then, consumers are divided into different levels of involvement, usually two (low and high) or three (low, medium and high) non overlapping groups. In turn, these groups are used either as an independent (most of the time) or as a dependent (less often) variable. However, no studies were found that used the individual items composing each scale as dependent variables. Since each of the items included in the scales are assumed to reflect the different components of involvement (for example, importance and relevance), research could also concentrate on understanding the extent to which consumer perceptions of self-relevance (dependent variables) are associated to other segmentation variables (independent variables).

3.4.3. Experience

The literature suggests that experience influences consumer behaviour in many ways. However, the most frequent influence of experience is upon perceptions. In fact, cognitive models of consumer behaviour (Howard and Sheth 1969; Ajzen and Fishbein, 1980; Engel et al., 1995; Rogers, 1995) highlight the importance of experience in changing perceptions, notably through the process of satisfaction evaluation with the purchase/behaviour.

As Engel et al. (1995) noted, although attitudes can be formed even in the absence of actual experience with an object, attitudes are frequently formed as a result of direct contact with the attitudinal object. A pleasant experience is likely to lead to the development of favourable attitudes toward the product, whereas dissatisfaction with the performance of the product can lead to negative attitudes. Thus, the type, amount and quality of experience available to consumers can strongly influence attitudes (Engel et al, 1995).

Rogers (1995) suggests a further relationship between experience and attitude. He argues that the extent to which the innovation is perceived as consistent with past experiences influences the innovation decision. Thus, past experience can influence the perceptions about the object in two ways. First, past experience can influence the relevant dimensions

of perception. Second, it can influence the specific perception of compatibility with previous experiences.

Experience not only affects the types of attitudes held by individuals but also the confidence with which they are held. Attitudes based on direct experience are usually held with more confidence. Given that the attitude-behaviour relationship should grow stronger when attitudes are based on direct experience than when they are based on 'indirect' experience, the attitudes of consumers who have purchased and consumed a product should prove more predictive of their future purchase behaviours than those lacking such experiences (Engel et al, 1995).

In summary, each of the properties of attitudes (intensity, favourability and confidence) will depend on the nature of a consumer's prior experiences with the attitude object. As the consumer accumulates new experiences, attitudes can change (Engel et al, 1995)

If there has been an agreement that experience affects behaviour through attitudes, there is less agreement about whether experience influences behaviour through other variables. Ajzen and Fishbein (1980) assert that variables external to the theory (such as past experience) are associated with behaviour only because these factors are related to relevant beliefs. This view as been criticised by East (1990), who pointed out that past experience often has an effect which is not mediated by the concepts of the Theory of Reasoned Action. He argued that through experience an individual learns to respond to stimuli and some of this learning may be unconscious and not affect stated intentions. He also added that through learning people learn about their abilities and the opportunities that they have and these may not be fully measured by attitudes and subjective norm.

3.4.4. Demographics

The adoption of innovations model posits that the demographic characteristics of the individual have an influence on the adoption process (Rogers, 1995). Specifically, they can affect the time when the individual receives knowledge about the innovation. Some of the main demographic characteristics include education, gender, income and employment status (Engel et al., 1995; Loudon and Della Bitta, 1993; Assael, 1992).

Howevet, the role of demographics in explaining consumer behaviour is controversial (Loudon and Della Bitta, 1993). Advocates of the use of demographics argue that:

- Buying habits and spending patterns are related with many different demographic variables (Kardes, 1999);
- Demographics are the most widely used consumer descriptors (Assael, 1992);
- Demographic information enables to project the results to the population, as these can be compared and related with the information provided by Census (Loudon and Della Bitta, 1993);
- An understanding of major consumer characteristics, such as demographics, is the starting point for understanding the role of other determinants of consumer behaviour (Engel et al., 1995);
- There is some evidence that demographics are successful in explaining choice at product-class level (Loudon and Della Bitta, 1993);
- Demographics can define some patterns of behaviour, notably because they define not only whether consumers are able to buy (income), but whether they need and want to buy (e.g. age, marital status, household composition) (Assael, 1992).

Yet, there is also strong criticism to the use of demographics in consumer behaviour:

- Empirical evidence suggests that demographics have little power in explaining consumption behaviour, notably at the brand-choice level (Loudon and Della Bitta, 1993);
- The relevance of demographics has diminished over time due to the narrowing differences in terms of some of the main variables, such as income, education and occupational status (Loudon and Della Bitta, 1993);
- Unlike perceptions and attitudes, demographics may be little related to consumer behaviour because they were not defined with the product in mind (Assael, 1992).

The general contention seems to be that, when used alone, demographics explain little about behaviour. In contrast, when used along with other variables, they can provide a valuable contribution in explaining consumer behaviour (Engel et al., 1995; Loudon and Della Bitta, 1993).

3.5. Summary

This chapter has reviewed a number of key variables that influence consumer behaviour. One variable pertaining to the evaluation of the object (attitude) and four variables focusing on the personal characteristics of the individual (motives, involvement, experience and demographics), were analysed.

Attitude has attracted considerable attention to the extent that it is a central component of virtually all cognitive consumer behaviour models. Attitudes are an evaluation of an object and are a predisposition to respond in a particular way toward a particular class of objects. Attitudes have several important characteristics, such as direction and strength, they are learned and because they are predispositions they cannot be observed but rather inferred. There are four main models of attitudes. The multicomponent or tripartite model conceptualises attitude as comprising cognitive, affective and conative elements. The expectancy-value models postulate that attitude consists of a person's beliefs about the object and the implicit evaluative responses associated with those beliefs. Attitude contains only evaluative beliefs and the cognitive and conative models are not treated as attitude but rather as elements that can be related to attitudes. The composite model of attitudes is partially similar to the expectancy-value model. However, the valence of each evaluative belief is not regarded as necessary, because only salient motives are included in the evaluation (i.e. attitude). In both the expectancy-value and the composite models, feelings are postulated to be implicit in attitudes. However, in the bi-dimensional model attitudes are distinguished from affect and cognition. Rather, attitude is postulated to be determined by a combination of both cognition and affect.

Within the adoption of innovations model, the attitudes have been covered by the perceived characteristics of the innovation. There are five main characteristics that influence adoption: relative advantage, complexity, compatibility, observability and

trialability. However, research has shown that additional attributes may also be appropriate for some innovations, such as perceived risk and image. The operationalisation of each perceived characteristic has been diverse because it is highly dependent on the type of innovation being studied.

For many years affect was assigned a more subordinate role in attitudes. However, in the past 25 years there has been a considerable growth in interest in the role and effects of affect upon several facets of consumer behaviour, notably attitudes. Researchers focusing on affect argue that affect is independent of (but related to) cognition. There are two main forms of affect: moods and emotions. The main difference between the two is their intensity and specificity. Emotions are more intense and stimulus specific than moods. There are two main methods for measuring emotions: the physiological and the subjective experience. In consumer behaviour the latter has received preference from researchers. The Circumplex Model of Affect has been one of the frameworks for measuring affect. The central tenet of this framework is that people's reactions to a stimulus object can be located along a two bi-dimensions space consisting of pleasure and arousal. The literature review showed that cognitive evaluations and feelings are different but equally important elements of attitude. However, despite the development of affect research, the models of consumer behaviour, notably the diffusion of innovations, have focused on the cognitive evaluation and have seldom incorporated these developments.

Next, the chapter moved on to analyse four variables related to the personal characteristics of the individual. Motives is one such variable. Motives can be classified according to many criteria such as valence (i.e. positive or negative), physiological/psychological, functional/hedonic and personal/object. In the case of interdependent innovations, motives may also be linked to the primary innovations or to one of the satellite innovations. Moreover, in the case of e-commerce, the motive to use or not to use it may be associated with the purchasing or consumption of the product-category to be purchased. Motives play two main roles in consumer behaviour directive and arousal. More specifically, motives influence behaviour in four important ways: (1) to develop and identify the desired end-states consumer seek to achieve, (2) to identify the goal objects, (3) to influence the evaluative criteria used to evaluate the brands and (4) because they affect choice criteria, to exert an influence on attitude. One of the most well developed motivational chains is that of offered by the Means-end chain. Means-end chains attempt to connect the object knowledge to the self knowledge and distinguish three types of

motives: attributes, consequences and values. The pro-innovation bias has led diffusion of innovations researchers to concentrate mostly on positive motives (the reasons for adoption). However, the motives for non-adoption may be as importance as the motives for adoption.

A second personal characteristic analysed is involvement as it has played a very important role in explaining consumer behaviour. Although there are several interpretations of the concept, there seems to be agreement that involvement refers to the overall personal relevance of an object to the individual. Involvement has been shown to mediate the influence of several other variables in consumer behaviour. Its antecedents are personal, product and situational factors. Involvement influences the behavioural outcomes (e.g. level of information search) and the hierarchy of communication effects. Generally speaking, under low involvement behaviour precedes the affective stage, whereas in the high involvement hierarchy affect precedes behaviour.

The chapter also examined how the experience of the individual can influence behaviour. Research shows that experience plays an important role in shaping other variables, notably attitudes. Finally, this chapter examined the role of demographics in explaining consumer behaviour. There have been praise and criticism in relation to the use demographics in consumer behaviour. In general, there seems to be an agreement that studied alone, demographics add little to the understanding of why consumers behave the way they do. However, when studied together with other variables, they can provide a valuable contribution.

4. Consumer behaviour issues in electronic commerce

4.1. Introduction

This chapter reviews the application of consumer behaviour theory to the study of the adoption of electronic commerce. Past research is examined in order to provide an understanding of the current status of research. The review focuses on the application of consumer behaviour issues to the adoption of e-commerce from an innovation interdependence point of view (see section 2.9.1 for a review of the concept). Consequently, previous research related to the adoption of each of the innovations comprising the innovation network (computers, the Internet and purchasing over the computer and the Internet) is examined. In addition, the chapter highlights the importance of the characteristics of the product category to be purchased, notably leisure travel, as this is the focus of this research.

It should be noted that much of the work presented in this section is contemporary with the work conducted as part of this research. For example, from the nine articles identified as focusing on research regarding the adoption of electronic commerce in the purchasing of travel-related products, six were published after the beginning of the data collection stage. Therefore, the conceptual framework and methodology were developed before the articles, which inform much of this chapter, were published. However, the conceptual and methodological decisions taken remain valid as other recent research did not follow the route of this investigation.

This chapter starts by examining previous research on the adoption of e-commerce from an innovation interdependence point of view. Next, an overview of the research on the adoption of computers and the Internet (the two innovations related to the adoption e-commerce), is reviewed (section 4.3), followed by a presentation of the previous studies on the adoption of purchasing over the Internet (section 4.4). In section 4.5, previous research on the adoption of e-commerce in the purchasing of travel is analysed and in section 4.6 a summary of the chapter is provided.

4.2. Innovation interdependence in the adoption of e-commerce

Using the Internet is a necessary condition for purchasing based on e-commerce and in order to use the Internet an individual must use a computer. Therefore, there is a necessary interdependence between purchasing using e-commerce and using computers and the Internet. Consequently, based on the Innovation Interdependence framework (see section 2.9.1), the study of purchasing using e-commerce can be approached from an innovation interdependence point of view.

Many researchers have recognised the innovation interdependence nature of e-commerce. For example, George (2002) stated that "*as novice users of Internet gain experience, they will make their first Internet purchase, and as they become even more experienced, they can be counted on to purchase more often"* (p. 176). Pavlou (2003) pointed out that *"in contrast to traditional consumer behaviour, online transactions have certain unique dimensions, such as the extensive use of technology for transactions"* (p. 105). Similarly, Efendioglu and Yip (2004) argued that *"the number of Internet users around the world has been steadily growing and this growth has provided the impetus and the opportunities for global and regional e-commerce"* (p. 45).

Given the recognition that the adoption of computers and the Internet are determinants of the adoption of e-commerce, one could expect a large body of research addressing the relationship between e-commerce and its antecedent innovations. However, the review of the literature revealed an under emphasis in research on the adoption of the antecedent innovations of e-commerce. As Pavlou (2003) recently stated, consumer technology acceptance is a relatively under researched area in the consumer behaviour literature.

One of the likely reasons for this state may be the fact that consumer behaviour models have been put forward to explain a single behaviour. In these models, elements that are not directly related to that behaviour are treated as:

- external variables by TRA (Ajzen and Fishbein, 1980), TPB (Ajzen, 1988) and TAM (Davis, 1989);
- inhibitors by the Howard and Sheth (1969) model;

- individual or environmental factors by the Consumer Decision Model (Engel et al., 1995); and

- prior conditions by the Diffusion and Adoption of Innovations (Rogers, 1995).

An additional reason for the lack of focus on the adoption of the antecedent innovations of e-commerce may be the pro-innovation bias pervading research on the adoption of e-commerce. This bias has had many implications for research, such as a tendency to underemphasise the rejection or discontinuance of innovations (Rogers, 1995). Because innovation research has emphasised adoption, it is not surprising that the vast majority of research has focused on the individuals closer to the top of the ladder of adoption. Participants are usually drawn from populations that uses, or have previously used, the Internet and thus it is assumed that these individuals have adopted the Internet. Consequently, because researchers assume the individuals have adopted the Internet, they also assume that individuals have adopted the computer.

Despite the pervading assumption that the adoption of computers and the Internet has taken place, a few studies have attempted to examine the relationship between their adoption and the adoption of e-commerce. At the computer level, these studies have emphasised personal factors such as the access to computers (e.g. Wigand, 1997; Li et al., 1999; Shim et al., 2001), skills in computer use (e.g. Yang and Lester, 2005; Shim et al., 2001), computer training (e.g. Liao and Cheung, 2001) and computer knowledge (e.g. Chang et al., 2005; Yang and Lester, 2005). Additionally, it has been suggested that frequency of computer usage (e.g. Bellman et al., 1999; Chang et al., 2005), number of years of use (e.g. Slyke et al., 2002; Chang et al., 2005) and computer experience (e.g. Worthy et al., 2004) influence the adoption of e-commerce. There are fewer studies examining the relationship between the perceptions of using computers and the adoption of e-commerce. One of the exceptions is the study by Yang and Lester (2005) who looked at the correlation between computer anxiety and attitudes toward computers and the purchasing of textbooks online.

At the Internet level, the variables postulated to be related to the adoption of e-commerce are similar, although it must be recognised that the Internet factors have been more studied than computer factors. The Internet personal variables emphasised as associated to the adoption of e-commerce include access to the Internet (e.g. Wigand, 1997; Shim et al.,

2001; Efendioglu and Yip, 2004; Worthy et al., 2004), Internet skills (e.g. Yang and Lester, 2005), Internet knowledge (e.g. Li et al., 1999; Lee, 2002; George, 2002; Chang et al., 2005; Worthy et al., 2004; Yang and Lester, 2005), frequency of Internet usage (e.g. Bellman et al., 1999; Efendioglu and Yip, 2004; Bellman et al., 1999; Chang et al., 2005), number of years of use (e.g. Bellman et al., 1999; Chang et al., 2005), Internet experience (e.g. Slyke et al., 2002; Worthy et al., 2004), email use (e.g. Bellman et al., 1999; Slyke et al., 2002) and involvement with the Internet (e.g. Goldsmith, 2002). Other researchers (e.g. Bellman, 1999; Kim et al., 2000) found that net-oriented lifestyles are associated with the adoption of e-commerce. At the attitude level, research suggests that attitudes toward the Internet correlate with online purchasing (Bellman et al., 1999; Yang and Lester, 2005). A few studies have examined the perceptions of adequate resources that can facilitate or inhibit behavioural intention to use e-commerce. For example, Shim et al. (2001) included Perceived Behavioural Control in their research model to understand whether or not a person perceived that he/she possesses requisite resources (knowledge about how to use the Internet) and opportunities (access to the Internet) needed to perform the behaviour in question.

A recent literature review on studies focusing on the adoption of e-commerce (Chang et al., 2005) further supports the conclusion that previous studies have neglected the adoption of the antecedent innovations of e-commerce. According to their study, computer/Internet issues have been dealt with as a consumer characteristic and restricted to specific uses of the technologies, knowledge, experience and usage. In general, a significant positive relationship was found between these variables and the adoption of e-commerce.

Although the aforementioned variables (skills, knowledge, access, use) can be related to the adoption of computers/the Internet, they tell little about why people actually adopt or not the antecedent innovations of e-commerce. Therefore, research into the adoption of e-commerce would benefit from an approach that does not isolate the adoption of the antecedent innovations from the adoption of e-commerce, that is, an approach that focuses on the complete innovation adoption network. One way to achieve this goal is by treating the adoption of each innovation (computer, Internet and e-commerce) as individual, but interrelated, phenomena. The next sections review the literature on the adoption of these three innovations.

4.3. Research on the adoption of computers and the Internet

This research approaches the adoption of electronic commerce from an innovation interdependence point of view. This implies the study of the adoption of e-commerce to be made through the study of the innovations that comprise the innovation network. It was mentioned earlier (see section 2.9.1) that the innovation network associated with the adoption of electronic commerce consists of three innovations: computers, the Internet and purchasing over the computer and the Internet. This section focuses on the adoption of the first two. Although in practice the research related to the adoption of computers and the Internet has usually been developed independently, the two are merged in this analysis of past research on the adoption of these two innovations. The main reason behind this decision is the similarity of the theoretical approaches used to study the adoption of both innovations. Research attempting to understand the factors influencing the adoption of the Internet has often resorted to the same theoretical underpinning that has been applied to the study of the adoption of computers and hence by merging the analysis repetition of the literature is minimised.

4.3.1. Models underpinning the adoption of computer-based technologies

Research on the acceptance of computers and the Internet (i.e. computer-based technologies) draws its theoretical underpinnings mainly from two models: Diffusion and Adoption of Innovations (DAI), and the Technology Acceptance Model (TAM).

Given that the **DAI** was put forward to address the diffusion and adoption of technological innovations (Hirschman, 1980) it is not surprising that several studies used this theory as the theoretical underpinning (Agarwal and Prasad, 1997; Chau and Hui, 1998; Danko and MacLachlan, 1983; Goldsmith, 2001; Holak et al., 1987; Karahanna et al., 1999; Moore and Benbasat, 1991; Oh et al., 2003; Parthasarathy and Bhattacherjee, 1998; Venkatesh and Brown, 1998). One set of studies attempted to understand whether innovativeness was related to the adoption of computer-based innovations. Some of these studies approached innovativeness from a temporal approach (e.g. Venkatesh and Brown,

1998; Danko and MacLachlan, 1983), while others from a trait point of view (e.g. Goldsmith, 2001; Chau and Hui, 1998).

Another area of DAI theory that has been applied to computer-based innovations is that of the perceived innovation attributes. Moore and Benbasat (1991) developed an instrument to measure the perceptions about using an information technology innovation. They extended the five attributes suggested by Rogers and incorporated image to the attribute set. Their instrument pervades most of the literature on perceived innovation characteristics and has been used by authors such as Karahanna et al. (1999) and Agarwal and Prasad (1997). Other studies using the perceived innovation attributes to understand the adoption of computer-based innovation include Holak et al. (1987) and Parthasarathy and Bhattacherjee (1998). More recently, Oh et al. (2003) incorporated DAI with the Technology Acceptance Model to understand how beliefs affected general attitudes toward broadband Internet. Compatibility, trialability, visibility and result demonstrability were posited as antecedents of relative advantage (perceived usefulness) and complexity (perceived ease of use).

As was shown in section 2.8.2., the TAM was developed to specifically study the acceptance of information systems. Both computers and the Internet have been the two main information systems used for theory development and testing. Hence, given that the theory was presented in detail section 2.8.2., it would be redundant to conduct a review on the use of TAM to study the adoption of computer-based technologies. However, it is important to outline that the TAM has been the main model used to conduct research on computer and Internet adoption.

The Theory of Reasoned Action (TRA) has not been widely used in the study of adoption of computer-based innovations. This is perhaps due to the fact that researchers have opted for TAM, which is itself derived from TRA. One of the exceptions is the study by Karahanna et al. (1999) about the adoption of an operating system. Similarly, the Theory of Planned Behaviour (TPB) has not gained the preference from researchers. The few exceptions include the study by Klobas and Clyde (2000) about the use of the Internet and the study by Tan and Teo (2000) on the adoption of Internet Banking. More recently Choi et al (2003) combined TPB and DAI to study the adoption of Interactive TV.

In an attempt to identify what leads individuals to make use of computer-based technologies, researchers have identified a number of fundamental determinants of adoption. The next sections examine some of the variables that have been suggested to be related to the adoption of computer-based technologies, notably the computer and the Internet.

4.3.2. Attitude

According to Shaft et al (2004), *"given the pervasiveness of computers in society, it is likely that most individuals have developed some attitudes towards [using] these machines. As such, intentions concerning computer use should also be well developed"* (p. 2-3). Therefore, consistent with the work on consumer behaviour (Howard and Sheth, 1969; Ajzen and Fishbein, 1980, Rogers, 1995), it is not surprising that researchers have recognised that attitudes play a key role in predicting user acceptance of computer-based innovations (Klobas and Clyde, 2000; Liaw, 2002; Garland and Noyes, 2004; Shaft et al, 2004).

Notwithstanding the evidence that supports this relationship, several authors (e.g. Davis et al, 1989; Whitley, 1997; Garland and Noyes, 2004) have pointed out that findings have been mixed and inconclusive, a fact that can be explained by three main reasons. First, the wide array of different attitude measures which have been employed (Shaft et al., 2004). Second, the inconsistency between the behavioural elements and attitude. It is surprising that many studies have failed to comply with Ajzen and Fishbein's (1980) rule regarding the similarity of action, target, context and time between the attitude items, notably in respect of action and target. Several studies (e.g. Garland and Noyes; 2004; Shaft et al., 2004; Whitley, 1996) included a mixture of items about own use of the innovation and items focusing on other actions and targets. Instead of items reflecting attitudes toward the innovation (e.g. computers are smarter than people) or other behaviours such as homes having computers (every home should have a computer), attitude items should measure attitudes towards own usage of that innovation (Moore and Benbasat, 1991). Some of these items resemble those of early measures of attitude, which focused not on usage by the respondents but mainly on the attitudes towards computers in society (e.g. Lee, 1970; Slonneger, 1976; Morrison, 1983). Other studies, however, have made an effort to adjust the measures of attitudes with the measurement of behaviour and both attitude items and

use are related to own use of the computer (e.g. Selwyn, 1997; Al-Gahtani and King, 1999; Venkatesh and Davis, 2000).

A third reason for inconsistency in results between attitude and usage might be the fact that attitudes can only be related to the voluntary use of computers (e.g. Bear et al., 1987; Jones and Clarke, 1995; Karahanna et al., 1999; Garland and Noyes, 2004; Noyes and Garland, 2005). In mandatory settings, researchers should not expect a strong relationship between use and computer attitude. However, a recent review of studies on computer attitudes (Shaft et al, 2004) found that most of the research occurred in potentially mandatory contexts, such as education (students or educators) and business (e.g. managers).

As a consequence, it can be expected that attitude is related to behaviour in contexts where the behaviour is voluntary and attitude and behaviour measure the same action and target.

4.3.2.1. Attitude models

As far as the **attitude models** being employed is concerned (see section 3.3.1 for a review), the literature shows that research has not been confined to the use of a single model. Rather, different approaches to the conceptualisation of attitudes have been used. Kay's (1993) Computer Attitude Measure (CAM) is based on the multicomponent model of attitude (Rosenberg and Hovland, 1960; Triandis, 1971) and Ajzen´s (1988) Theory of Planed Behaviour. This scale identifies four distinct constructs on which to base assessment of computer attitudes: affect, cognition, conation and perceived behavioural control. This scale has been one of the most widely used in research in recent times. For example, Selwyn (1997) proposed a scale based on Kay's (1993) computer attitude scale and TAM, where the cognitive component was tapped by TAM's perceived usefulness belief. Selwyn's scale, in turn, has been adapted by others (e.g. Tsai et al., 2001) to study Internet attitude.

More recently, Liaw (2002) proposed a scale based on TAM and self-efficacy constructs. Self-efficacy and perceived usefulness were regarded as the cognitive component, perceived enjoyment as the affective component and intention to use as the conative component. Shaft et al. (2004) used the multicomponent model to put forward the Attitude Toward

Computers Instrument (ATCI). However, an analysis of the items suggests a less than satisfactory conceptualisation of each of the three components. The cognitive component was covered by the word 'boring' which itself is a measure of an affective state. In addition, the conative component does not consist of behaviours or behavioural manifestations but rather a feeling (enjoyable/frustrating to use) and beliefs (enhance productivity; easy to use).

Advocates of multicomponent conceptualisation argue that this model ensures comprehensive measure of consumers' attitudes toward computers (Selwyn, 1997). In a similar vein, Whitley (1997) argued that the apparent confusing and conflicting findings in the relationship between gender and attitudes is based on the fact that attitudes towards computers are treated as an unitary construct when they should be regarded as multifaceted.

Although TAM is based on TRA, Davis et al. (1989) suggested that, instead of multiplying the beliefs (b_i) by their evaluation weights (e_i), the relative influences of ease of use and usefulness on attitude be statistically estimated using linear regression. The main reason presented for this different approach lies in the fact that *"when the polarity of an outcome is fairly homogeneous across subjects, the corresponding belief tends to be monotonically related to attitudes and statistically estimated weights tend to accurately capture the actual usage of information cues"* (p. 988). Because usefulness and ease of use are expected to be positively valued outcomes for most people, self-weighting is not regarded as necessary. Moreover, in the revised version of the TAM, attitude as an overall evaluation is removed and usefulness and ease of use are postulated to have a direct effect upon intention (e.g. Venkatesh, 2000; Venkatesh and Davis, 2000) or usage (e.g. Amandarajan et al., 2002). Thus, it can be argued that the revised TAM model is a composite model of attitudes.

In addition to TAM based studies, a few researchers used the perceived innovation attributes as postulated by DAI as a measure of attitudes. One of the most influential studies is that by Moore and Benbasat (1991). Other examples of composite-model scales include the scales used by Levine and Donitsa-Schmidt (1998), which was subsequently used by, for example, Garland and Noyes (2004) and the scale by Gressard and Loyd (1986), which were adopted by authors such as Francis et al. (2000) and Smith et al. (2000). Therefore, given the pervasiveness of TAM and, to a lesser extent DAI, in the adoption of

computer-based technologies, the majority of the scales put forward to measure attitude resemble the composite model.

Scales used in computer attitude studies tend to be more focused on business or educational use than leisure use. Conversely, Internet studies have focused not only on business/educational use but also leisure use, perhaps because the development of the Internet was accompanied by its adoption for both uses. The 'bias' of attitude scales towards other than leisure settings has previously been noted. According to Shaft et al. (2004), for researchers in non-educational settings the choices of an attitude scale are less obvious because most of the scales have been developed for educational settings. Another shortcoming of attitude scales, notably those related to computers, is that they are no longer as relevant to today's context (Tsai et al., 2001).

4.3.2.2. Perceived innovation attributes

As was shown earlier, several studies have incorporated perceived innovation characteristics as a variable influencing the adoption of computer-based innovations. There is a large body of research documenting the importance of **relative advantage** (or usefulness) to the adoption of computer-based innovations. For example, Karahanna et al. (1999) found that perceived usefulness is the only belief underlying both attitude toward adoption and continuing use of computers. In a recent review of the literature on TAM studies, Legris et al. (2003) showed that, with very few exceptions, relative advantage has a significant positive relationship with attitude and behavioural intention.

Different approaches to the conceptualisation of relative advantage have been proposed. Venkatesh and Morris (2000) suggested that there are three main categories of advantages: hedonic, utilitarian and social. Eason (1988) proposed a framework for classifying the benefits of ICT for organisations. His framework implies that the organisation is viewed as a collection of resources deployed to handle a specific task. According to the framework, the benefits of ICT can be placed on a continuum from resource reduction to organisational enhancement. There are four major categories of benefits: saving of resources, improved productivity, improved support and organisational enhancement.

This framework has the potential to be used to examine the benefits of adopting computer-based innovations within a leisure context. *Reduction of resources* involves the accomplishment of the same outcome using fewer resources. Resources involved in using a computer technology include the saving of effort, money and time needed to complete the tasks. *Improved productivity* refers to the optimisation of resources. Generally speaking, this type of benefit involves seeking to obtain more using the same resources, that is, to maximise the task outcomes in relation to the required inputs. Whereas the former two categories of benefits relate to the management of resources, and thus refer to more 'quantitative' aspects of using IT, improved support and personal enhancement are associated with more intangible or 'qualitative' benefits. *Improved support* refers to the seeking of new ways of achieving the personal objectives. Finally, *personal enhancement* benefits are related to achieving the more important and abstract personal objectives in life.

Several researchers have focused on the benefits associated with reduction of resources, notably saving of time (e.g. Davis et al., 1989; Al-Gahtani and King, 1999; Agarwal and Prasad, 1999; Oh et al., 2003) and effort (e.g. Oh et al., 2003). Bearing in mind that most of the research on the adoption of computer-based innovations has been developed within an organisational context, it is not surprising that improved productivity is one of the most featured benefits (e.g. Davis et al., 1989; Agarwal and Prasad, 1999; Al-Gahtani and King, 1999; Venkatesh, 2000; Anandarajan et al., 2002; Oh et al., 2003). Measures of improved support usually refer, for example, to improvements in the quality of the work (e.g. Agarwal and Prasad, 1999; Al-Gahtani and King, 1999; Karahanna et al., 1999), improvements in accuracy of information (e.g. Moon and Kim, 2001) and enabling better decisions (e.g. Teo et al., 1999; Teo, 2001) and more imaginative work (Tsai et al., 2001).

As far as **compatibility** is concerned, the few studies that have incorporated this attribute have supported support its importance in explaining adoption and usage of computer-based innovations. For example, Al-Gahtani and King (1999) stated that the most striking aspect of the results of their study was the importance of compatibility. In a similar vein, Agarwal and Prasad (1999) found that compatibility was the most important predictor of usage.

The measures developed by Moore and Benbasat (1991) have been adopted by virtually all researchers incorporating this attribute in their research models (e.g. Agarwal and Prasad, 1999; Al-Gahtani and King, 1999; Oh et al., 2003). The scale includes three items, assessing

the extent to which the innovation (1) fits with work practices, (2) is compatible with all aspects of work and (3) fits with the way the individual likes to work.

As Legris et al (2003) demonstrated, the vast majority of studies on the adoption of technological innovations found a positive relationship between **complexity** (ease of use) and attitude towards, and intention to use computer-based innovations. The instrument developed by Davis et al. (1989) pervades the literature and has been used by several authors such as Agarwal and Prasad (1999), Al-Gahtani and King (1999), Karahanna et al. (1999), Venkatesh (2000), Anandarajan et al. (2002) and Oh et al. (2003).

Other measures of ease of use include the mental effort required (e.g. Agarwal and Prasad, 1998; Al-Gahtani and King, 1999; Venkatesh, 2000; Moon and Kim, 2001), the time that takes to learn (e.g. Moon and Kim, 2001) and how hard it would be to learn without expert help (e.g. Moon and Kim, 2001). Some measures portrayed as measuring ease of use do not appear to do so. For example, several researchers (e.g. Al-Gahtani and King, 1999; Tan and Teo, 2000), following the recommendations of Moore and Benbasat (1991), included one statement regarding how frustrating is using the innovation. Answers to this type of statement may or may not reflect ease of use.

Moore and Benbasat (1991) defined **visibility** as the extent to which potential adopters see the innovation as being visible in the adoption context. Research suggests that visibility is a significant predictor of initial adoption (Karahanna et al., 1999) and usage (e.g. Agarwal and Prasad, 1997). Visibility of computer-based innovations has been operationalised in terms of 'sight' visibility, that is, whether the respondents see other individuals using the innovation (Karahanna et al., 1999; Oh et al., 2003; Karahanna et al., 1999).

In addition, the adoption of an innovation involves uncertainty about whether it will perform as anticipated. Thus, it is possible that an individual **perceives risks** associated with using computers and the Internet. For example, individuals may fear that their life might become much too dependent on these technologies or that it might result in a de-socialisation process.

As Moore and Benbasat (1991) and Venkatesh and Davis (2000) noted, individuals often respond to social normative influences to establish or maintain a favourable image within a reference group. There are contradictory results about the influence of **image** upon the adoption of computer-based innovations. Karahanna et al. (1999) found that image was a

significant predictor for users, Venkatesh and Davis (2000) concluded that image predicted perceived usefulness and Al-Gahtani and King (1999) that image predicted perceived n enjoyment. Conversely, Agarwal and Prasad (1997) found that image was not a predictor of usage and intention and Karahanna et al (1999) that image was not a predictor of attitude toward adopting.

4.3.2.3. Affect

Several researchers have assessed the individual's emotional reactions towards using computer-based technologies. However, the range of feelings is rather limited to some negative feelings such as anxiety (e.g. Selwyn, 1997; Venkatesh, 2000; Bozionelos, 2001; Tsai et al., 2001; Wilfong, 2006), the positive feeling of perceived fun/enjoyment (e.g. Venkatesh, 2000; Teo, 2001; Anandarajan et al., 2002; Liaw, 2002) and the general feeling of liking (e.g. Agarwal and Prasad, 1999; Liaw, 2002; Yang and Lester, 2003). Results have shown that, in general, positive feelings tend to be associated with use whereas negative feelings deter people from using computing technologies.

Venkatesh (2000) defined computer anxiety as a negative affective reaction toward computer use and Bozionelos (2001) as a negative emotional state and/or negative cognition experienced by a person when he/she is using a computer or imagining future computer use. Computer anxiety has been shown to be related to a number of key variables including hours of computer use (Wilfong, 2006), experience with specific computer-related tasks (Wilfong, 2006), quality of initial experience (Todman and Drysdale, 2004; Beckers and Schmidt, 2003), lack of support received during the first experiences (Beckers and Schmidt, 2003), quality of past experiences (Todman and Drysdale, 2004) and self-efficacy (Wilfong, 2006).

Other negative feelings include frustration and anger. According to Bessiere et al. (2006), frustration is almost universally accepted as the emotional outcome of a negative computing experience. They defined frustration as *"an emotional response to unexpected obstacles impeding goal achievement"* (p. 3). Frustration arises when the individual is faced with a condition that interferes with or stops the realisation of a goal. In other words, frustration occurs when the technology does not perform as the individual wants. Wilfong (2006)

suggested that anger, defined as a strong feeling of displeasure and negative cognitions in response to a perceived failure to perform a computer task, was a feeling that could be related to computer adoption and usage.

Perceived fun/enjoyment is the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use (Venkatesh, 2000). Several researchers have also recognised the importance of perceived fun and include this belief in their conceptual frameworks (e.g. Teo et al., 1999; Teo, 2001; Anandarajan et al., 2002; Liaw, 2002; Choi et al., 2003; Liaw and Huang, 2003). In some studies perceived enjoyment has been conceptualised as a component of another belief used in research on computer adoption – perceived playfulness. For example, Moon and Kim (2001) regard enjoyment as one of the three components of playfulness, together with how curious and attentive the individual is when using computers. In contrast, Venkatesh (2000) points out that playfulness refers only to how creative and venturesome the individual is and enjoyment is a separate construct.

Kay (1993) is one of the few investigators who has used a more comprehensive set of emotional responses. Adopting a multicomponent model of attitudes, Kay tapped the affective component by the means of 10 dimensions. Yet, the scale has been criticised by Noyes and Garland (2005) for three main reasons:

- It is debatable whether some of the descriptors are actually representing positive and negative aspects (e.g. natural/artificial);
- Some descriptions are difficult to apply (for example emptiness and suffocation);
- Certain dimensions can hardly be viewed as affective feelings states as postulated by Cohen and Areni (1991), such as goodness.

4.3.3. Computer/Internet experience

Although it has been pointed out that attitudes are an important determinant of adoption, research also shows that other factors are also relevant (Klobas and Clyde, 2000). One such factor is experience with the innovation. Learning how to use the innovation is a process

closely related to the innovation adoption process as it is through learning that uncertainty about the outcomes of using the innovation are reduced (Rogers, 1995). In the computer/Internet literature the extent of learning has been assessed through the construct of the innovation experience, that is, the amount of skills a person acquires over time (Smith et al., 1999). According to the authors, computer/Internet experience has been shown to be both related to attitudes toward computers/the Internet and their use.

Smith and colleagues conceptualised computer experience as a bi-dimensional construct, consisting of subjective and objective constituents: objective and subjective experience. Objective experience (OE) pertains to the *"totality of externally observable, direct and/or indirect (...) interactions [with computers/the Internet] that transpire across time"* (Smith et al., 1999; p. 228). Subjective experience (SE) refers to *"the private psychological state reflecting the thought and feelings a person ascribed to some existing computing event"* (Smith et al., 1999; p. 228). In other words, SE is a subjective evaluation about past experiences in using computers/the Internet and is expected to mediate the effects of OE on attitude (Smith et al., 2000). According to Garland and Noyes (2004) it is important to distinguish between objective and subjective measures because certain individuals may, despite increasing objective experience, have negative subjective experiences.

Jones and Clarke (1995) suggested OE is divided into direct and indirect experience. Direct OE is related to the individual's previous and/or current usage of the innovation. Indirect experience results from the information acquired through other means than personal experience with using computers, such as the media, peers, parents and teachers. Information is acquired through observing, reading or hearing (Smith et al., 1999) and therefore indirect computer experience is highly dependent on the nature of social system in which the individual is embedded. Most of the research on computer/Internet experience has concentrated on direct objective experience. There are three measurable components of direct OE (Jones and Clarke, 1995; Smith et al., 1999; Garland and Noyes, 2004): amount ot use, opportunity to use and diversity of use.

Amount of computer/Internet use refers to the cumulative use of computers/the Internet. This includes, for example, amount of time spent on using them, frequency of use and how long they have been using it for. Amount of experience can be measured in general, by main purpose (e.g. personal/leisure, work, school) and by task. (e.g. email, games, text writing).

Opportunity to use is related to the availability of resources contributing to, or resulting in, the use of computers/the Internet within or across various settings. Opportunity examples include whether the person has access to a computer/the Internet, the location of that access or whether he/she has ever done a course requiring their use. The importance of location is related to the fact that this is one determinant of the amount of time users can spend using the innovation and an indicator of the amount of privacy they have (Dickey et al., 2000). In addition, the characteristics of the technology, such as the type of software and hardware used and type of Internet connection (i.e. broadband or narrowband), have been highlighted as a very important influence on adoption (e.g. Teo, 1998; Dickey et al, 2000; Liao and Cheung, 2001). The importance of access as a determinant of adoption of computer-based technologies has been pointed out by many researchers (e.g. Elliot, 2002; George, 2002; Sexton et al., 2002). However, it is surprising how little is known about what factors influence access to computers and the Internet and how access to them influences usage patterns. This is perhaps because, as mentioned earlier, most of the research has centred on use in businesses and schools where access is usually taken for granted.

The third category of direct objective experience is the diversity of experience, which refers to the different tasks the individual has performed using computers, such as the software packages, games and computer programming, and using the Internet, such as e-banking and email.

4.3.4. Motives and involvement

Similar to other studies on the adoption of innovations, researchers have assumed that computer-based innovations are relevant for every individual, that is, that every individual is involved with the use of the innovation. One possible explanation is that research has been concentrated on educational and business environments, where use is likely to be mandatory and unavoidable. Yet, the main reason why people do not use computers/the Internet may well be that their use is simply not relevant to the individual. Despite the potential of involvement to contribute to an understanding of the adoption of computers and the Internet, past studies have failed to include this variable in their conceptual framework. The exception was a study by Goldsmith (2002), who found a positive

relationship between involvement with the Internet and frequency of online buying and intention to buy online.

As shown in section 3.4.2.1, according to the cognitively-based approach to Involvement, an individual will find an innovation relevant if he/she perceives that innovation will fulfil one or more important needs. Likewise, the innovation will be deemed irrelevant if it does not fulfil important needs. Motives are related to needs in the sense that they are a way of people expressing why they use (or do not use) the innovation. Several approaches to the classification of motives have been put forward. Hoffman and Novak (1996) stated that there are general categories of motives in computer mediated environments like the Web: goal directed and experiential. Goal directed behaviour refers to directed search mode of navigation in which the consumer is extrinsically motivated to find a particular site or piece of information on a site. On the other hand, experiential behaviour is intrinsically motivated and corresponds to a nondirected, exploratory search mode.

Teo (2001) suggested a motivational framework based on usage activity undertaken on the Web. According to the author, people use the Internet for messaging, browsing, downloading and purchasing. Sexton et al. (2002) suggested a classification based on the type of need associated with the usage of the computer technology. This framework posits that a person can use the Internet to met personal needs, to satisfy job requirements or to satisfy school requirements. Bourdeau et al. (2002) approached the motives to use the Internet from an experiential perspective (Hirschman and Holbrook, 1982), which establishes that the behaviour of the individual is driven by utilitarian, hedonist or social status factors. They found five categories of motives (Bourdeau et al., 2002): social, utilitarian value, hedonic, learning and purchasing. Katz and Aspden (1997) found that people use the Internet mainly (1) to gain information, (2) to communicate with other people, (3) due to curiosity/Interest in using the Internet, (4) because the job requires its use, (5) business communication, (6) education, (7) access news and world information and (8) not to be left behind.

One common characteristic of previous studies addressing the issue of why people use computers/the Internet was a focus on the motives to use them in general. Not surprisingly, people often report reasons associated with business and educational purposes as the motives to use computers/the Internet. To the best knowledge of the researcher, no

studies have examined the motives to use these technologies specifically for leisure purposes.

Although an individual may use a computer-based innovation for many purposes, it has been suggested that often it is a 'killer application' that leads an individual to adopt it. A 'killer application' is the main motive why an individual is likely to use (or purchase) an innovation. Several investigators have pointed out that the adoption of computers is largely influenced by a desire to adopt the Internet. For example, Selwyn (1998) and Bourdeau et al. (2002) state that the home PC market was facilitated by the access to the Internet and the electronic mail and that it is communication with the outside world which makes the personal computer justifiable in the home. More recently, DeYoung and Spence (2004) argued that currently it is difficult to separate use of computers from use of the Internet.

4.3.5. Other variables

There is a large body of research addressing the relationship between demographic variables and the adoption of computing technologies. Some of these variables include gender, age, educational level, occupation, income and ethnic group. Many studies tend to support the view of a gender divide, with males more likely to use computers (e.g. Selwyn, 1998; Venkatesh et al., 2000) and the Internet (e.g. Teo, 2001; Tsai et al., 2001; Sexton et al., 2002). It has been shown that this gap is formed early in life (Selwyn, 1998) and that the early intentions formed by women and men have a lasting influence on their usage of the technology (Venkatesh et al., 2000). The Internet, being mainly accessed through the computer is consequently affected by the differential adoption of the computer (Schumacher and Moharan-Martin, 2001; Yang and Lester, 2005). However, some authors have challenged the position of a gender divide. Whitley (1997) conducted a meta-analysis on gender differences in computer attitudes and behaviour and concluded that the majority of effects of gender on other variables (e.g. attitudes or current behaviour) were non significant or small. According to the study, gender accounts for about 1% of the variance in attitudes and about 2% of the variance in behaviour.

There are fewer studies focusing on other demographic variables and their effects upon Internet usage. Users of computer-related technologies tend to be younger and more

educated. It has also been found that age is related with technology usage activities, with younger users engaging in messaging and downloading activities to a greater extent than older users of the Internet (Teo, 2001). Education has also been found to be related to ease of use, with younger individuals perceiving computer systems to be easier to use than older individuals (Agarwal and Prasad, 1999). A few studies have examined the effects of occupation on variables related to the adoption of computer-based innovations. For example, Teo (1998) compared the perceptions of students, IT personnel and non-IT personnel in terms of four Internet activities: messaging, browsing, downloading and purchasing. Agarwal and Prasad (1999) found that whether the individual is a provider or user of the technology affects ease of use. Those whose work is related to providing technology perceived the computer system to be easier to use than those who were solely users of the technology.

Another variable that has been posited to influence the adoption of computer/based technologies is self-efficacy. Self-efficacy is based on Social Cognitive Theory (Bandura, 1997) and is a form of self-evaluation about one's capabilities to execute courses of action. Computer/Internet self-efficacy is, thus, a judgement of one's capability to use computers/Internet (Compeau and Higgings, 1995; Torkzadeh and van Dyke, 2001). This belief influences the decisions about what behaviours to undertake, the amount of effort and persistence put forth when faced with obstacles and the mastery of the behaviour (Bandura, 1997; Hsu and Chiu, 2004). The concept of self-efficacy is closely related to Perceived Behavioural Control (Ajzen, 1988) and therefore several researchers have used it as a measure of Perceived behavioural control (e.g. Tan and Teo, 2000; Hsu and Chiu, 2004). Self-efficacy also shares some similarities with the concept of Perceived Resources (Mathieson et al., 2001).

4.4. Research on e-commerce adoption

Javenpaa and Todd (1997) identified two main approaches to research on consumer adoption of e-commerce. The technology-centred approach examines the consumer adoption of e-commerce by analysing the technical specifications of a virtual store. These include user interface features, content and design, usability, ability to effectively dialogue with consumers and security measures (e.g. Rose et al., 1999; Ranganathan and Ganapathy,

2002). This view believes that online shopping is currently hampered by virtual stores' unproductive use of the technology (Chen et al., 2002). The consumer-centred approach explains and predicts the adoption of online purchasing through the consumers' perspective, investigating consumers' perceptions about it. It is these perceptions (e.g. product perceptions, service quality, trust, shopping experience) that influence retail channel selection decisions. In other words, the rationale behind the consumer centred view is that electronic market success is determined by consumer's willingness to adopt (Chen et al., 2002). This research approaches the adoption of e-commerce from a consumer-centred point of view.

4.4.1. Models underpinning the research on consumer adoption of e-commerce

Very few researchers have used the **comprehensive models** of consumer behaviour (Howard and Sheth, 1969; Engel et al., 1995) for the purpose of studying the adoption of e-commerce. Teo and Yeong's (2003) investigation is one of the few exceptions. Their study focused on three core stages of the decision process: information search, alternative evaluation and purchase. O'Connor and O'Keefe (2000) examined the effects of the Internet on each of the five stages of the buying process proposed by the EBM model by comparing traditional consumer and Internet consumer behaviours.

Given that purchasing over the Internet can be regarded as a new purchasing practice when compared to other modes of shopping (Vijayasarathy, 2004), and bearing in mind that using e-commerce requires the use of other innovative technologies, it can be argued that the **diffusion and adoption of innovations** is an appropriate theory for studying the adoption of e-commerce. Two branches of diffusion theory have essentially been examined in the literature. One group of researchers has focused on innovativeness. George (2002), Goldsmith (2002), Goldsmith and Goldsmith (2002) and Citrin et al. (2000) assessed the relationship between innovativeness as a personality trait and the intention to/actual purchasing over the Internet using the Domain Specific Innovativeness Scale proposed by Goldsmith and Hofacker (1991). The temporal approach to innovativeness can be found in studies by, for example, Vrechopoulos et al (2001), who compared the demographic profile and perceptions of innovators and early adopters of e-commerce.

The effects of perceived innovation attributes on intention to use and actual usage of e-commerce is the other important area of research using DAI theory. One of the earliest studies was undertaken by Eastlick and Lotz (1999) who studied the factors influencing the adoption of an electronic shopping medium. Verhoef and Langerak (2001) studied whether physical effort, time pressure and enjoyment were related to three perceived innovation characteristics (complexity, relative advantage and compatibility) and whether these were related to intention to adopt. Eastin (2002) focused on whether perceived risk, two types of advantages (perceived convenience and perceived financial benefits) and complexity predicted actual use of the Internet for purchasing.

As in the field of adoption of computers and the Internet, the **TAM** has been the most widely used model to study consumer adoption of e-commerce. According to Pavlou (2003) this stems from the fact that e-commerce is heavily technologically-driven and thus researchers have hypothesised that the principles of the model can be applied to e-commerce. With few exceptions (e.g. Henderson and Divett, 2003), researchers have expanded the belief set of TAM. Other internal variables include trust (Chen et al, 2002; Pavlou, 2003; Chen and Tan, 2004), perceived risk (Pavlou, 2003), compatibility (Chen and Tan, 2004; Vijayasarathy, 2004), privacy and security (Vijayasarathy, 2004), enjoyment (Childers et al., 2001), normative beliefs (Vijayasarathy, 2004), self-efficacy (Vijayasarathy, 2004) and perceived service quality (Chen and Tan, 2004). In general, the results support the belief that TAM´s predictive ability is enhanced by the inclusion of other beliefs. Studies based on TAM have either used the original model, in which attitude is a mediator between beliefs and intention (e.g. Childers et al., 2001, Chen et al., 2002; Chen and Tan, 2004; Vijayasarathy, 2004), or the revised model, which postulates that beliefs have a direct impact on intention (e.g. Gefen and Straub, 2000; Henderson and Divett, 2003; Pavlou, 2003).

A few researchers have used the **Theory of Planned Behaviour**. George's (2002) model posited that attitudes toward Internet purchasing were influenced by three types of belief: trustworthiness, control of personal data, and the anonymity of Internet interactions. Shim et al. (2001) put forward a model that postulates that intention to search the Internet for product information is a mediator between intention to use the Internet for purchasing and attitude, subjective norm and perceived behavioural control.

Alternative approaches

Several alternative theories to the study of the adoption of e-commerce have been identified. These include the transaction cost theory and the media choice theories. **Transaction cost theory** is based on the transaction cost economics model. The model attempts to explain why a subject favours a particular form of transaction over others and the basic assumption is that given all things being equal, people prefer to conduct transactions in the most economic way (Liang and Huang, 1998; Teo and Yu, 2005). For e-commerce, the assumption is that purchasing from electronic stores can be considered as a choice between the web and traditional stores and hence it is reasonable to assume that the consumer will go with the channel that has a lower transaction cost (Liang and Huang, 1998). Several type of transaction costs have been postulated to be involved in online buying. Teo and Yu (2005) suggested searching costs, monitoring costs and adapting costs, while Liang and Huang (1998) provided a more extensive list, which includes search, comparison, examination, negotiation, payment, delivery and post-service costs.

According to the **media choice theories**, the selection of a medium for a specific task is a function of the characteristics of the medium and the task (Vijayasarathy, 2002). One such theory is the Media Richness Theory which postulates that individuals tend to choose a medium according to its richness in dealing with equivocality and uncertainty (Daft and Lengel, 1986; El-Shinnawy and Markus, 1997; Heeren and Lewis, 1997; Wijayanayake and Higa, 1999). The general contention is that rich media (such as face-to-face) are suitable for dealing with equivocal situations and lean media (such as written documents) are more appropriate for reducing uncertainty (El-Shinnawy and Markus, 1997; Heeren and Lewis, 1997).

Trenholm and Jansen (1999) suggested that a medium can be evaluated according to its interaction characteristics. Table 4.1 shows the interaction characteristics of the four most common purchasing channels based on the level of personal contact involved and the technology that mediates the communication:

- Face-to-face (non-technologically mediated personal contact);
- Telephone (technologically mediated voice-based communication with personal contact)

- Email (technologically mediated written-based communication with personal contact) and
- Electronic purchase (technologically mediated communication with no personal contact).

Table 4. 1: Interactional characteristics of purchasing channels

(Source: Adapted from Trenholm and Jansen, 1999)

Nature of contact	Personal contact			No personal contact
Characteristics of communication	Face-to-face	Telephone	Email	Electronic purchase
Proximity of the parties	close	far	far	far
Nature of feed-back	immediate	immediate	delayed	immediate
Adaptation of message	specific	specific	specific	general
Communication roles	informal	formal	formal	formal
Type of language	oral	oral	written	written
Flexibility of communication	flexible	flexible	flexible	rigid

From the analysis of Table 4.1 not only is it possible to ascertain the characteristics of each method of communication but to identify the similarities and differences between them. For example, the only common characteristic between the face-to-face and electronic purchase is the nature of feed-back, which is thought to be immediate. Conversely, the only two differences between face-to-face and telephone are the proximity of the parties and the communication roles. Understanding which communication method the consumers would prefer and the reasons for that preference may give some insight for the reasons why e-commerce is used or in not used.

4.4.2. Appropriateness of the adoption of innovations model for studying the adoption of e-commerce

One important issue that needs clarification is whether a model based on the hierarchy of effects (such as the adoption of innovations model) is appropriate to the study of consumer adoption of electronic commerce. According to Gatignon and Robertson (1985), this type of model is an appropriate representation of the adoption process if the amount of cognitive processing involved is high. In their view, four variables determine the amount

of cognitive processing involved: consumer learning requirements, innovation or switching costs, social relevance and multiperson adoption unit.

Consumer learning requirements – For products requiring high consumer learning, a hierarchy of effects model should be expected. Purchasing using electronic commerce is likely to involve, to a large extent, learning, not only at the technological level (learning how to use the technology) but also at the purchasing level (learning how to use the technology for purchasing purposes). In the case of travel products the complexity associated with purchasing over the Internet is thought to be enhanced by the complexity of the travel product. This complexity is due to the existence of many and differentiated types of provider, not only at the highest level (airlines, accommodation, rent-a-car, tour operators, travel agencies, and so on), but also within each of these categories (independent hotels, chain hotels, consortium hotels; low-cost and full service airlines). Additionally, not only can the tourism product be presented in many different forms (packages or individual products, different types of food plans), but the rules that govern the purchasing and consumption of the product may be complex (for example, pricing often involves lengthy and complex restrictions).

Innovation or switching costs – When the adoption of the innovation involves high costs or it has consequences or costs for the consumption system in which they are placed, the hierarchy of effects model is likely to take place. This is certainly the case of electronic commerce, since the individual is likely to incur costs associated with the purchase and use of the technology, including a computer, the necessary software and the link to the Internet. Additionally, there may be indirect costs associated with misusing the innovation, such as those arising from purchasing the wrong type of product.

Social relevance – The greater the social relevance the more likely a hierarchy of effects adoption process. There is some suggestion that using electronic commerce is becoming more and more a socially relevant behaviour. For example, the degree to which ICT and e-commerce usage is often used as a measure of a nation's development and many governments have specific plans for their promotion among citizens. Social relevance need not arise only from the desirability of adoption, but also from undesirability. For example, there may be some groups which associate using technology (computers, the Internet) and purchasing over the Internet as a signal of breaking traditional social relations within the

community. These individuals may not find acceptable purchasing methods that do not involve some degree of personalisation.

Multiperson adoption unit – Adoption decisions that involve other members of the social system are likely to follow a hierarchy of effects adoption pattern. This is likely to be the case when purchasing leisure travel. A recent study (Wang et al, 2004) found that 10 of the 13 sub-decisions associated with a family journey were joint decisions. More specifically, the study found that the choice of purchasing channel (i.e. the consideration and decision of what travel agency to use) was a shared decision for 85 percent of the families interviewed.

In addition, there is some agreement among researchers that both the use of ICT and of e-commerce entails a high degree of discontinuity (Rogers, 1995; Ram and Sheth, 1989; Gatignon and Robertson, 1985). Therefore, it seems appropriate to have a hierarchy of effects models as frame of reference for this research.

4.4.3. Attitude

Attitude is one the areas that has received attention from researchers attempting to understand what determines the adoption of e-commerce. As Dickey et al. (2000) stated, gauging consumer attitudes toward online purchasing is crucial because not only does it provide insight into the short-term viability of e-commerce, but, even more importantly, it provides valuable information about consumers' concerns and fears that must be addressed before implementing a successful strategy. The importance of attitudes in explaining the adoption of e-commerce has also been highlighted elsewhere (e.g. Goldsmith and Goldsmith, 2002; Shim et al., 2001).

4.4.3.1. Attitude models

Different models have been used to measure attitude towards purchasing over the Internet. One such model is the expectancy-value model, notably the expectancy-importance approach. This model can be found in studies by Liao and Cheung (2001), Shim et al.

(2001) and more recently by Worthy et al. (2004). However, the majority of the studies on attitude towards purchasing over the Internet were developed using the composite model. Studies involving TAM (e.g. Gefen and Straub, 2000; Childers, 2001; Chen et al., 2002; Henderson and Divett, 2003; Chen and Tan, 2004; Vijayasarathy, 2004) and DAI (e.g. Eastlick and Lotz, 1999; Verhoef and Langerak, 2001; Eastin, 2002; Pechtl, 2003) are examples of composite models of attitude. Other examples can be found in Teo and Yeong's (2003) and Goldsmith and Goldsmith's (2002) studies. The literature review did not reveal any studies explicitly undertaken based on the multicomponent and two-component models.

4.4.3.2. Perceived innovation attributes

There is significant evidence that potential adopters' perceptions of an innovation influences their adoption decision (Rogers, 1995; Moore and Benbasat, 1991). Thus, understanding the perceptions of purchasing over the Internet may provide insights into why individuals use or do not use e-commerce.

Relative advantage

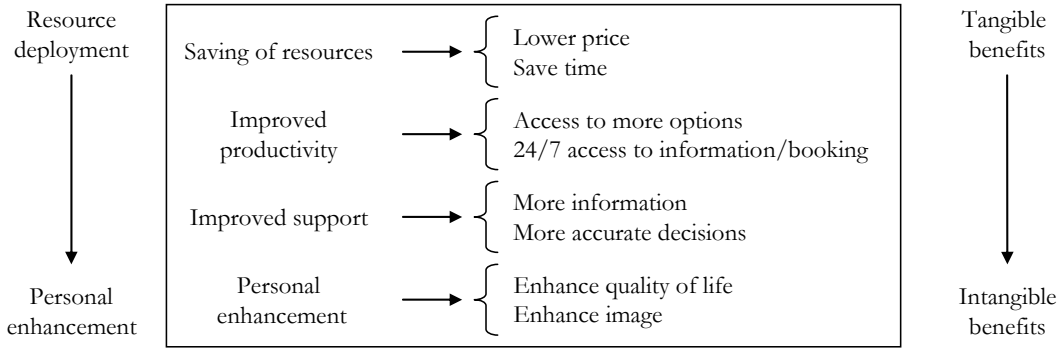
One assumption pervading research on e-commerce is that its use encompasses many benefits, that is, *relative advantage*. This is likely to be the result of the pro-innovation bias highlighted by Rogers (1995). However, it is important to differentiate between potential advantages and those actually perceived by consumers. For example, Subramanian et al (2000) argued that *"the Internet interface, at the heart of the new process, provides a natural, use friendly and platform independent environment for the consumer to enhance the purchase experience"* (p. 165). However, research suggests that consumers in general do not perceive e-commerce as portrayed by these authors.

In broad terms, e-commerce provides buyers with an additional purchasing channel from which they can buy their leisure travel components. Not surprisingly, researchers have attempted to provide a more detailed description of the benefits that the e-commerce encompasses. However, there has been lack of a theoretically-based classification for the

benefits or advantages of e-commerce. Therefore, this section provides a classification framework of potential benefits of e-commerce in the purchasing of leisure travel. The proposed classification (Figure 4.1) is an adaptation of the framework proposed by Eason (1988) to classify the benefits of information technology in the office and presented in section 4.3.2.2.

Figure 4. 1: Consumer's benefits from using e-commerce

Source: adapted from Eason (1988)



Reduction of resources involves the accomplishment of the same outcome (e.g. purchase a flight ticket) using less resources. Resources involved in the purchasing though e-commerce refers to the effort, money and time needed to complete the purchase and these have been extensively studied (Hoffman and Novak, 1997; Strader and Shaw, 2000; Elliot and Fowell, 2000; Childers et al., 2001; Verhoef and Langerak, 2001; Chen et al., 2002; Eastin, 2002; Elliot, 2002; Turban et al., 2002; Chang et al., 2005; Efendioglu and Yip, 2004; Worthy et al., 2004).

Effort refers to the physical resources necessary to complete the purchase. Examples of effort benefits include the ability to shop from different locations (notably work and home), eliminating the effort associated with travelling to the stores, and the access to all related providers for completing the purchase process through a single interface.

Since the Internet facilitates shopping in many places, individuals can compare prices among the different suppliers and potentially find the lowest price on the market, thus *saving money*. Moreover, some authors (e.g. Hoffman and Novak, 1997; Shaw, 2000; Turban et al., 2002; Lee et al., 2003) suggest that because of the greater competition and increased

power of consumers, firms operating in the electronic marketplace are led to reduce prices in order to remain competitive. E-commerce not only enables the 'direct' saving of financial resources (i.e. those associated with the price of the product), but indirectly there are other costs that the individual does not incur, such as those associated with transportation to the store (for example, petrol and parking fees).

Time savings are gained from, for example, the ability to locate information quickly and not travelling to a store. Additionally, if the product can be digitised, such as the case of travel, the deliver of the product can be immediate (Elliot and Fowell, 2000; Turbal et al., 2002).

Many researchers have outlined the 'convenience' benefits of e-commerce, which includes both the elements of when a consumer can shop and where a consumer can shop (Childers et al., 2001). More specifically, these include the ability to shop from different locations, eliminating the inconvenience associated to travelling to the stores. Thus, convenience can be viewed as a combination of some of the previous resources, together with the ability to purchase at any time.

Improved productivity refers to the optimisation of resources. Generally speaking, this type of benefit involves maximising the purchase outcomes using the same resources. Purchasing through e-commerce provides access to more options, access to information and booking at any time and facilitates comparison among alternatives.

Whereas the former two categories of benefits relate to the management of resources, and thus refer to more 'quantitative' aspects of purchasing, improved support and personal enhancement are associated with more intangible or 'qualitative' benefits. **Improved support** refers to the seeking of new ways of achieving the personal objectives. E-commerce facilitates access to a wide range of information, notably information that otherwise would be hard to obtain, such as the experiences of fellow consumers. For certain products, such as travel, e-commerce also enables a certain degree of 'pre-testing' of the product, by the means of pictures and videos. Moreover, e-commerce provides consumers with more choices, both in terms of suppliers and products. For example, the growth of low cost airlines was facilitated by the emergence of e-commerce. These airlines opened routes to many new destinations that were not covered by other airlines, thus extending the range of destinations available to the tourist. In addition, consumers are now able to purchase from many smaller tourism businesses whose existence they would not

have been aware of if it was not for the Internet. Thus, because consumers can get more information about the products and have access to a wider range of products, they are more likely to be in a position to make more accurate purchase decisions.

Finally, **personal enhancement** benefits are related to achieving the more important and abstract personal objectives in life. They can be regarded as the 'end-states' or values that an individual pursues. Two examples of such goal can be the enhancement of the quality of life and the enhancement of personal image.

Whatever the type of advantages, the *"benefits of using e-commerce as compared to traditional channels are important in delineating whether consumers will have a positive attitude toward e-commerce"* (Childers et al., 2001; p. 515). Existing research seems to support this proposition, with results showing that advantages have a positive impact on online shopping (Chang et al., 2005). However, Chang and colleagues also noted that some inconsistent results can be found, notably in terms of price and transaction cost.

Compatibility

Several researchers have examined *compatibility* within the context of e-commerce (e.g. Verhoef and Langerak, 2001; Chen et al., 2002; Oh et al., 2003; Chen and Tan, 2004; Vijayasarathy, 2004). Compatibility in the context of e-commerce has been defined as *"the extent to which a consumer believes that shopping online fits/matches his/her lifestyle, needs and shopping preference"* (Vijayasarathy, 2004, p. 750). Compatibility addresses the social context in which online retail takes place (Chen and Tan, 2004) and is partially determined by the norms of the social system (Chen et al., 2002).

The results suggests that compatibility is a determinant of both attitude (e.g. Chen et al., 2002; Chen and Tan, 2004; Vijayasarathy, 2004) and intention (e.g. Verhoef and Langerak, 2001) to adopt e-commerce. As expected, the higher the compatibility, the higher the probability of adoption. In addition, it has been found that compatibility has a significant impact of perceived usefulness (Chen et al., 2002; Chen and Tan, 2004). Compatibility is likely to be influenced by time starvation (Vijayasarathy, 2004; Verhoef and Langerak, 2001), liking for in-home shopping (Vijayasarathy, 2004) and demographics, such as age and education (Verhoef and Langerak, 2001).

Chen et al. (2002), Chen and Tan (2004) and Vijayasarathy (2004) adapted the Moore and Benbasat (1991) scale to measure compatibility. This scale asks respondents to indicate the extent to which the innovation fits their lifestyle, the way they like to shop and seek product information and is compatible with their shopping preferences. Verhoef and Langerak (2001), on the other hand, measured the extent to which e-commerce suits the respondent, requires few adaptations in personal life and yields problems.

Complexity

Past research suggests that complexity is also an important determinant of e-commerce adoption (Gefen and Straub, 2000; Childers et al., 2001; Verhoef and Langerak, 2001; Chen et al., 2002; Vijayasarathy, 2004). Consumers who consider e-commerce as simple, easy to use or easy to learn have a more positive attitude towards e-commerce and demonstrate a greater intention to use e-commerce than those who perceive otherwise. The complexity associated with e-commerce refers to the extent to which purchasing over the Internet is perceived as relatively difficult to understand and use (Rogers, 1995). Studies have either focused on measuring complexity by the use of general statements, such as 'complex' or 'easy' (e.g. Gefen and Straub, 2000; Childers et al., 2001; Verhoef and Langerak, 2001; Chen et al., 2002) or more specific areas of purchasing online. For example, Verhoef and Langerak (2001) measured the complexity of some steps in the purchasing process, such as how hard it is to find the needed products, how difficult is to order products and how problematic it is to compare products. Chen et al. (2002) included an item that evaluated whether the respondents thought that it was easy to find what he/she wanted. In addition to complexity of use, several researchers have studied the easiness/difficulty of learning to use e-commerce (e.g. Gefen and Straub, 2000; Chen et al., 2002; Vijayasarathy, 2004). Finally, self-efficacy as also been used as a measure of complexity (e.g. Eastin, 2002).

Visibility

Visibility of e-commerce refers to the extent to which the individual has the opportunity to obtain information about the innovation without actually using it. Research has tended to operationalise this variable as the opportunity to see the innovation being used, that is,

'sight visibility'. An additional way to operationalise visibility might be exploring the extent to which opportunities for discussion are available within the social system: the 'verbal' visibility. The adoption of innovations theory supports this type of visibility since it postulates that the extent to which an individual is able to communicate with opinion leaders or other adopters about the innovation may affect the adoption of that innovation. For example, Katz and Aspden (1997) argued that social and work networks appear to be important for stimulating interest and providing users with support.

Trialability

Pechtl (2003) argued that trialability is assumed to establish no central characteristic [meaning] in online shopping but did not explain why. There are several possible reasons why trialability has not been regarded as a relevant characteristic to the adoption of e-commerce. First, Tornatzky and Klein (1982) reported inconsistent results on the effects of this attribute on adoption and this may have deterred researchers from using it. Second, trialability refers to the perception about the extent to which the innovation can be experimented with on a limited basis. Hence, assessing the perceptions of trialability only makes sense before adoption takes place. Eastlick and Lotz (1999), for example, only assessed trialability in non-adopters. Third, and perhaps most importantly, trialability in e-commerce means that the individual has to complete a purchase and hence e-commerce cannot be tried without the full commitment of the consumer. Thus, not surprisingly, a recent literature review on studies addressing the adoption of e-commerce found no references to this innovation attribute (Chang et al., 2005). However, one way of interpreting the concept of trialability within the adoption of e-commerce might be the purchasing of small value items before going into more expensive purchases. It can be argued that those who prefer to follow this pattern are experimenting with the innovation to check whether it is a viable option for future purchases.

Perceived risk

Many researchers have pointed out that the *perceived risks* associated with purchasing over the Internet are an important determinant of the adoption of e-commerce (Eastlick and

Lotz, 1999; Tan, 1999; Kim et al., 2000; Strader & Shaw, 2000; Cheung and Lee, 2001; Eastin, 2002; George, 2002; Featherman and Pavlou, 2003; Forsythe and Shi, 2003; Lim, 2003; Liu and Wei, 2003; Pavlou, 2003; Teo and Yeong, 2003; Chang et al., 2005). In broad terms, perceived risk refers to the probability of any loss that occurs. In the field of electronic commerce, perceived risk can be defined as *"the subjectively determined expectation of loss by an Internet shopper in contemplating a particular online purchase"* (Forsythe and Shi, 2003, p. 869). When consumers perceive the likelihood of the outcomes of purchasing over the Internet not approximating the expected outcomes for that purchase, they may prefer to opt for an alternative method that entails less probability of expected losses.

Recently, Lim (2003) argued that it is important to differentiate sources from outcomes of perceived risk and stated that most of the research carried out in the past concentrates on outcomes. She identified seven outcomes of perceived risk that might be of interest in e-commerce adoption, with each of the dimensions referring to a type of loss consumers might perceive to suffer as a result of their actions. These outcomes of risk were financial, performance, social, physical, psychological, time-loss and privacy.

Consumers perceive risk because any transaction involves a certain degree of uncertainty. According to Pavlou (2003), consumer uncertainty in electronic commerce is enhanced not only by the distant and impersonal nature of the online environment, but also due to the implicit uncertainty of using global open infrastructure for transactions. Pavlou (2003) further suggests that there are two types of uncertainty present in online transactions:

- Behavioural uncertainty exists due to the potential of Internet retailers to behave in an opportunistic manner and the inability of the government to monitor adequately all transactions;

- Environmental uncertainty results from the unpredictable nature of the Internet, which is beyond the full control of the Web retailer or the consumer.

Lim (2003) provided a similar, although more extended, scheme for classifying the sources of perceived risk. According to the author, perceived risk may be caused by one or more of the following factors:

- *Technology sources*: these relate to the lack of consumer control over how the technology (i.e. the Internet) handles personal information. It includes the issues of

security (e.g. danger of stealing credit card details) and privacy (e.g. use of cookies to collect personal information);

- *Vendor sources*: these include the dislike of dealing with unknown vendors who may not keep the promise of providing the service. In addition, potential misuse of credit card details by vendors and worries about the selling of customer information to third parties are important vendor sources of perceived risk;

- *Product sources*: these are related to the uncertainty about whether the products purchased meet expectations, in terms of fit and quality. Product sources are caused by the difficulty or impossibility to touch and feel the product;

- *Consumer sources*: these refer to the social pressure suffered by consumers from families and friends. However, Lim (2003) did not find this a relevant source due to the 'lonely' nature of electronic purchasing.

Lim (2003) developed her typology of sources of perceived risk based on Internet users, that is, individuals presumably with good knowledge of computers and the Internet. Therefore, it is not surprising that she only included sources external to the individual. Notwithstanding, Internal sources, which refer to risk associated to the deficiencies of the individual (Bessiere et al., 2006), may also play an important role in the formation of risk perceptions. These internal sources include the lack of knowledge, skill and confidence in using the technology as a source of perceived risk. Those without Internet and/or computer knowledge might fear misusing these technologies while conducting a purchase. More specifically, the lack of knowledge may hinder a consumer's ability to assess whether the actions taken while purchasing are the best courses of action and hence increase their level of perceived risk. Therefore, a redefinition of consumer sources is required in order to include those factors associated with the lack of knowledge and skills regarding the use of the antecedent innovations (computers and the Internet).

Chang et al. (2005) found that the majority of the studies examined the general perception of risk. For example, Eastin (2002) measured perceived risk through the evaluation of beliefs about security (secure/not secure) and Pavlou (2003) only distinguished between behavioural and environmental risk. Others, however, have opted for more detailed measurement, analysing specific risks such as credit card security (Forsythe and Shi, 2003) and the product not performing as described (Teo and Yeong, 2003). Despite some

inconsistencies in the results (Pechtl, 2003; Chang et al., 2005), in general perceived risk has been found to be related to intentions and use of e-commerce (Forsythe and Shi, 2003; Pavlou, 2003; Chang et al., 2005), with perceived risk having a negative impact on these outcomes.

Several researchers also suggested that trust in e-commerce influences its adoption. However, this innovation attribute was not included for the two main reasons. First, perceived risk and trust are closely interrelated and trust is a more restrictive concept than perceived risk (Lim, 2003). Second, there is evidence that trust only affects adoption of e-commerce through other variables, notably perceived risk (Pavlou, 2003; Cheung and Lee, 2001).

Image

As shown previously, many studies have argued that image can affect the adoption of computer-based technologies. However, the literature review undertaken as part of this research found no studies incorporating image as a relevant innovation attribute to the adoption of e-commerce. This finding is supported by a recent literature review by Chang et al. (2005).

4.4.3.3. Affect

Despite the numerous studies addressing the relationship between affect and consumer behaviour (see section 3.3.3), few affective evaluations have been carried out in the study of the adoption of electronic commerce. One of the exceptions is the study by Childers et al. (2001) who assessed perceived enjoyment as one of the antecedents of attitude toward purchasing over the Internet. Although the majority of the items measured feelings (e.g. fun, feel good, boring and exciting), the scale also included items consisting of other than feelings such as 'involve me' and 'interesting'. Their study showed that hedonic aspects of e-commerce, such as perceived enjoyment, play at least an equal role to the instrumental aspects (i.e. perceived usefulness).

4.4.4. Motives and involvement

Several researchers have studied the motives to purchase by e-commerce. Vrechopoulos et al. (2001) found that 24 hours shopping, saving time, avoid crowding in stores, better briefing about products and more time for product evaluation and selection were the most important reasons for consumers to use e-commerce. More recently, Efendioglu and Yip (2004) suggested convenience, price, delivery and speed, selection and privacy as important motives to use e-commerce. Parsons (2002) concentrated on non-functional motives associated with purchasing over the Internet. Drawing on Tauber's (1972) motives for shopping, Parsons concluded that personal and social motives are important in explaining why people use e-commerce.

Kenney (1999) took a different approach since he suggested an expectancy-value model to understand the objectives (i.e. motives) underlying Internet purchases. The argument underlying the expectancy-value approach to motives is that different motives have different weights. Using an unstructured methodology, the elicitation of objectives (motives) was undertaken using a means-end approach. However, the motives elicited were not coded using the attribute-consequence-value framework usually adopted by means-end research (see section 3.4.1.3 for a description of this means-end research). Instead, motives were classified into means and fundamental objectives.

One common feature of all the previous studies is that the list of motives produced is either non-product specific or focuses on a very broad category of products (e.g. physical goods). In addition, only the motives of Internet users and purchasers tend to be studied. One of the exceptions is Keeney (1998), whose list was elicited from individuals who were, and who were not, connected to the Internet.

As Rogers (1995) explained, many consumers know about innovations but do not adopt them. According to Worthy et al. (2004), one of reasons underlying non-adoption is the lack of consumer involvement with the innovation. In a similar vein, Strader and Shaw (2000) argued that involvement of consumers with electronic commerce can dramatically increase the magnitude of change brought about by e-commerce. Therefore, understanding the extent to which e-commerce is relevant for the individual, that is his/her level of

involvement with it, can be a valuable contribution to the study of adoption of e-commerce.

Despite suggestions, both in the general and e-commerce consumer behaviour literatures, that involvement with purchasing over the Internet may be an important determinant for the adoption of e-commerce, no studies that clearly identified this element as a determinant of the acceptance of e-commerce were found. Perhaps due to the aforementioned pro-innovation bias, there is a prevailing assumption that e-commerce is personally relevant to every subject.

4.4.5. Product-category behaviour

A number of researchers have recognised the importance of product types in the consumers' selection of purchasing channel (e.g. Alba et al., 1997; Choi et al., 1997; Peterson et al., 1997; Liang and Huang, 1998; Rosen and Howard, 2000; Vijayasarathy, 2002; Chang et al., 2005). Therefore, an understanding of the factors influencing the adoption of e-commerce requires an examination of the purchase and consumption patterns of the individual regarding the product category being researched. Four behaviours of interest for this research were identified and are briefly examined in the next sections: roles, frequency of purchase, shopping habits and preferences and types of supplier.

4.4.5.1. Roles

Within the purchasing process there are six roles that may be performed by the various members of the travel party (Kotler et al, 1999; Loudon and Della Bitta, 1993): initiator, influencer, information gatherer, decision maker, purchaser and user. One member may take a leading role in some of the stages (e.g. information gathering) whereas more than one element is likely to participate in other stages (e.g. decision-making) (Loudon and Della Bitta, 1993). One of the factors that might explain why an individual does not purchase over the Internet is that he/she does not perform the purchaser role. An individual may not be a purchaser for a given product category for two main reasons. First, the individual

may simply not consume that product category. Second, the literature suggests that within the household some members may be in charge of specific purchasing activities (Alreck and Settle, 2002) and travel is no exception (Cooper *et al.*, 1998)

4.4.5.2. Frequency of purchasing

In addition to the issue of whether an individual purchases a product, the likelihood of using the Internet for purchasing a product category has been shown to be associated with frequency of purchase of that product category (Goldsmith and Goldsmith, 2002). The more frequent the purchase, the more likely the person is to purchase over the Internet.

4.4.5.3. Shopping habits and preferences

The individual's shopping habits and preferences are also likely to influence whether the Internet is used for the purchasing of a product category. According to Windham and Orton (2000), "*one of the key factors that facilitated the acceptance of the Web [as a purchasing channel] was the depersonalisation of retailing, a gradual process that took years to unfold" (*p. 6). Several researchers (e.g. Eastlick, 1996; Bellman et al., 1999; Eastin, 2002; Lim, 2003; Yoh et al., 2003) support Windham and Orton's (2000) claim. In general, these studies concluded that previous use of other non-store purchasing methods, such as telephone and catalogue shopping, are an important determinant of the adoption of online shopping. In a similar vein, Efendioglu and Yip (2004) highlighted that there are some cultures that value face-to-face transactions and this may be a barrier to e-commerce adoption. Slyke et al. (2002) suggested that the differences in perceptions about purchasing on the Internet between males and females may be explained not only by differences in attitudes towards technology but also by their shopping practices and preferences.

4.4.5.4. Type of supplier

In section 2.7.3.2. it was shown that the supply side of the innovation is one of the factors influencing its adoption. In the case of e-commerce, the types of products purchased via the Internet are influenced by the extent to which the providers in that industry have adopted Internet shopping (Elliot and Fowell, 2000). Different types of providers can adopt e-commerce at different points in time and with different levels of sophistication. For example, if an individual is loyal to a type of provider and if that type of provider provides the opportunity to purchase online, he/she may feel more motivated to use e-commerce. Conversely, if that type of provider has failed to go online, the loyalty to that provider may result in the rejection/postponement of using e-commerce in the purchasing of leisure travel. Therefore, the extent to which the type of provider an individual wants to purchase from has adopted e-commerce can influence the individual's adoption of e-commerce.

Broadly speaking, there are two types of provider: the principals and the intermediaries. Intermediaries are common in the travel industry, usually taking the form of tour operators and travel agencies. Their main function is to purchase the travel components on behalf of the consumer, but they can also perform other roles such as gathering information on behalf of the consumer or influencing the decision through their advice. In contrast, other tourists may be more independent in their travel arrangements and decide to purchase directly from principals, such as hotels and airlines.

4.4.6. Other variables

According to the diffusion and adoption of innovations theory, the personal characteristics of the individual affect the innovation adoption process. Demographics and psychographics are some variables that have been postulated as associated with purchasing over the Internet. In addition, given that e-commerce involves a monetary exchange between the purchasers and the seller, it is not surprising that payment of purchases has also been shown to influence the adoption of e-commerce.

Demographics

Several researchers have examined demographics in the context of the adoption of e-commerce. Examples of demographic variables include gender (e.g. Li et al., 1999; Vrechopoulos et al., 2001; Goldsmith and Goldsmith, 2002; Slyke et al., 2002; Yang and Lester, 2005), education (e.g. Li et al., 1999; Verhoef and Langerak, 2001; Vrechopoulos et al., 2001), age (e.g. Bellman et al., 1999; Li et al., 1999; Verhoef and Langerak, 2001; Goldsmith and Goldsmith, 2002), income (e.g. Bellman et al., 1999; Li et al., 1999; Kim et al., 2000; Vrechopoulos et al., 2001) and race (e.g. Bellman et al., 1999).

Psychographics

A few researchers have also attempted to understand the effects of psychographics upon e-commerce adoption. For example, Li et al. (1999) proposed a model in which consumer online behaviour is affected by, among other variables, shopping orientations. They view shopping orientations as a specific dimension of lifestyle and operationalised it on the basis of Activities, Interests and Opinions statements pertaining to acts of shopping. Four types of shopping orientations emerged: recreational, experiential, convenience and economic orientation. Kim et al. (2000) tested the effects of consumer lifestyles in the form of price, Internet and time oriented lifestyles upon the perceived benefits and risk associated with purchasing over the Internet.

Payment for purchases

Payment for the purchases have been regarded as a very important determinant of e-commerce adoption (Hoffman and Novak, 1997; Dickey et al., 2000; Eastin, 2002; Efendioglu and Yip, 2004), and a few studies were specifically devoted to this topic (e.g. Stroborn et al., 2004; Walczuch and Duppen, 2004). Stroborn et al. (2004; p. 1432), drawing on the study of Germany, noted that there are a multitude of payment systems available and suggested a classification for payment methods based on the time when the customer's account is charged: prepaid systems, pay-now systems, pay-later systems. Vrechopoulos et al. (2001) suggested a classification based on the alternative payment methods offered by an Internet supplier which includes five methods: credit card through

phone or fax, credit card through the Internet, credit card on delivery, cash on delivery and bank account debit. If at the national level it is possible that several of these payment methods are available to consumers, at the cross-border level consumers have less options. Whatever the geographical reference, credit card is the dominant currency when it comes to Internet payments. ´

In addition it has been suggested that having access to a credit card is associated with the likelihood of purchasing from the Web (Slyke et al., 2002). It can be expected that in the case of high cost purchases, such as leisure travel, the credit limit of the credit cards(s) that the person owns can influence the adoption of purchasing over the Internet. However, individuals may own a credit card but do not use them as a regular payment method. Thus, another factor that may influence the use of credit card for purchasing over the Internet is the extent to which this payment method is used on a regular basis (Stroborn et al., 2004).

Both access and usage of credit cards have been regarded as determinants of the willingness to use them for Internet payments. For example, Windham and Orton (2000) argued that one of the reasons for the rapid success of e-commerce in the United States is the widespread adoption of credit cards by Americans. As they noted, the advent and acceptance of credit cards, and the comfort level in using them as a means of spending, has been an important pre-requisite for e-commerce. However, several researchers (e.g. Eastin, 2002) have noted that many people are reluctant to share their credit card details with Internet vendors, either because they do not trust the 'open' nature of the Internet or because they do not know the Internet vendor.

Walczuch and Duppen (2004) examined the features of payment systems that consumers prefer. They found that security, reliability and privacy are the most important features of a payment system for Internet purchases. Another important finding from this study is the lack of a relationship between the importance of features and the value of the purchase. They also concluded that current payment systems used on the Internet (mainly credit cards) do not satisfy consumer requirements, which may be a reason for the low penetration of e-commerce.

4.4.7. Differential definitions of e-commerce

Although its meaning appears to be intuitive, the term electronic commerce (or e-commerce) has been used in two fundamentally different ways. The examination of the two different perspectives can be best explained through the presentation of the online transaction life-cycle. Peterson et al. (1997) and Vijayasarathy (2002) suggest that the online transaction life-cycle consists of three main stages: communication, transaction and distribution. In the communication stage the information about products flows between business and consumers; in the transaction stage consumers realise orders and pay the purchase; the distribution phase involves the exchange of the purchased products and services between buyers and sellers. The underlying difference between the two definitions of e-commerce is in the stage at which a transaction is regarded as an e-commerce transaction. One approach views electronic commerce as encompassing information transfer. Thus, searching for information about or ordering (without paying online) products and services over the network is regarded as a form of electronic commerce. This broad view can be found in the definitions by Efendioglu and Yip (2004) and Chaffey (2004). Conversely, other definitions imply that electronic commerce is restricted to the actual buying of products which involve a financial mediated transaction. Thus, these definitions assume that electronic commerce only takes place when both the order fulfilment and payment are conducted over the network (e.g. Lim, 2003). While some researchers clearly indicate what definition they have chosen, in many of the investigations the scope of the definition adopted is not clear. In this research the narrow definition was adopted and thus electronic commerce is defined as *"the buying of products via communication networks which involve an online financial transaction"*. Consequently, the term e-commerce is used instead of the term e-business for the reason that e-commerce refers to transactions between businesses and third parties (such as customers), while the definition of e-business encompasses these as well as the transactions within a business (such as internally processing a purchasing order) (Chaffey, 2004).

4.5. Adoption of e-commerce in the purchasing of travel

Several researchers (e.g. Rosen and Howard, 2000; Chen and Tan, 2004) have pointed out the potential of e-commerce to be used as a purchasing channel for travel products. Current data shows that travel is one of the product categories most frequently purchased by consumers. Thus, one would expect to find a large number of studies addressing the adoption and usage of e-commerce by consumers to purchase this product category. However, and perhaps surprisingly, a review of the academic literature revealed that research in this field is scarce. Table 4.2 presents a summary of the studies attempting to understand the determinants of online purchasing of travel products. Some limitations of this research are evident. Most of the research focuses on personal characteristics, notably demographics, with very little use of perceptual variables. In addition, the samples used have been biased towards consumers of the product-category (Heung, 2003; Shon et al., 2003), Internet users (Weber and Roehl, 1999), students (Morrison et al., 2001; Anckar and Walden, 2002; Athiyaman, 2002) and members of a tourism association (Card et al., 2003).

Table 4. 2: Summary of research on adoption of e-commerce in the purchasing of travel

(Source: author)

	Main model	Sample	Product category	Independent variables	Dependent variables
Bonn et al., 1999		Travellers	Leisure travel	Use of the Internet to gather information (users and non-users)	31 variables, including sociodemographics, computer usage and travel patterns
Weber and Roehl (1999)		Internet users	Travel	Use of the Internet to purchase travel in the past six months	Sociodemographics; Importance of online shopping features (not specific to travel)
Morrison et al. (2001)		Students	Travel	Use of the Internet to search for information (lookers) or to purchase (bookers)	Sociodemographics; Internet usage patterns (including those related to travel); Travel related variables; Characteristics of last trip booked online.
Anckar and Walden (2002)		Students	Selected travel products	Complexity of booking (high and low)	Percentage of correct bookings; Perceptual problems.
Athiyaman (2002)	TPB	Students	Airline tickets	Intention to purchase from online vendor or travel agent	Attitude toward purchase Social influence; Perceived behavioural control.
Card et al. (2003)	EBM	Members of a Tourism Association	Travel	Previous use of the Internet to purchase travel (shoppers and non-shoppers)	Personal characteristics; Store characteristics.
Heung (2003)		International travellers		Usage of the Internet for travel information or booking (users and non-users) Country of origin	Sociodemographics; Reasons for using/not using the Internet for travel information or booking.
Shon et al. (2003)		International travellers	Airline tickets	Use of marketing channel to purchase (direct sales, travel agent and website)	Purpose of trip; Education; Income; Travel frequency.
Beldona et al. (2005)		Residents in US and Canada	Seven travel components	Travel product component User skills	Reasons for purchasing at the website.

Moreover, the majority of the studies have either concentrated on travel as a product category (Weber and Roehl, 1999; Morrison et al., 2001; Card et al., 2003) or focused on specific sub-categories such as airline tickets (Athiyaman, 2002; Shon et al., 2003) without clearly differentiating the underlying travel purpose: business or leisure. However, it can be argued that the purpose of the journey can influence the purchasing of the travel components related to that journey. Business travellers usually travel on behalf of an organisation and therefore the costs are usually paid by their employers. They have little discretion in choice of destination or the timing of the trip. Business travellers require maximum flexibility in order to be able to alter their travel arrangements at short notice. Conversely, leisure travellers travel to make use of their free time and usually pay for this type of journey. They are free to make their holiday arrangements well in advance and thus they do not need flexibility. In return, they expect to get a lower price (Holloway, 2002; Cooper et al, 1998).

4.6. Summary of the chapter

This chapter has reviewed how consumer behaviour theory has been applied to the study of the adoption of electronic commerce and its antecedent innovations. Bearing in mind that purchasing by e-commerce requires the use of computers and the Internet, this chapter provided an overview of research on e-commerce from an innovation interdependence point of view. The review showed that most of the research on e-commerce adoption has concentrated on the last stage of that process (i.e. purchasing over the Internet) with limited research investigating the adoption of computers and the Internet. Two reasons were advanced as potential causes for this lack of research. First, the pro-innovation bias pervading research on the adoption of e-commerce. Second, the most frequently used consumer behaviour models treat the variables that are not directly related to the main behaviour as external to the model. The review of the literature has also demonstrated that studies that attempted to relate the computer/Internet adoption to e-commerce adoption have done it only on a very limited basis, usually using the outputs of adoption (i.e. computer/Internet), perceptions of skills or experience as surrogates of adoption.

The chapter then moved on to examine the previous research on the adoption of computer-based innovations (i.e. computers and the Internet) and e-commerce. Most of

the research on the adoption of computers and the Internet has been developed using the Technology Acceptance Model (TAM). Similarly, the majority of research on the adoption of e-commerce was shown to have used TAM as the theoretical underpinning. The underlying assumption is that because e-commerce is heavily technology driven, the assumptions of TAM remain valid to the adoption of e-commerce.

Several researchers have studied the adoption of computers/the Internet and e-commerce from a Diffusion of Innovations (DAI) point of view. Two main areas of this model have been explored: innovativeness and the perceived innovation attributes. There are some similarities between TAM and DAI model, notably in terms of the beliefs that are postulated to influence adoption. However, TAM has a more restricted belief set than DAI and some researchers have pointed out that the latter may be more appropriate in the context of complex and voluntary innovations. Other models utilised to study the adoption of e-commerce include the comprehensive models of consumer behaviour (Howard and Sheth and Engel et al.) and the transaction cost models and TRA/TPB, although they have been used to a much less extend than TAM and DAI.

As shown in Chapter Three, TRA involves the use of an expectancy-value model of attitudes. Despite that TAM is based on TRA, in TAM the evaluation weights are not directly measured but estimated using linear regression. Thus, the attitude model underlying TAM studies can be regarded as a composite model. Given that TAM and DAI pervades research on the adoption of computers/Internet/e-commerce, the majority of research on attitudes towards these innovations resembles the composite model. The multicomponent model has also been adopted by several researchers for studying the adoption of computers and the Internet. However, no research on the adoption of e-commerce was found that had used the multicomponent model of attitudes. One important limitation of computer/Internet attitude research is a 'bias' towards other than leisure settings as most previous scales tend to be focused on business or educational uses.

This chapter has also reviewed the research on the perceived characteristics associated with using computer-based innovations and e-commerce. Several attributes which are likely to affect the use of innovations were described, notably relative advantage, complexity, compatibility, visibility, perceived risk and image. Research on affect associated with using computers/the Internet has been restricted to some negative feelings, such as anxiety and frustration, and the positive feelings of fun/enjoyment. With few exceptions, research on

the adoption of e-commerce has failed to incorporate feelings towards using e-commerce. In addition, no studies have attempted to understand the consumer's level of involvement with using either computers/Internet or e-commerce.

The literature review has also demonstrated that computer/Internet experience is associated with their adoption. It was suggested that experience can be divided into objective and subjective experience. Objective experience, in turn, is constituted by direct and indirect experience. Direct experience involves the individual's previous and/or current usage of the innovation. Three measurable components of direct objective experience were described: amount of computer/Internet use, opportunity to use and diversity of experience.

Additional variables that have been posited as influencing adoption include demographics, psychographics and the payment for purchases. However, although research suggests that demographics (e.g. gender, age and education) are associated with adoption, there is a debate on the effects of demographics on the latter.

Bearing in mind the importance of the product category for the adoption of e-commerce, it was argued that the purchase patterns of the product-category need to be carefully addressed. Using e-commerce is a means to obtain products and consequently the behaviours associated with the product category under research are an important determinant of the adoption of e-commerce. Four specific determinants were suggested: the extent to which the consumer performs the purchaser role, the frequency of purchasing the product category, the type of supplier used by the consumer use and the consumer's shopping habits and preferences.

Despite travel being one of the most purchased products over the Internet, research on the adoption of e-commerce in the purchasing of leisure travel is limited in number and scope. Similar to other fields of e-commerce adoption, most of the research has focused on Internet users and purchasers or on consumers of the product category. In addition, the majority of the studies attempt to understand the relationship between personal characteristics and e-commerce adoption, with very little research studying perceptual variables.

5. Methodology

5.1. Introduction

Conducting research in a new field is not a simple task. As the literature has shown, research on the adoption of electronic commerce is still in its infancy. The literature has also demonstrated that consumer behaviour models were not developed for studying the choice of purchasing channels. Rather, they were developed for the study of consumers' choice of products and services. Yet, these are two fundamentally different (although inter-related) processes, as one can be seen as the end (obtaining a product/service) and the other as a means to that end (how the products and services are obtained). Consequently, one of the main methodological challenges facing this research was the adaptation of consumer behaviour models and concepts to the study of the adoption of electronic commerce.

The aim of this chapter is to describe the overall methodology of the research. Specifically, this chapter discusses the research process and the main methodological steps necessary to achieve the objectives of the study. The chapters starts by providing the conceptual framework used in this research, including the main concepts and the hypothesised links between them. Next, the chapter discusses the nature of quantitative and qualitative methodologies, notably the characteristics, advantages and disadvantages of each, leading to the justification of the approach adopted. The section devoted to the research process describes the various steps involved in the research design, ranging from the formulation of the research topic to the framework of analysis. Finally, the limitation and issues of validity and reliability faced in this research, including the selection of the independent variables and the analysis of non-response, are examined.

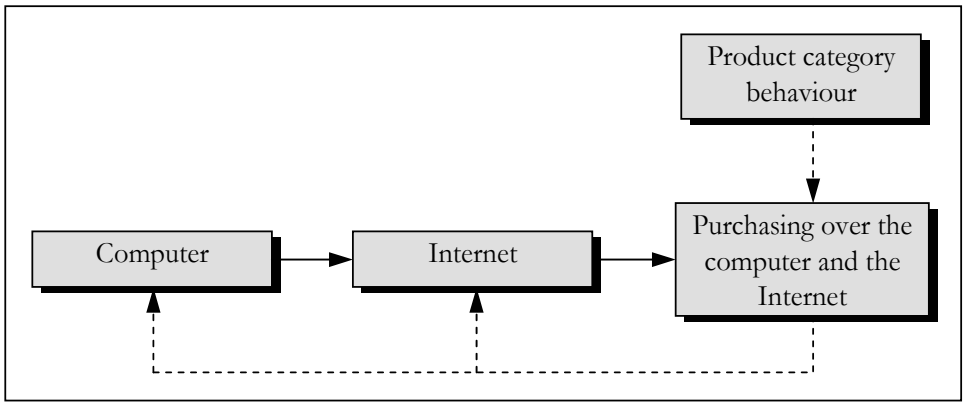
5.2. Conceptual framework

In chapter two (section 2.9.1) it was argued that studying the adoption of e-commerce should be approached from an innovation interdependence point of view. Yet, a review of

the literature on the adoption of e-commerce (Chapter 4) revealed that previous studies have largely ignored its interdependent nature. Therefore, this research aims to fill this gap by putting forward a conceptual framework which associates the adoption of one innovation with the adoption of other related innovations (Figure 5.1). More specifically, the adoption of electronic commerce is linked to the adoption of two other innovations, namely computers and the Internet. The consumer adoption of e-commerce is, thus, viewed as a three stage process, starting with the adoption of computers, followed by the adoption of the Internet and ending with the adoption of purchasing through the computer and the Internet. Implicit in this perspective is the view that the adoption of the computer influences the adoption of the Internet and the adoption of the Internet influences the adoption of purchasing over the computer and the Internet. Presumably, the adoption of the computer also influences the adoption of purchasing over the Internet, but only indirectly. In other words, the adoption of the computer is viewed as a necessary condition for the adoption of the Internet and the adoption of the Internet as a necessary condition to the adoption of the purchasing over the Internet.

Figure 5. 1: Conceptual framework of the research (1st order)

Source: Author



Additionally, the framework acknowledges the existence of feedback within the system. It is hypothesised that the adoption of purchasing over the Internet can influence the adoption of computers and the adoption of the Internet. Similarly, the adoption of the Internet can also influence the adoption of the computer. This feed-back influence is mainly achieved through a process of satisfaction/dissatisfaction.

There is a fourth main variable posited to influence the adoption of electronic commerce. Past research has shown that the adoption of electronic commerce varies according to the product-category being purchased (see section 4.4.6). Hence, the purchasing and consuming of travel is regarded as a variable influencing the purchasing of leisure travel over the computer and the Internet.

After selecting the core variables (i.e behaviours) influencing the adoption of electronic commerce (which make up the **first order** conceptual framework), the research moved on to select the variables/concepts posited to influence each of the behaviours making up the first order framework. This will be regarded as the **second order** conceptual framework.

As mentioned earlier (see section 2.4.2), this research was developed from a cognitive point of view. Cognitive theories assume rational consumer decision-making behaviour and emphasise that observed behaviour is explained by intrapersonal information processing. In Chapter Two some of the models that have been developed using the cognitive paradigm were presented: the Theory of Buyer Behaviour (Section 2.7.1), the Consumer Decision Model (Section 2.7.2), the Diffusion and Adoption of Innovations model (Section 2.7.3), the Theories of Reasoned Action/Planned Behaviour (Section 2.8.1) and the Technology Acceptance Model (Section 2.8.2). From these models, the diffusion and adoption of innovations model was selected as the basis for this research as it provides an appropriate theoretical underpinning for the study of an innovative behaviour like the adoption of e-commerce.

One of the issues that needs be addressed in the case of innovation interdependence is whether to use the same or a different framework for each of the interdependent behaviours. The adoption of innovations model was used to explain the adoption of Internet purchasing, as well as the adoption of computers and the Internet, for two main reasons:

- The model is mostly suitable for studying technology-based innovations (Hirschman, 1980) and, it can be argued, computers, the Internet and purchasing over the e-commerce are innovations that fall within this criteria (Pavlou, 2003);

- An unified conceptualisation enables the comparison of variables across behaviours;

In order to include a richer set of variables in the conceptual framework, several contributions from other models were sought. In terms of the variables related to the adoption of each of the three innovations of the innovation network, the main concepts to be studied and the underlying rationale for their inclusion were (Figure 5.2):

- **Motives**: the Howard and Sheth (1969) model of consumer behaviour postulates that motives exert a strong influence on consumer behaviour. It has been suggested that motives affect other variables such as the evaluative criteria used to evaluate the brands and attitude. Motives are linked to needs and therefore an understanding of the motives associated with using an innovation can contribute to the identification of what is leading, or what could lead, consumers to use, or not to use, each of the innovations.

- **Involvement**: implicit in the adoption of innovations model is the contention that individuals tend to be highly involved with the innovation, that is, that any innovation is relevant to every individual. However, some researchers have questioned this assumption (e.g. Strader and Shaw, 2000; Worthy et al., 2004). Therefore, involvement with the innovation, a variable included in Engel et al's and Howard and Sheth's models, was incorporated in the conceptual framework, as it gauges the level of personal relevance of the innovation.

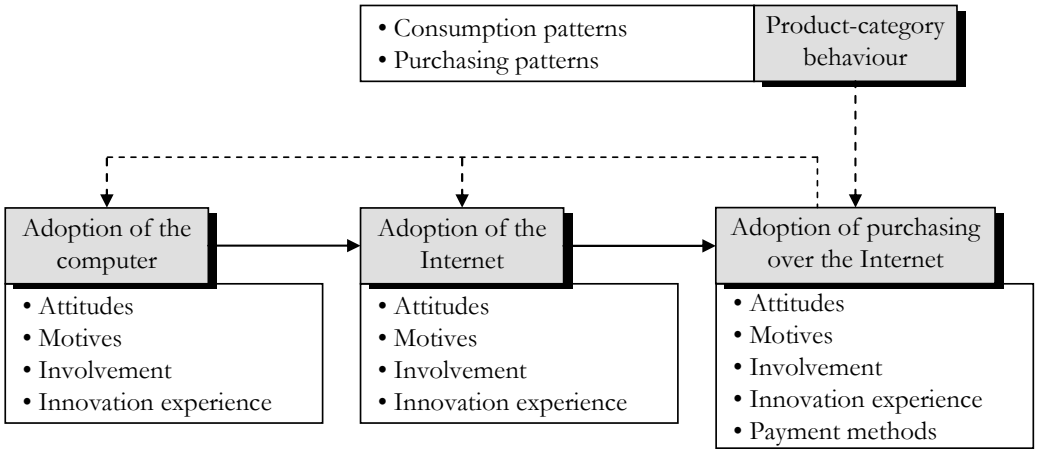
- **Attitude**: the literature has shown that the consumers' evaluation of a behaviour has a strong influence on whether they will perform that behaviour. It was also shown that the most common way consumer behaviour models use to gauge consumers' evaluation of the object is through the concept of attitude.

- **Innovation experience**: Section 4.4.3 demonstrated that the experience with an innovation was also an important element in explainaing the usage of that innovation, as well as the adoption of other related innovations.

- **Payment for the purchases**: Payment for the purchases has been shown to be a very important determinant of e-commerce adoption (see section 4.4.6). Moreover, past research in Portugal suggests that the consumers' concerns about payment over the Internet are among the most frequent reasons cited for not purchasing over the Internet (UMIC, 2002; UMIC, 2004).

Figure 5. 2: Conceptual framework of the research (2nd order)

Source: Author



Besides the three innovations comprising the innovation adoption network, the first order conceptual framework also postulates that product category behaviour influences the adoption of e-commerce in the purchasing of leisure travel. Thus, two types of variables related to the product-category behaviour were selected to be part in this study. The first is the **purchasing** of the product category. Consumers develop purchasing patterns over time and leisure travel is no exception. These patterns are likely to provide an important clue as to why they use, or would use, e-commerce when purchasing leisure travel. Consequently, the habits and preferences of consumers in the purchasing of leisure travel are regarded as a variable influencing the adoption of e-commerce.

The second variable related to the product category behaviour that was selected for inclusion in the conceptual framework was **consumption**. In the case of leisure travel, the purchaser is also likely to be the traveller, that is, the user. Consequently, one of the reasons for not becoming an adopter of e-commerce in the purchasing of leisure travel may be the lack of consumption of leisure travel. Therefore, the frequency of travel is posited as a contributing factor to the adoption of e-commerce in the purchasing of leisure travel.

5.3. Qualitative versus quantitative research

The first question that had to be addressed as a result of the conceptual framework was whether to use a quantitative or qualitative methodology. Although quantitative and qualitative methodologies share some similarities, such as logic (Punch, 1998), they are different in their nature and structure (Sarantakos, 1998). More specifically, they encompass the use of different types of data, methods of data collection and processes of analysis (Punch, 1998).

Quantitative research is associated with the positivistic or hypothetico-deductive paradigm. The emphasis is placed on measuring the phenomenon using highly structured techniques of data collection and the use of quantitative methods of data analysis (Sarantakos, 1998). Quantitative data enables standardised and objective comparison, resulting in an overall description of the phenomenon in a systematic and comparable way (Punch, 1998). In contrast, qualitative research is associated with the interpretative paradigm and its emphasis is on discovery and exploration rather than on hypothesis testing. Hence, qualitative researchers resort to less structured techniques of data collection and analysis (Sarantakos, 1998). In addition, qualitative research accommodates better the context in which individuals are embedded (Punch, 1998). A comparison between the essential features of qualitative and quantitative methodologies is presented in Table 5.1. The differential features are presented in their 'pure' form (Sarantakos, 1998) but, as Punch (1998) noted, *"the same logic drives both types of empirical inquiry (...) which makes combining the approaches possible"* (p. 240).

In the face of these two different perspectives, should a qualitative or quantitative approach be taken? Bearing in mind the strengths and limitations of each approach, it is apparent no type of research is better than the other. Both types are important, although suitable for different types of inquiry (Sarantakos, 1998). Based on criteria suggested by Punch (1998), the quantitative approach was used in this research for the following reasons.

First, there is an interaction between questions and methods and the latter must be appropriate to answer the research questions. The primary aim of this research is to understand the extent to which the different stages in the e-commerce adoption path are related with a series of variables related to the adoption of each of the innovations

comprising the conceptual framework. As the study concentrates on studying differences between the elements of the sample, quantitative research is more appropriate (Sarantakos, 1998).

Table 5. 1: Comparison between the essential features of qualitative and quantitative research

Source: Adapted from Sarantakos (1998) and Jennings (2001)

Feature	Quantitative research	Qualitative research
Purpose	Explain social life	Understand social life
Ontological view	Causal relationships	Multiple realities
Theoretical aim	Theory testing	Theory building
Historical context	Ahistorical – interested in explanations over space and time	Historical – interested in real cases
Research process	Pre-determined	Influenced by the respondent
Proximity of the researcher	Distant from respondent	Close to the respondent
Scope	Particularistic – studies elements, variables	Holistic – studies whole units
Sampling	Random	Theoretical
Priority of the study	Studying differences	Studying similarities
Data analysis	Reductive, statistical analysis	Explicative, themes and motives
Level of measurement	High levels	Low levels
Epistemological view	Objective	Subjective
Research approach	Deductive	Inductive
Research design	Closed – strickly planned	Open and flexible in all aspects
	Static and rigid	Dynamic
	Replicable	Study specific
Representation of data	Numeric	Textual
Representation of findings	Statistical tables and graphs	Narrative

Second, the literature review revealed that the existing theories of consumer behaviour would provide a sound theoretical ground for the development of this research. Because most of these theories have not been applied to the general context of purchasing channels, and specifically to purchasing over the Internet, the effort was placed on theory testing rather than on theory development.

In addition, practical considerations also influenced the option for a quantitative approach, notably the limitations of cooperation from respondents. If the time of face-to-face contact with the respondents was not kept to a minimum, gaining cooperation would have been difficult. Moreover, due to the restrictions of time and money, a quantitative approach was regarded as the most cost-effective.

Finally, the option for a quantitative approach was also influenced by the 'knowledge payoff' criteria, which refers to what type is likely to provide more learning about the phenomenon. The results of this research are likely to be of interest to policy makers and

managers in the fields of ICT and tourism. These are likely to be more receptive to a macro perspective about the adoption of electronic commerce, rather than with the experiences of a few respondents.

5.4. The research process

This section will discuss in detail the research process adopted, that is, the sequential steps or stages involved in planning the research. Many authors have modelled the research process (e.g. Oppenheim, 1992; Tull and Hawkins, 1993; Pizam, 1994; Sarantakos, 1998), ranging the number of steps from four to fourteen. However, these models tend to have a similar view of the research process. Any differences seem to lie more in the way the process is presented rather than in content. The research process adopted in this thesis is presented in Figure 5.3 and follows the seven steps proposed by Pizam (1994).

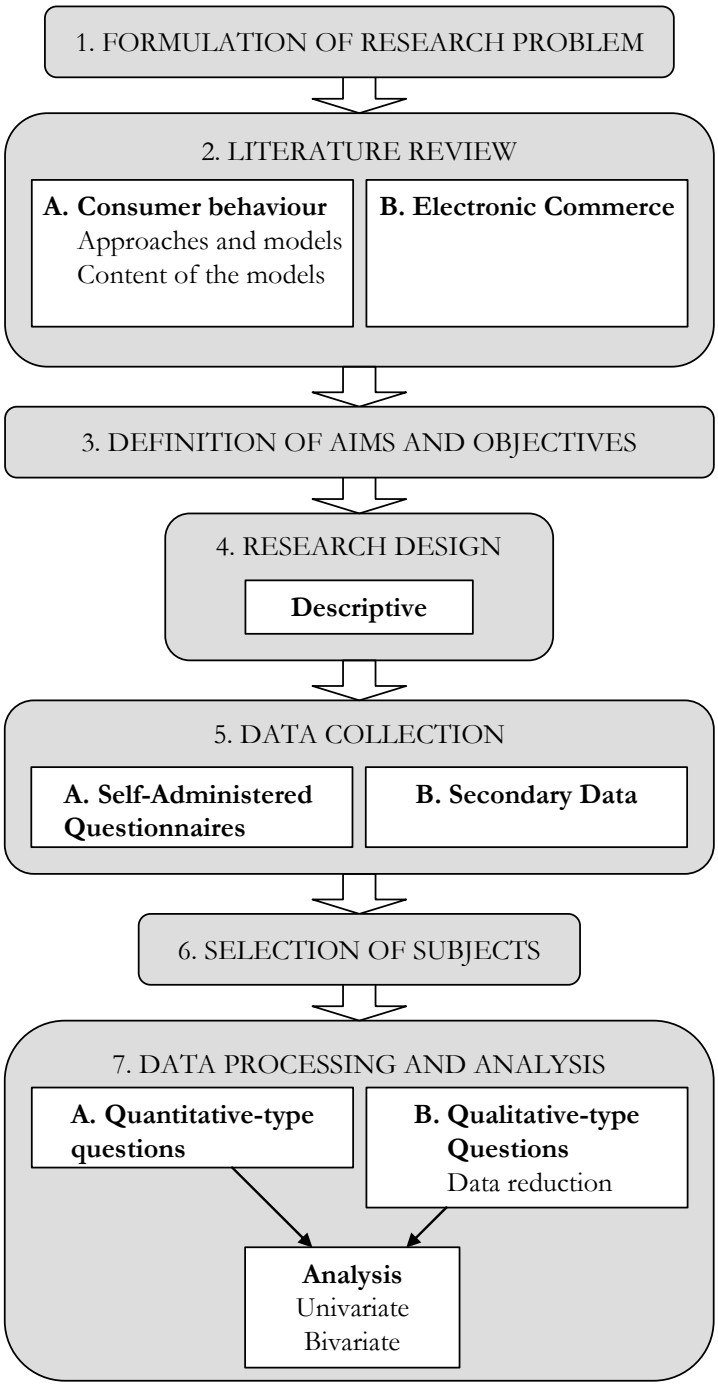
5.4.1. Formulation of the research topic

The starting point of every research investigation is the definition of the research topic. The general topic of the research, as Pizam (1994) pointed out, may be suggested by two types of concern: practical and scientific. Jennings (2001) added a third major category of reasons that may affect the selection of the research topic: the personal interest of the researcher. The research topic of this survey was influenced by practical and scientific concerns as well as personal interests.

First, from a practical point of view, this research is the first attempt to provide the travel industry and electronic commerce stakeholders in Portugal with in-depth information about the adoption of electronic commerce in the purchasing of leisure travel. This is very important as the development and implementation of electronic commerce strategies by tourism businesses and tourism boards has been grounded in scarce information pertaining to the characteristics, attitudes and expectations of Portuguese consumers.

Figure 5. 3: Stages of the research process

Source: Author



Second, from a scientific point of view, electronic commerce is still in its infancy and very little has been researched in this field. If electronic commerce is to become successfully established in society, it is important to understand the factors influencing its adoption. As

far as tourism is concerned, it is important to explore the barriers and opportunities for the electronic commerce being used in the purchasing of leisure travel. Only then can business strategies be devised and implemented based on a sound knowledge about how consumers might behave.

Finally, since the researcher holds a degree in tour operating management, an investigation focusing on the tourism industry in general, and specifically on the issues associated to the tourism distribution channels, was a natural step forward in extending and deepening knowledge about the industry. The decision about approaching the research from a consumer point of view was led by the researcher's desire to gain a better understanding of this complex discipline.

5.4.2. Review of related research

Once a research topic is defined, the next stage involves reviewing the related studies, that is, doing a literature review. The role of the literature varies according to style of the research (Punch, 1998). Generally speaking, in quantitative research it is extensively conducted during the planning stage. Conversely, in some types of research, such as grounded theory, the literature coverage is delayed until directions emerge from the early analysis of data. In quantitative research the literature is an integral part of the research planning and its main role is to support the question development stage (Punch, 1998).

For this thesis, three different types of literature review were conducted (Cooper, 1984):

- A *theoretical research review*, which presents and compares the different theories for explaining the phenomenon under investigation. This theoretical review was divided into two areas: the approaches and models (Chapter Two) and the content of the models (Chapter Three). Chapter Two presented and compared several consumer behaviour models in order to provide an essential analytical tool for this investigation. Chapter Three has shown how several variables related to the person and to the characteristics of the object of research might be important in explaining consumer behaviour. In addition, an overview of how these variables have been

used in previous research was undertaken, with a view to explore alternative conceptualisations and methodologies.

- An *integrative research review*, which summarises past research and identifies conclusions based on different studies related to the topic of research. This review, presented in Chapter Four, provided an overview of how other researchers have investigated the adoption of e-commerce.

- A *methodological research review*, carried out in this chapter, examines the different research methods that have been used to solve the research problem. The different research methods are discussed in order to identify the most appropriate course of action for achieving the research aim and objectives.

The literature review was undertaken in three different stages. An initial literature review was conducted with the aim of supporting the research proposal. Here, the focus was on finding relevant theories and concepts associated with the topic of research, in order to emphasise the pertinence and *researchability* of the study as well as to help define the research questions and the broad methodological options.

After this initial revision, the task continued but its purpose was slightly different. The second stage of the literature review was carried out in order narrow down the topic, refine the research questions, and develop the conceptual framework. Additionally, this stage enabled the preparation of the research instrument and the setting up of the strategy for data collection.

The final stage of the literature review took place after the conclusion of primary data collection and concentrated on updating the previous literature reviews. This involved the identification and evaluation of the most recent work, a task that was critical in this thesis since between stage two and three of the literature review nearly two years had elapsed.

For the review of the literature, several sources were used to provide information on the adoption of electronic commerce in the purchasing of leisure travel. The main sources of information included:

- Books, conference papers, newspapers and reports obtained from British and Portuguese University library's, organisations and trade associations;

- Key journals, mainly the Journal of Consumer Research, Journal of Consumer Marketing, Journal of Advertising, Journal of Consumer Psychology, European Journal of Marketing, Journal of Services Marketing, Information Technology and Tourism, were searched for articles related to consumer behaviour, electronic commerce and travel distribution;

- Key words (e.g. adoption of innovations, attitudes, involvement, motives) were searched in a variety of databases, mainly ScienceDirect and Emerald Fulltext, as well as in various Internet search engines (e.g. Google; Sapo);

- A review of the content of the above sources was used as a source for further relevant material.

5.4.3. Identification of aims, objectives and research questions

The literature review revealed several major shortcomings of past research in the field of consumer behaviour and electronic commerce. First, the lack of consumer behaviour models addressing the wider context in which one innovation is adopted. This vacuum has led researchers to portray a narrow view of the process by which electronic commerce is adopted, with an over emphasis on the last stage of the process (purchasing over the Internet), underemphasising the antecedent behaviours (using computers and the Internet). A second limitation pertained to the little research on consumer adoption of e-commerce, with most research concentrating on consumers close to the top of the ladder of adoption (i.e. users of the Internet and of e-commerce). Third, a lack of research on the adoption of electronic commerce in the purchasing of leisure travel was also evident. Finally, the restricted research output focusing on the adoption of e-commerce by Portuguese consumers, notably in the purchasing of leisure travel. These shortcomings led to the adoption of the following aim:

To evaluate the influences on the adoption of e-commerce in the purchasing of leisure travel

After the identification of the research aim, the following research objectives were formulated:

- To develop a conceptual framework for researching the adoption of e-commerce in the purchasing of leisure travel;
- To examine the extent to which the factors influencing the adoption of e-commerce change along the ladder of adoption;
- To investigate the relationship between the adoption of computers and the Internet and the adoption of e-commerce in the purchasing of leisure travel;
- To determine the relationship between the travel purchasing and consumption behaviour and the adoption of e-commerce in the purchasing of leisure travel;
- To evaluate the barriers and opportunities for the adoption of e-commerce in the purchasing of leisure travel.

5.4.4. Research design

There are three main types of research design: exploratory, descriptive and explanatory (Tull and Hawkins, 1993). The choice of research design is guided by the research situation, notably the research questions (Fawcett and Downs, 1992; Punch, 1998). This research adopted a descriptive stance and a survey approach was used in order to evaluate the influences on the adoption of e-commerce in the purchasing of leisure travel. A descriptive design was used because it aims to *"describe social systems, relations or social events, providing background information about the issue in question as well as stimulating explanations"* (Sarantakos, 1998; p. 6). More specifically, its purpose is to describe the phenomenon under study by accurately describing the variables (facts and characteristics) of the research model (Tull and Hawkins, 1993; Jennings, 2001).

Moreover, descriptive designs are flexbile in accommodating different sources of information. However, surveys and case studies are the two major types of descriptive designs (Pizam, 1994). Surveys, as defined by Tull and Hawkins (1993), are studies that enable the *"systematic gathering of information from respondents for the purpose of understanding or predicting some aspect of the behaviour of the population of interest"* (p. 164). In surveys respondents are asked a variety of questions regarding their behaviour, intentions, attitudes, awareness,

motivations, and demographic and lifestyle characteristics (Malhotra, 2004). Tull and Hawkins (1993) add that one important feature of surveys is that they can provide evidence of association (though seldom can prove cause).

5.4.5. Data collection techniques

All research involves collecting some sort of data and social research is no exception. There are two broad types of data collection: primary and secondary (Malhotra, 2004; Tull and Hawkins, 1993). Secondary data were developed for other purposes than the current research problem. Conversely, primary data are originated by the research and are collected to help to solve the current research problem. This research involved both data collection types.

Secondary sources enable researchers to go back in time, are usually easily and quickly accessible and tend to be free or have minimal costs (Sarantakos, 1998). Moreover, Jennings (2001) asserts that some research tends to meet high research standards, such as those produced by governments and commercial research institutions. Therefore, documents were gathered from public and private organisations in Portugal (e.g. Ministry of Science, National Statistics Bureau, National Tourism Board) and England, in order to collect potentially relevant information for the research (e.g. statistics). However, when dealing with the collected documents, one has to be aware of the potential limitations. In broad terms, these disadvantages are related to accessibility, methodological issues and a lack of complete knowledge of the process under which the documents were produced (Jennings, 2001).

Since secondary data was less than sufficient to obtain the data required for the research, most of the data was collected through **primary methods**. Questionnaires and interviews are the two main methods for primary data collection. The decision of which technique to use resulted from a consideration of the advantages and limitations of both techniques bearing in mind elements such as the aims of the survey, the nature of data to be collected, the characteristics of the population and the resources available. Considering all these factors, it was decided to use **questionnaires** as the main method of primary data collection because:

- There were resource constraints in terms of both time and money. Because questionnaires are relatively inexpensive (Sarantakos, 1998; Pizam, 1994; Oppenheim, 1992), have a low processing cost (Oppenheim, 1992) and produce quick results (Sarantakos, 1998), they were deemed to be the most appropriate technique.

- Questionnaires can be completed at the respondent's convenience (Sarantakos, 1998). The information requirements were substantial and hence the time of an interview would be at least one hour. However, it was anticipated that requesting respondents to face an interviewer for this period was expected to provide respondents with a reason for refusing participation.

However, questionnaires have some important limitations, including the impossibility of probing or clarification of questions and answers and correcting misunderstandings (Sarantakos, 1998; Oppenheim, 1992). Questionnaires are not suitable for respondents of poor literacy or language difficulties, for the visually handicapped, the very old or for children (Oppenheim, 1992). In addition, the researcher cannot observe the conditions under which the questionnaire was answered. Moreover, they do not offer opportunities for motivating the respondent to participate in the survey or to answer the questions (Sarantakos, 1998), which may produce low response rates (Oppenheim, 1992). With mailed questionnaires it is not unusual to have a response rate as low as 20% (Pizam, 1994).

To overcome the limitations of using questionnaires, a brief structured **interview** (Jennings, 2001) was also conducted. The main aim of this interview was to identify the respondent within the household and to deliver the questionnaire to the individual (a detailed description of how this interview was undertaken is presented in section 5.5.8.). At the same time, the interview aimed to gather demographic details and experiential information of the respondent (i.e. the person selected to take part in the study) in terms of computers, Internet and Internet purchasing. This was undertaken in order to control for non-response. Moreover, it provided the opportunity to emphasise the importance of being the selected individual, and not someone else more motivated or with more knowledge about the topic, to answer the questionnaire. Finally, interviews were also used with the aim of motivating the individual to participate in the study, by giving a 'face' to the research, enhancing its credibility and personally expressing gratitude for the cooperation.

5.4.6. Selection of subjects

After the decisions about data collection techniques were made, the research concentrated on selecting the subjects that would be invited to participate in the research. The selection of subjects involved two main tasks: the definition of the population and sampling.

Population is the target group who would, in the ideal world, be the subject of the research, and about whom one is trying to say something (Punch, 1994). As Hoinville and Jowell (1977) argue, the decision about a survey population stems more from the purpose of the survey than from sampling considerations. To fulfil the aims of the research, the procedures associated with the selection of subjects had to ensure that all elements of the population that hypothetically are able to make an electronic purchase, as well as actual and potential purchasers of the product category under research (i.e. leisure travel), were included. Therefore, in light of these conditions, and due to research limitations, time and money, one borough in Lisbon's district – Cascais – was selected as the social system for the research. By choosing Cascais, the cost of reaching the respondents was kept reasonable as it was the place of residence of the researcher.

As McDonald and Dunbar (1998) noted, if the researcher wants to ensure that the potential of each individual is assessed, the investigation should study all individuals who potentially can become users and not just the part of the market that currently uses the product/service. Only by including users and non-users can the need for the innovation be fully determined (Weinstein, 1994). This study adopted this view and hence all members of the population between 18 and 69 were regarded as potential users of the Internet to purchase leisure travel. The lower border arises from the fact that people under 18 are not likely to be shoppers for travel products nor owners of credit cards, the most frequent payment system on the Internet. The upper border stems from the fact that people over 70 are less likely to travel and, if they do, the tendency is to decrease the travel intensity. By focusing on all members of the population, the study sheds light over the attitudes and behaviours of a part of the market neglected by past research on e-commerce – the less experienced with computers and the Internet.

Ideally, research should study all the elements within a population (census). However, since complete coverage of the population was impractical, data was collected from a sub-set of

the population, that is, a sample. There are two main types of sampling procedures: probability and non-probability sampling (Tull and Hawkins, 1993; Sarantakos, 1998; Diamantopoulos and Schlegelmilch, 2000; Jennings, 2001; Robson, 2002). Probability sampling, which is driven by the assumption that *"the sampling units are selected by chance and for which there is a known chance of each unit being selected"* (Tull and Hawkins, 1993; p. 543), was used in this research because it has a high degree of reliability, favours representativeness and has a high generalisability of the results (Sarantakos, 1998).

Having defined the population for the survey as *"all residents in the borough of Cascais, aged between 18 and 69 years old"* and decided on probability sampling, the next step was to specify the sampling procedure in detail. One method of selecting residents is to approach them in the place they live. One way in which this can be achieved is by obtaining a list of residents, identify their addresses and visit them. Initially, using a systematic sampling from residents lists, such as electoral registers or telephone directories, was explored. However, this was abandoned because in Portugal the electoral registers are confidential and many residents might not have telephone or, if they do, they may not have them listed in a telephone directory.

Therefore, a multi-stage sampling procedure was adopted. Multi-stage sampling is the process by which a sequence of samples is drawn from samples already selected but only the last sample of subjects is studied (Sarantakos, 1998). More specifically, a three stage sampling procedure was employed.

Stage 1: the choice of streets

A list of streets was obtained on each for the six parishes comprising the borough of Cascais. A total of 2578 streets were identified. Parishes were the favoured source of information for identifying the streets and four out of six – Carcavelos, Estoril, Parede, S. Domingos de Rana – had updated street lists. The streets of the other two parishes – Cascais and Alcabideche – were collected from a Streets Guide published by a local publishing house. While the first source assures the reliability and up to date nature of information, the sources the publishing house used for its compilation are not known. Nevertheless, a comparison for Estoril parish showed only minor differences between the

two sources and hence the use of the list of streets from the publishing house was deemed appropriate.

The streets were sorted alphabetically (the titles, such as road, avenue, square were removed) and divided in groups of 50 streets, which resulted in 52 groups. In each group the streets were numbered from 1 to 50. A number between 1 and 50 was then randomly selected and the street with that number in each group was selected to take part in the sample. Each street was then visited and the following guidelines were established for selecting households.

Stage 2 - The choice of the household

In order to ensure randomness of the sample, the choice of households also needed to be random. Properties/buildings with at least one mailbox and a gate/door to the street were considered a 'house'. Thus, the term 'house' encompasses block of flats and detached and semi-detached houses. The starting point was the second house on the right hand side of the street and then every other house was selected (2^{nd}, 4^{th}, 6^{th}...). Houses in both sides of the street were selected. Once the house was identified, one household in every floor was selected. If the floor had more than one household (usually confirmed by the number of mailboxes), a selection criteria previously randomly established was applied. For example, if the floor had four doors, the first door on the left was chosen.

Stage 3: The selection of the respondent

In order to keep the sample random, the person whose birthday was next was selected (bearing in mind the lower and upper age limits), which is a procedure used and accepted by researchers (Sarantakos, 1998). Initially (first two weeks), only those who were in the house at the moment of the visit were considered for participation. However, this was a potential source of bias since it would leave out those who due to several reasons (e.g. work late) were not at home in the evening. Therefore, the procedure was changed in order to include all the members of the household.

5.4.7. Questionnaire design

Questionnaire design involves several major decision making areas (Tull and Hawkins, 1993). The **preliminary considerations** refer to what type of information is to be collected, from which respondents and by what techniques. The latter two issues have been dealt with previously and hence only the type of information to be collected is addressed here.

The information requirements are a direct consequence of the research questions. Hence, following the conceptual model adopted by this research, the questionnaire collected information pertaining a series of variables associated with four behaviours:

- Travelling;
- Using computers for leisure purposes;
- Using the Internet for leisure purposes;
- Purchasing tourism-related products for leisure purposes over the Internet.

More specifically, the questionnaire covered several elements likely to influence these behaviours (as suggested by the literature review), such as involvement and motives, attitudes and usage patterns. As Ajzen and Fishbein (1980) suggested, all the perceptual measures were designed to correspond in terms of behaviour, target, time and context. All measures in the study refer to a specific behaviour, a specific target, a specific context and a general time frame.

Question content is centred on the general nature of the questions and the information that the questionnaire is designed to produce. At this stage, the focus was on the decisions regarding what specific approaches and scales to include. For example, in the preliminary decisions stage a decision was made to study attitudes. At the question content stage, the decision of the specific model of attitudes was made and the tripartite model of attitude was chosen. Additionally, the decision about what scales to use for measuring each of the variables was made.

As far as **attitude** is concerned, the multicomponent model was selected because, as was demonstrated in Chapter Three, it had not been used before to study the adoption of e-commerce. In addition, advocates of the multicomponent conceptualisation argue that this model ensures comprehensive measurement of consumers' attitudes (Selwyn, 1997). Finally, it has been demonstrated that affect (feelings) has an important influence upon behaviour beyond the cognitive evaluation.

The adoption of the innovations (Rogers, 1995) model provides a rich set of innovation characteristics with which to evaluate consumers' perceptions of an innovation and these were used to specify the content of the *cognitive component*. Six perceived innovation characteristics were selected (Plouffe et al., 2001; Rogers, 1995; Moore and Benbasat, 1991; Ostlund, 1974): relative advantage, complexity, compatibility, visibility, image and perceived risk:

- Four statements assessed the *relative advantage* associated with using the innovation (Eason, 1998): the extent to which using the innovation would reduce the use of resources (two items, one related to time and the other to effort), would improve support (quality) and would result in personal enhancement (quality of life).

- *Complexity* was also measured by the means of four items. Three items (complexity/simplicity of use, ease/difficulty of learning and ease/difficulty of use) were based on previous research (Strutton et al., 1994). One additional item was added by the researcher, encompassing the extent to which the respondents perceived the innovation as easy/difficult to learn by themselves.

- Two statements were developed by the researcher to measure *compatibility*: compatibility with daily routine and approval by friends.

- The *visibility* associated with using computers was measured through three items: 'have seen what others do when using a computer', 'had several opportunities to see a computer being used' (both drawn from Moore and Benbasat, 1991) and 'have seen important people using a computer' (developed by the researcher). Two statements measured the visibility of e-commerce. One statement measured sight visibility ('have seen others using the innovation') as was taken from Moore and

Benbasat (1991); the other measured verbal visibility ('have talked to others about the innovation') and was developed by the researcher.

- *Image* was measured by the means of four items. The statements to the benefits in terms of prestige and status were taken from the work of Moore and Benbasat (1991). The statements concerning the benefit in terms of self-image and the compatibility with image that the individual wants to convey to others were developed by the researcher.

- *Perceived risk* associated with using computers was covered by two statements (Eastlick and Lotz, 1999; Tan, 1999), one pertaining to psychological risk ('afraid life becomes dependent on computers') and one to time risk ('using a computer is a waste of time'). Two statements were also used to gauge the risks associated with purchasing leisure travel over the Internet: overall risk ('the probability of not doing the best deal is high') was taken from Eastlick and Lotz (1999) and financial risk ('can loose money') was developed by the researcher.

The *affective component* associated with using the innovation was measured through eight pairs of feelings. Six of the pairs (bored/enjoyed, stressed/relaxed, not stimulated/ stimulated, unsecured/confident, not excited/excited, not entertained/entertained) were adapted from research on affective images of tourist destinations (Baloglu and Brinberg, 1997; Vaughan and Edwards, 1999; OPTOUR, 2001). Two additional feelings were added: unhappy/happy and frustrated/fulfilled based on the work of Richins (1997). More recent research on the adoption of computer-based innovations (e.g. Aldreck and Settle, 2002; Bessiere et al., 2006) supports their inclusion in the affective set.

The *conative component* of attitude was covered by a statement regarding the intention to use the innovation in the near future. In addition, respondents who were uncertain or did not agree that they intended to use the innovation in the near future were asked to indicate whether they intended to do it in the long term.

Motives to use an innovation were identified though an open question asking individuals to list the most important motive/reason to use computers and the Internet for leisure purposes, as well as e-commerce in the purchasing of leisure travel. Conversely, the questions regarding the motives/reasons not to use the innovation provided respondents with some possible answers from which they had to rank the three most important ones.

Bearing in mind that the use of computers/the Internet for leisure purposes is likely to take place at home, respondents were also asked about the main motive to purchase computer to have at home.

An adaptation of Zaichkowsky's (1985) scale was used to measure **involvement** with using the innovations. Eight items were selected: value, prejudicial/beneficial, relevance, desirability, appeal, importance, essential/dispensable and usefulness. These items were selected based on their suitability for studying the adoption of computer based innovations. In addition, many of the items of the scale could not be used used due to translation difficulties (explained in more detail later in this section). Moreover, there are concerns about attitudinal contamination of both the original and the revised versions of the scale McQuarrie and Munson, 1992; Zaichkowsky, 1994). Some items, such as 'boring' and 'exciting', are hedonic in nature and have been used to measure the affective component of attitudes (e.g. Baloglu and Brinberg, 1993; Vaughan and Edwards, 1999). Different compositions of the scale (i.e., the scales by McQuarrie and Munson, 1992; Zaichkowsky, 1994) have yielded high validity and reliability and thus the combination of items selected for this research is expected to retain high reliability and validity (the reliability could be confirmed by the high Cronbach Alpha value, as shown later in section 5.5.2). Removing two items from the scale is not expected to have affected the properties of the scale. In fact, one could question the need to use 10 items to measure a construct that is regarded by many as unidimensional (see Chapter 3, Section 3.4.2.4 for a discussion of Zaichkowsky's scale).

Several variables were used to assess **computer/Internet experience**, but only measures of direct experience were included:

- To gauge *amount of computer/Internet* use, respondents were asked to indicate how many hours they used them in a normal week and when they first used computers/the Internet. Respondents were requested to divide hours of use by main purpose (leisure or business) and by location of access (home, college, work and other places). In addition, the first experience of using Computer/Internet, namely the year, location and purpose, was also included as a measure of amount of experience.

- Opportunity to use the innovation was measured by asking respondents to indicate whether they had a computer/Internet they could use either at home or at work/college.

- Diversity of experience, which refers to the different tasks that the respondent had undertaken while using computers and the Internet, as well as the tasks they intended to perform in the future, were also studied. As far as purchasing over the Internet is concerned, the respondents were asked to indicate the products/services they had purchased, the products/services they attempted to purchase and the products they would purchase.

As far as **payment for purchases** is concerned, two payment related issues were studied. One of the questions addressed whether respondents owned credit cards. Respondents who owned credit cards were requested to indicate the highest credit limit of a single card as well as the credit limit of all the credit cards. Respondents who did not own credit cards were asked to give the most important reason for that. In addition, respondents were asked to rank the three most preferred payment methods when purchasing leisure travel over the Internet, as well as to explain their first choice.

As was shown earlier, two main variables related to the **product category behaviour** were posited to influence the adoption of electronic commerce: the purchasing and consumption of the product category. As far as the variables related to *purchasing* is concerned, the respondents were asked to indicate their likely behaviours when purchasing leisure travel in terms of the extent to which the respondents would do the reservations, which marketing channel they would purchase their travel from and their preferred media to contact the travel provider. In terms of the *consumption* of the product-category, the respondents were asked to indicate the number of journeys they had undertaken since between January 2000 and the date of completion of the questionnaire (the questionnaire run from January until December 2002), both for business and leisure purposes.

Due to length limitations of the questionnaire, the cognitive and affective components of attitude, as well as the involvement, related to the using of the Internet for leisure purposes were not covered by this research. The decision to concentrate data collection on the adoption of computers was based on the grounds that the relationship between the adoption of the Internet and the adoption of e-commerce was more understood that the

relationship between the adoption of computers and the adoption of e-commerce. In addition, the national statistics had shown that a large proportion of the Portuguese population were not users of computers (see Chapter 1, Section 1.1.4). This suggested that the adoption of computers could be a major factor influencing the adoption of e-commerce.

A summary of the variables comprising the second order conceptual framework, their sources and the specific items used to measure each of the constructs, as well as the relationship of each item with the concepts pertaining to the first order framework is presented in Table 5.2.

After defining the content of the questionnaire, the next stage was **question phrasing**. At this stage, the recommendations proposed by Oppenheim (1992) and Sarantakos (1998) were adopted in order to minimise the bias and distortion involved in questioning. In order to make words and phrases easily and clearly understood by the respondents, the questions were made as simple and straightforward as possible. This was a challenging task because day-to-day use of computers, the Internet and e-commerce often involves using technical and non-Portuguese words. However, because the study included respondents without previous experience with these technologies, their use was avoided. For example, instead of using the word 'email', 'correio electrónico' (electronic mail) was used.

Another challenge was the translation of the questionnaire from English to Portuguese. As Efendioglu and Yip (2004) stated, *"the possible danger of lost meanings and incorrect interpretations of what is being asked when questionnaires are developed in one language and administered in another language to a culturally different population requires a special care in translation of the questionnaire"* (p. 49). There were some difficulties in the translation task because some of the English words, when translated to Portuguese, do not have a common-sense meaning. For example, in translating the Zaichkowsky (1985) Personal Involvement Inventory it was not only difficult to find the correct words that would make sense in Portuguese, but also in some circumstances the translation of two different English words would result in the same word in Portuguese. This is the case, for example, of the 'important' and 'matters to me' dimensions, which would translate to a same word ('importante'). A Portuguese university lecturer with background both in teaching English language and tourism management reviewed the translation made by the author. Several ammendements were made after the recommendations of the reviewer.

Table 5. 2: Operationalisation of variables included in the conceptual framework

Main variable	Sub-variable	Specific items	Source	First order conceptual framework			
				Computer	Internet	Purchasing travel over the Internet	Travel
Attitude: Cognition	Relative advantage	Reduction of time/effort; Quality of task ; Quality of life	Eason (1998)	X		X	
	Complexity	Complexity/simplicity of use; Easiness/difficulty of learning	Davis et al. (1989)	X		X	
		Easiness/difficulty of use	Strutton et al. (1994)	X		X	
		Easy/difficult to learn by themselves	Author	X		X	
	Compatibility	Compatibility with daily routine; Approval by friends	Author	X		X	
	Visibility	Have seen what others do when using the innovation; Have seen the innovation being used	Moore and Benbasat (1991)	X			
		Have seen important people using the innovation	Author	X			
		Have seen others using the innovation	Moore and Benbasat (1991)			X	
		Have talked to others about the using innovation	Author			X	
	Image	Increase prestige; Enhance status	Moore and Benbasat (1991)	X		X	
		Build a positive self-image; Compatibility with the image that wants to convey	Author	X		X	
Attitude: Affect	Perceived risk	Afraid life becomes dependent on the innovation; Using the innovation is a waste of time	Eastlick and Lotz (1999) Tan (1999)	X			
		Using the innovation can loose money	Eastlick and Lotz (1999)			X	
		Probability of not doing the best deal	Author			X	
		Bored/enjoyed; stressed/relaxed; not stimulated/stimulated; unsecured/confident; not excited/excited; not entertained/entertained Unhappy/happy; frustrated/fulfilled	Baloglu and Brinberg, (1997) Vaughan and Edwards (1999) OPTOUR (2001) Richins (1997	X X		X X	
Attitude: Conation		Intention to use in the near future; intention to use in the long future	Ajzen and Fishbein (1980)	X	X	X	
Involvement		Valuable/worthless; prejudicial/beneficial; relevant/irrelevant; desirable/undesirable; appealing/not appealing; important/not important; useful/useless; essential/dispensable	Zaichkowsky (1985)	X		X	
Motives	Motives to use	Open answer	Author	X	X	X	
	Motives to purchase	Open answer	Author	X			
	Motives not to use	Access, advantages, need, liking	Author	X	X	X	
	Motives not to use	Advantages, access to Internet, access to computers, trust, liking, knowledge, travel	Author			X	

Table 5. 2: Operationalisation of variables included in the conceptual framework (continued)

Main variable	Sub-variable	Specific items	Source	First order conceptual framework			
				Computer	Internet	Purchasing travel over the Internet	Travel
Innovation experience	Amount of use	Number of hours of use according to purpose and location	Jones and Clarke (1995) Smith et al. (1999)	X	X		
	Opportunity to use	Access to the technology at home or at college/work	Jones and Clarke (1995)	X	X		
	First experience	Purpose (work, study, play games); location (college, own home, family/friends home, office)	Author	X			
		Purpose (work, study, get information about products, curiosity); location (college, own home, family/friends home, office)	Author		X		
	Diversity of experience (past and future)	Use the Internet; write texts; play games; get information; get information about products and services; check email.	Author	X			
		Read newspapers; get free music; use email; get information about products and services; banking; purchase products and services; get non-commercial information; compare offers from companies	Author		X		
		Books; CDs; Airline tickets; entertainment tickets; movies/DVDs; packages; financial services; computers; rent-a-car; tourist accommodation; cruises; insurance	Author			X	
Payment methods	Motive for not owning a credit card	Open answer	Author			X	
	Credit card limits	Less than 500 euros; 501-1000 euros; 1001-1500 euros; 1501-2500 euros; 2501-5000 euros; 5000 euros or more.	Author			X	
	Preferred payment method	Credit card (details by phone); credit card (details by email); credit card (details online); bank transfer; debit card.	Vrechopoulos et al. (2001)			X	
Consumption of travel	Travel frequency	Number of journeys according to purpose (leisure or business) and main destination (Portugal, Spain, Other EU countries, other European non-EU countries, other countries)	Author				X
Purchasing of travel	Participation in the reservation of leisure journeys	Always the respondent; most of the times the respondent; most of the times others; always others.	Author				X
	Marketing channel	Always travel agencies; most of the times travel agencies; most of the times suppliers; always suppliers	Author				X
	Communication channels	Email, face-to-face, telephone (most preferred and less preferred)	Author				X

Of paramount importance in question wording was the setting of the frame of reference. Every question clearly stated the purpose of the action (e.g. using a computer for leisure purpose) and attempts were made to re-enforce that it was the respondent's use that was being asked. For example, the question regarding the affective component of attitudes was "when using the computer and the Internet in the purchasing of leisure travel, I would feel…" rather than "using the computer and the Internet in the purchasing of leisure travel is…". This follows the suggestion that research on perceived characteristics of innovations should concentrate on the individual's perception about his/her use of the innovation rather than in the perceptions about the innovation itself (Moore and Benbasat, 1991).

After the decisions about the question content and phrasing were made, the next stage was designing the **response formats**. There are two types of response format: open-ended and pre-coded (or closed) and both have advantages and disadvantages (Hoinville and Jowel, 1977; Sarantakos, 1998; Jennings, 2001). Because no best format exists, the questionnaire included a mixture of open and pre-coded questions. Open-ended questions were mainly used to ask respondents about their motives and why they had given a certain answer (probing questions). In contrast, closed questions were mainly used in the measurement of attitudes, involvement and behaviours. A variety of response sets were used, including ranking scales, Likert scales and semantic differential scales.

The **question sequence** is an important issue because it can be a potential source of error. Following Tull and Hawkings (1993, p. 356) recommendations, the questionnaire consisted of four parts, ordered in the following manner:

> *Part A: Travelling.* This section gathered information regarding recent travel patterns and the several behaviours associated with purchasing leisure travel, such as who would do the reservations, from where would they purchase and the preferred communication means when contacting the suppliers.
>
> *Part B: Computers.* This section included questions regarding the context of first use of computers, reasons for never having used computers, current use or reasons for not being a current user of computers for leisure purposes, motives to use or not to use computers for leisure purposes and involvement with, and attitudes towards, using computers for leisure purposes.

Part C: The Internet. This section included questions regarding the context of first use of the Internet, the reasons for never having used the Internet for leisure purposes, current use or reasons for not being a current user of the Internet for leisure purposes, motives to use or not to use the Internet for leisure purposes and intentions to use the Internet for leisure purposes.

Part D: Purchasing leisure travel on the Internet. This section included questions regarding what products the respondent has purchased/would purchase on the Internet, reasons for never having purchased leisure travel on the Internet, motives to purchase leisure travel on the Internet, involvement with, and attitudes towards, using the Internet in the purchasing of leisure travel, ownership of credit cards, preferred payment methods and motives that would lead to purchase leisure travel over the Internet.

Within each of the A to D parts, the factual questions were followed by attitudinal and perceptual questions.

In self administered questionnaires, appearance is an important variable in securing cooperation from the respondent (Tull and Hawkins, 1993). Hence, the **presentation of the questionnaire** was designed to make the questionnaire easy to use. The same formatting was maintained throughout the questionnaire, and detailed instructions were given about the type of answer required. Moreover, instead of individual sheets of paper, the questionnaire was printed in A3 size sheets in order to form an A4 size book. A laser photocopy machine was used to guarantee high quality printing.

After printing, the questionnaire was **pre-tested** and this took place in two stages. First, five (Portuguese) academics were given the questionnaire for completion. Four had previous experience with designing and implementing questionnaires. One had an university degree in the English Language, which enabled the clarification of some issues related to the translation of the questionnaire. In line with the comments made by the academics, amendments were made regarding question wording, scaling and instructions. However, the most important finding of this stage was that a single questionnaire for all the respondents was not appropriate. The main reason was that the different levels of prior experience with the computers, the Internet and Internet purchasing required the use of many filter questions, which made the answering process confusing. Therefore, it was decided to present the questionnaire in four versions. The versions had all questions in

common other than the experiential questions which were adapted to each of the experience levels. For example, the question about why thew respondent had never used a computer only makes sense to respondents who have never used them. The vast majority of filter questions became unnecessary and the flow of the questionnaire was considered acceptable. The four final versions of the questionnaire were:

Version 1: respondents who never used computers (Appendix A1);

Version 2: respondents who have used computers in the past but never used the Internet (Appendix A2);

Version 3: respondents who have used computers and the Internet in the past but never purchased over the Internet (Appendix A3);

Version 4: respondents who have used computers, the Internet and who have purchased over the Internet (Appendix A4).

During the personal visit to the dwelling, the respondents were asked to provide their age, educational background, employment status and their previous experience with computers, Internet and Internet purchasing (Appendix A5). A full explanation of how the questionnaire was administered is presented the next section.

The second stage of the pre-test involved subjecting the questionnaire to a field test. The questionnaires received during the first three weeks of implementation of the questionnaire were observed carefully to check whether the expected pattern of answering was being provided. In particular, the nature of the answers to open questions and the consistency in pre-coded questions were verified. In the pre-coded questions one problem encountered was that some respondents were filling in only one of the statement/pair of words instead the whole set of items. This led to the emphasising in the instructions of the need to mark with a cross every line (i.e. every statement/pair of words). The same instruction was given by the interviewer while delivering the questionnaire in person.

5.4.8. Administration of the questionnaire

During the first visit to the street, a letter explaining the aims of the questionnaire and requesting the assistance of one household member in its completion was left in the mailbox of each selected residence (Appendix A6). In order to enhance the credibility of the research, both the envelope and the letter featured the logo of the Estoril Institute for Hotel and Tourism Studies (the employer of the researcher at the time the data collection took place). Between one and four days after leaving the letter in the mailbox, a visit was made to the household. The visits were conducted on weekdays in the evening, between 7.30 and 9.30 pm.

After the identification of the right respondent, the interviewer explained the general aims of the questionnaire and left the questionnaire for completion together with a stamped envelope addressed to the researcher. A period of one week was given for the return of the questionnaire. If the respondent was not at home but if someone in the household clearly knew the respondent's level of previous experience with computers, Internet and Internet purchasing, the questionnaire was left for completion. If there were some doubts, one of three courses of action was taken. First, an attempt was made to contact the respondent by phone in order to collect the necessary information. Second, if this was not possible, a second visit was made in a period where the respondent was expected to be at home. Finally, if the person was not likely to be at home in the next few days, the researcher requested the contact person to obtain that information from the respondent and a later visit was paid to the contact person.

In the case of acceptance of the questionnaire, the interviewer asked for a name and a contact for the respondent (preferably a phone number, but it could also be an email address) so that if some doubt or clarification was needed later the person could be contacted. If the household refused to participate, the interviewer tried to understand the general reason for the refusal as well as to obtain the socio-demographic information and the information about prior experience with computers, the Internet and electronic commerce. Some of the reasons given for not accepting the questionnaire are shown in Table 5.3.

Table 5. 3: Examples of reasons for not accepting the questionnaire

Lack of time	Against the use of the Internet
Not interested in issues associated with new technologies	Poor literacy
Lack of knowledge/opinion about it	Disabled
Does not travel	

Two visits to the residences was made and only in the case of at least one prior contact was a third visit made. In order to minimise sampling error caused by this decision, the second visit was preferably undertaken in a different week and on a different day and hour.

If the questionnaire was not returned after two weeks of its handing over, attempts were made to contact the respondent using the contact collected during the visit. If this contact was possible, the respondent was asked again its completion and returning. An illustration of some of the reasons given for not completing the questionnaire are presented in Table 5.4.

Table 5. 4: Examples of reasons for not returning the questionnaire

Lack of time	Questionnaire too long
Lack of motivation to do it	Does not travel
Lack of knowledge/opinion about it	

The implementation of the questionnaire was undertaken between January and November 2002. The extended period was caused by two factors. First, the daily 'open window' was restricted to two hours. After testing the extension of this period, it was concluded that many people were not at home before 7.30 p.m. and that for others it was not appropriate to open the door after 9.30 p.m. Second, the data collection was suspended after the first week of July and continued only in the second week of September. It was evident that many people were not at home due to the holiday period and even those who were at home showed little interest in participating. Moreover, there was also a major sharp decrease in the rate of return of questionnaires.

Most of the questionnaires were delivered by the researcher. However, during four months, he was helped by a third year student of the Estoril Higher Institute for Tourism and Hotel

Studies. The student was appropriately trained by the researcher and delivered roughly one quarter of the questionnaires.

5.4.9. Results of the data collection

One of the critical issues in social research is the number of the respondents to be included in the study. There are two main approaches to the estimation of the sample size. *Statistical estimations* employ statistical methods in order to define the appropriate size of the sample (Sarantakos, 1998). In practice, researchers opting for statistical estimations use statistical tables that relate the degree of precision (the sampling error) which is theoretically obtained for samples of different size (Oppenheim, 1992). *Non-statistical estimations* of sample size are influenced by the nature of the population and the type of analysis employed in the research (Sarantakos, 1998). The higher the homogeneity of the population with respect to the study object, the lower the likelihood that a large sample will be required.

However, one of the most frequently used guidelines for estimating the sample size does not use statistical estimations. Rather, it is the number of subgroups that the researcher wishes to compare that drives the acceptable number of questionnaires to collect (Hoinville and Jowell, 1977; Oppenheim, 1992; Sarantakos, 1998). Sample size is also heavily influenced by the resources constraints, such as time and money.

This research used a non-statistical method for estimating the sample size. The main independent variable chosen for this research is the stage in the e-commerce adoption path (a detailed explanation is presented later in this chapter, section 5.5.3.). Therefore, the sample size needed to be sufficiently large to allow for comparisons between the sub-groups of the independent variable. Oppenheim (1992) suggests that "*as a rough guide, the smallest subgroup will need to have between fifty and a hundred numbers"* (p. 61). Therefore, due to time constraints, the sampling process stopped when the smallest group was 49 questionnaires.

To achieve this objective, 259 streets were selected after applying the sampling process mentioned in section 4.4.6. A total of 1737 potential households were selected, but from these 651 were not eligible to participate in the study because (1) nobody was at home, (2)

all residents were over 69 years old and therefore fall out of the age bands and (3) they were not permanent residences (holiday flats, businesses). In addition, in 341 households it was not possible to identify the person who should respond because (1) they refused to participate, (2) there was at least one personal contact but after three visits it was not possible to deliver the questionnaire and (3) they did not speak Portuguese. Therefore, a total of 745 respondents agreed to participate in the study (potential sample), from which 693 accepted the questionnaire. The reasons for not wanting to keep the questionnaire, while providing the personal details (*Part E* of the questionnaire) included (1) not aware of the subject, (2) disability (3) no time to fill questionnaires and (4) a lack of interest in participating in the study.

From the 693 questionnaires delivered 303 were received, but not all could be used in data analysis. An analysis of fifteen questionnaires suggested that they were not answered by the intended respondents and thus they were not coded for data analysis. This could be proved by, for example, answers that clearly indicated previous experience with computers/Internet when it should be a respondent that never used computers/the Internet. An additional 9 questionnaires were returned without any information. Therefore, a total of 279 questionnaires were coded for data analysis (actual sample).

5.4.10. Data analysis

Once the data collection was completed, the next step was to analyse it. The questionnaire included both open and pre-coded questions. This section explains the methods used in the analysis of both qualitative and quantitative type answers.

5.4.10.1. Quantitative analysis

The data was analysed using Version 10 of the Statistical Package for Social Sciences (SPSS). There are three main types of statistical techniques: univariate, bivariate and multivariate (Sarantakos, 1998; Diamantopoulos and Schlegelmilch, 2000; Pallant, 2001; Bryman and Cramer, 2001). The main factor influencing the decision of which statistical

technique to use is the type of measurement of the variables. There are three major types of measurement: nominal (or categorical), ordinal and interval/ratio (Hoinville and Jowell, 1977; Oppenheim, 1992; Tull and Hawkins, 1993; Sarantakos, 1998, Diamantopoulos and Schlegelmilch, 2000; Bryman and Cramer, 2001; Jennings, 2001).

The distinction between the types of variables is important because certain statistical tests presume certain kinds of variable (i.e. measurement). Some authors (e.g. Sarantakos, 1998; Bryman and Cramer, 2001) argue that strictly speaking multi-item questionnaire measures (e.g. Likert and semantic differential scales) are ordinal data. In this research, multi-item measures were treated as ordinal data for the purposes of conducting some bivariate statistical analysis. However, although this study treats the data as ordinal, for reasons conntected with description of the results both means and standard-deviations were computed.

Univariate techniques

Univatiate analysis is the simplest form of quantitative analysis and refers to the various ways of analysing and presenting information relating to a single variable. There are three main groups of univariate measures (Sarantakos, 1998; Diamantopoulos and Schlegelmilch, 2000; Bryman and Cramer, 2001):

- The **relational measures** relate parts of a group of scores to each other or to the whole (e.g. rate, ratio and percentage);

- The **measures of central tendency** represent the average or the typical value in a distribution and are one of the most commonly used statistical measures (e.g. mean, median and mode);

- The **measures of dispersion** inform about the degree to which the data is spread around the mean (e.g. range and standard deviation).

The analysis of the data using univariate statistics provided interesting information. However, it was not sufficient to demonstrate differences in perceptions and relationships between variables. Therefore, bivariate techniques were also used.

Bivariate techniques

The essence of bivariate techniques is that they enable the examination of relationship patterns between two variables. One variable is used to form the comparison groups (i.e. the independent variable) and the other (i.e. the dependent variable) to assess whether it is explained by the independent variable (Sarantakos, 1998; Bryman and Cramer, 2001). There are a number of bivariate techniques and the main criteria influencing the choice of the most appropriate statistical test are the type of measurement and the number of comparison groups (Bryman and Cramer, 2001).

The chi-square test is used to assess whether two variables are independent from or related to each other (Sarantakos, 1998). More specifically, the test examines the null hypothesis (H_0) assuming that the variables are independent of each other (Sarantakos, 1998; Bryman and Cramer, 2001; Pallant, 2001). This is achieved by comparing the observed and expected frequencies in each of the cells of the contingency table. The acceptance or rejection of the null hypothesis is dependent on the level of probability that the differences happened by chance that the research is prepared to accept. The level of probability for rejecting the null hypothesis was set at the significance value of 0.05, which means that there only is a 1 in 20 chance that the null hypothesis is being rejected when it should have been accepted. Chi-square can be used to assess whether there are differences between the variables, but it does not tell where the differences lay.

There are some circumstances where the chi-square should not be employed. Although these rules vary between researchers, the general rule is that the test should not be used when more than 20 percent of the cells have an expected frequency of less than 5 or if any cell has an expected frequency less than 1 (Tull and Hawkins, 1993; Bryman and Cramer, 2001; Pallant, 2001).

Although the chi-square can be used with nominal, ordinal and interval/ratio variables, it is more frequently used on nominal variables. This is because there are other tests that can be used with ordinal/interval/ratio data and can inform not only if there is any difference between the variables, but also where those differences lie. If this is the case, one important decision to make pertains to whether to use parametric or non-parametric tests. The two types of tests make different assumptions about the population that the sample has been drawn. The main difference between them is that while parametric tests are based on the

assumption that the variable investigated is normally distributed in the population, non-parametric tests do not adhere to the principle of normality (Bryman and Cramer, 2001; Pallant, 2001; Dancey and Reidy, 2002).

There are several techniques for assessing the normality of a variable, such as the skewness and kurtosis, histograms, normal Q-Q plots and the Kolmogorov-Smirnov statistic. In this research, the Kolmogorov-Smirnov statistic was used to assess normality. A series of tests were undertaken and systematically revealed that the distribution of the scores was not normaly distributed. Moreover, most of the variables were 'true' ordinal variables. Therefore, non-parametric tests were used for assessing the association between the independent variable and ordinal/interval/ratio variables.

The **Mann-Whitney** test was used to test for differences between two independent groups and an interval variable. This is the equivalent to the parametric t-test of independent samples, but instead of comparing the means of the two groups, the Mann-Whitney test compares medians (Pallant, 2001). More specifically, *"it compares the number of times a score from one of the samples is ranked higher than a score from the other sample"* (Bryman and Cramer, 2001, p. 133). Similar to the chi-square, and following general practice (e.g. Balnaves and Caputi, 2001; Bryman and Cramer, 2001; Pallant, 2001) the significant value for rejecting the null hypothesis is 0.05.

The **Kruskal-Wallis** test is similar to the Mann-Whitney but can be used to compare three or more unrelated samples. It is the equivalent test to the parametric ANOVA. A significant result ($p<0.05$) indicates that at least one of the groups is different from at least one of the others. It does not tell, however, which ones are different, nor does it tell how many groups are different from each other. Because SPSS does not contain a test to reveal where the differences lie, the **Multiple Comparison Test** (MCT) proposed by Siegel and Castellan (1988) was used to determine which groups were different. The MCT aims to check whether the null hypothesis should be accepted or rejected for each pair of groups. For this purpose, the researcher needs two values:

- The differences in mean rank for the two sub-groups, which can be easily calculated using the SPSS output.

- The critical value of z, which is obtained using the following formula (Siegel and Castellan, 1988):

$$Z_{\infty/k(k-1)} \sqrt{\frac{N(N+1)}{12}\left(\frac{1}{n_u}+\frac{1}{n_v}\right)}$$

As far as the z value is concerned, the significance (or *p*) value chosen for the original analysis (that is 0.05) was used. Using the number of comparisons (they are three as given by the formula [k(k-1)/2], where k is the number of sub-groups) and the Alpha level (∞=0.05), the corresponding z value is 2.394 (Siegel and Castellan, 1988). N is the total number of responses from the two sub-groups (*u* and *v*) being analysed, whereas n_u is the number of responses in sub-group *u* and n_v the number of responses in sub-group *v*. After obtaining the critical value of Z, this value is compared with the difference in the mean ranks. Only when the difference in the mean ranks exceeds the critical value of z is the comparison significant. As far as the presentation of the results is concerned, given that the MCT does not give the exact significance value, the researcher can only report whether the difference between the two groups is significant or not at the 0.05 level (which in the tables are indicated with a +).

The Chi-Square, Mann-Whitney, Kruskal-Wallis and Multiple Comparison tests were performed in order to examine the null hypothesis (H_0). The null hypothesis states that there is no difference between the subgroups of the independent variables (described in Section 5.5.3) and as such any differences could be explained as possibly having arisen by chance or were caused by the sampling procedures (Sarantakos, 1998). In other words, the null hypothesis states that there is no difference between the sub-groups of the independent variable. If the null-hypothesis is rejected (at the 95% level of confidence), the alternative hypothesis is accepted which suggests that any differences between the sub-groups of the independent variables are likely to be genuine (Dancey and Reidy, 2002).

Multivariate statistics

Multivariate statistics explore the connections between three or more variables simultaneously (Bryman and Cramer, 2001). Multivariate statistics are more complex than univariate and bivariate statistics. There are several multivariate techniques and the most frequently used are multiple regression, factor analysis and cluster analysis (Diamantopoulos and Schlegelmilch, 2000; Bryman and Cramer, 2001; Dancey and Reidy,

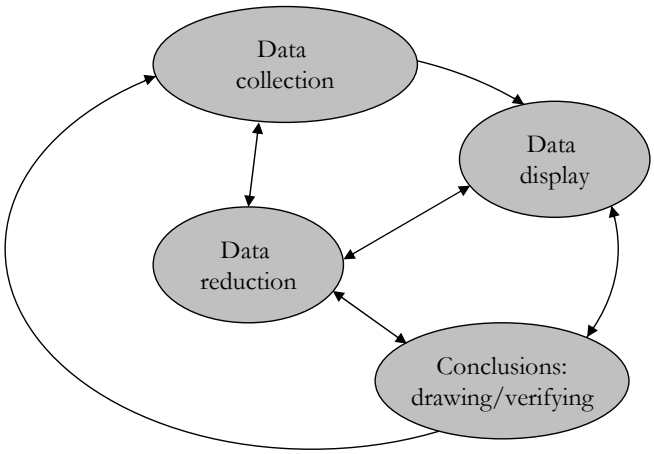
2002). Multivariate techniques were not used because it was not necessary for achieving the aims of the thesis.

5.4.10.2. Qualitative type analysis

There are a variety of approaches for analysing qualitative data. For example, Tesch (1990) identified 26 and Creswell (1998) 28 different approaches to qualitative analysis. Thus, there is no single right way to do qualitative data analysis and much depends on the purposes of the research (Punch, 1998).

One of such approaches to qualitative analysis is the interactive model suggested by Miles and Huberman (1994). According to these authors, analysis of qualitative data can be seen as a process consisting of three activities: data reduction, data display and conclusion drawing/verifying. This model was adopted for the analysis of open-ended questions (Figure 5.4) as it is an appropriate approach *"for more quantitatively oriented researchers who accept the necessity of 'going qualitative' but are concerned that they will have to leave their scientific principles behind if they do so"* (Robson, 2002, p. 473-4).

Figure 5. 4: Components of data analysis: Interactive model
Source: Miles and Huberman (1994)



Data reduction is a continuous process throughout the analysis and refers to the process of selecting, simplifying or transforming the answers (Miles and Huberman, 1994). It involves the careful study of the content of the answers and then fitting the answers into a pattern of categories developed after the responses have been studied (Sarantakos, 1998). To achieve this, a list was produced in order to observe patterns of response. Although most of the open questions clearly indicated that the respondents should give only one motive/reason, some respondents wrote two or more reasons. In such circumstances, only the first reason written was considered.

The next stage was to input into SPSS all the data from the open-ended question as they were given by the respondents. Similar to Miles and Hiberman (1994) a two stage coding process was applied. The first stage focused on grouping the answers with a common theme (e.g. saving of time). At this stage an effort was made to reduce significantly the number of categories while maintaining the meaning of the answer. The second stage involved grouping these themes into a few categories so that the information was reduced to a level that quantitative analysis could be applied. These themes and categories were, it is argued, accurate, unidimensional, mutually exclusive and exhaustive (Sarantakos, 1998). For example themes such as 'saving of time', 'more time to evaluate options' and 'flexibility of time' were grouped in the category 'time'.

A very important component in qualitative analysis is to guarantee that the data is not stripped from their context (Punch, 1998). Using the two stage process allows the few final categories to be linked to the themes that originated them, maintaining to a certain degree the context of the answers.

Data display is the stage where information is organised, compressed and assembled (Punch, 1998). Tables were the display method used in this study. For each open ended-question two types of tables were produced. One table shows the final categories that resulted from the process of data reduction. Another table illustrates the themes that made up main each category in order to enable a deeper understanding of the more specific meanings of each main category and at the same time minimise the loss of information.

Drawing and verifying conclusions. Reducing and displaying has only meaning if data are to assist in drawing conclusions (Punch, 1998). There are several tactics that can be used for

the purposes of drawing and verifying conclusions, such as comparisons, noting of themes and patterns and looking for negative statements (Miles and Huberman, 1994).

5.4.11. Analytical Framework

One of the aims of the research was to evaluate the *barriers* and *opportunities* for the use of e-commerce in the purchasing of leisure travel. A barrier is *"any condition that makes it difficult to achieve an objective"* (The Free Dictionairy, 2004), whereas an opportunity can be defined as any condition that makes it possible to do something, that is, to achieve the objective. In this research, the broad objective is to purchase leisure travel on the Internet. Hence, in the context of this research, a barrier is any condition that makes it difficult to purchase leisure travel on the Internet and an opportunity is any condition that makes it possible to purchase leisure travel on the Internet.

The factors influencing the adoption of e-commerce were categorised in four areas:

- *Systemic factors*: the extent to which the characteristics of the system enable the individual to use the innovation
- *Structural factors*: the extent to which the structures that enable the individual to use the innovation are in place.
- *Psychological factors*: the extent to which the use of the innovation is perceived as associated to potentially valued outcomes
- *Behavioural factors*: the extent to which past or current actions, as well as behavioural manifestations, facilitate the use of the innovation

5.5. Validity and reliability

One very important issue any researcher has to address throughout the development of the study is to ensure research of good quality. Quantitative research relies heavily on

measurement instruments and therefore the quality of those instruments is critical for assessing the quality of the research. There are two important criteria for assessing the quality of quantitative research: validity and reliability. Additionally, two issues that influence validity and reliability are explored: non-response and the independent variable.

5.5.1. Validity

Validity refers to the *"ability of the measures to produce findings that are in agreement with theoretical or conceptual values"* (Sarantakos, 1998; p. 78). In other words, it is the extent to which the instrument actually measures what it is supposed to measure. In social research, due to the latent nature of the variables, assessing validity is a difficult task. It involves inferring whether the items that people respond to measure the corresponding (latent) construct that is being measured (Punch, 1998; Diamantopoulos and Schlegelmilch, 2000). There are several approaches to assess validity of an instrument (Carmines and Zeller, 1979; Punch, 1998; Sarantakos, 1998; Diamantopoulos and Schlegelmilch, 2000; Balnaves and Caputi, 2001; Bryman and Cramer, 2001; Jennings, 2001; Robson, 2002) and it is the collective picture painted by evidence relating to the various kinds of validity that determines the overall validity of a measure (Diamantopoulos and Schlegelmilch, 2000). Three basic approaches to assessing validity are criterion validity, subjective validity and construct validity.

In **criterion validity**, a measure is validated by comparing performance of that measure with performance of a particular criterion variable (Carmines and Zeller, 1979). If the criterion variable exists in the present it is a case for *concurrent validity*; if the criterion variable will not exist until later it is a case for *predictive validity*. In this research, assessing criterion validity would require showing that the several scales accurately predict the actual purchasing of leisure travel over the Internet. However, due to the cross-sectional nature of the research, criterion validity could not be assessed.

There are two main methods for **subjective validation**: face validity and content validity. *Face validity* refers to the fact that the concept being measured is being done so appropriately (Jennings, 2001), that is 'on the face of it' it appears to have validity (Sarantakos, 1998). Face validity in not widely accepted because it relies on the subjective

judgement of the researcher. A more accepted method of subjective validity is *content validity*. Content validity refers to the degree to which a measure covers all possible aspects of the research topic (Sarantakos, 1998). Ensuring content validity involves two steps (Punch, 1998): to specify the content of a concept and to develop indicators which sample from all areas of content in the concept. Content validity was ensured by undertaking a thorough review of the literature to identify the different aspects of the concept. Moreover, by studying not only the issues associated with the innovation focus of the research (purchasing over the Internet), but also the necessary interdependent innovations (i.e. computers and the Internet), the research covered a broad range of areas associated with the research topic.

However, due to questionnaire length limitations, some of the issues related to the adoption of the Internet could not be fully covered in the survey. This included the cognitive and affective components of attitude and involvement. The option to concentrate data collection on the issues associated with the adoption of computers and the adoption of purchasing of leisure travel over the Internet was based on the expectation that the two main sub-groups would be those who had never used computers and those who have never purchased over the Internet, although they have used the Internet. As is shown below (section 5.5.4), the results support the initial assumption that these two groups would be the largest in the borough of Cascais.

Most of the measures used were drawn from publications in English for which no versions in Portuguese were available. Those measures were translated into Portuguese and later checked by a fully qualified translator to ensure content validity. Therefore, although every effort was made to minimise the effects of the language difference, it must be acknowledged that this factor may have had some impact on content validity.

Finally, ***construct validity*** is the extent to which a measure conforms with theoretical expectations (Punch, 1998). The research findings have shown that the instrument used in this research conformed the theoretical expectation that emerged from the literature review satisfactorily. For example, the results of the bivariate analysis can ascertain construct validity, since by the use of the Kruskal-Wallis tests it was evident that stage in the e-commerce adoption path was, to a large extent, associated with the perceptions about using computers for leisure purposes. Therefore, it can be assumed that the research has achieved good construct validity.

5.5.2. Reliability

Whereas validity is concerned with whether the instrument measures what it is supposed to measure, **reliability** refers to the degree to which an instrument produces consistent results (Tull and Hawkins, 1993; Punch, 1998; Sarantakos, 1998; Jennings, 2001). Validity and reliability are interrelated. If a measure is valid then it is also reliable but if it is reliable it may or may not be valid. Consistency in measurement has two main aspects: consistency over time (or stability) and internal consistency (Punch, 1998; Diamantopoulos and Schlegelmilch, 2000). Consistency over time is the extent to which similar results are obtained from repeated applications of the same (or similar) measurement instrument to the same set of respondents. Assessing stability over time requires the application of the method test-retest reliability, in which the researcher administrates the same instrument at two points in time to the same respondents. The correlation coefficient between the two measurements is then calculated and for reliable results the coefficient should be high. Due to time and budget limitations test-retest was not used.

Internal consistency is concerned with the extent to which *"the items are consistent with each other and are all working in the same direction"* (Punch, 1998; p. 99). Unlike consistency over time, internal consistency requires only one administration of the measure. The Cronbach's Alpha coefficient is one of the most commonly utilised indicators of internal consistency (Pallant, 2001) and was used in this research. In general, scales demonstrating a Cronbach Alpha coefficient above 0.6 are regarded as reliable (Malhotra, 2004). The results (Table 5.5) confirm the general reliability of the scales. However, two of the subscales (computer perceived risk and computer and Internet purchasing compatibility) yielded Alpha values below this cut-off point. As Pallant (2001) highlighted, Cronbach Alpha values are quite sensitive to the number of items in the scale and it is not uncommon to find values of 0.5 when the scale has less than ten items. Each of these subscales comprised two items and hence this could be one possible cause for the low alpha values.

Table 5. 5: Internal reliability (Cronbach α) of the scales

Main scale	Sub-scale	Innovation				
		Computer		Internet	Purchasing over the Internet	
Attitudes: cognitive component (1)	Complexity	0.79	0.83	**	0.82	0.84
	Compatibility		0.38	**		0.50
Attitudes: cognitive component (2)	Relative advantage	0.69	0.74	**	0.76	0.74
	Image		0.87	**		0.88
	Visibility		0.64	**		0.66
	Perceived risk		0.52	**		0.65
Attitudes: affective component		0.91		**	0.90	
Attitudes: conative component		0.99		0.99	0.80	
Involvement		0.86		**	0.90	

Notes: (1) Semantic differential items; (2) Likert-scale items; * Single item; ** not applicable.

5.5.3. Independent variables

One of the issues that influences the internal validity of the study is the choice of the independent variables (Kane and O'Raily, 2001). The choice of the independent variable (or variables) and its sub-groups can be regarded as a segmentation process. Several segmentation bases are usually used to split the market (Veinstein, 1994; Korgaonkar and Wolin, 2002) such as geographic, socioeconomic, psychographic, product/service usage and benefits. In this research, the main independent variable was the stage in the e-commerce adoption path, which was based on the respondents' previous usage of the innovations comprising the adoption network. More specifically, three segments (or sub-groups of the independent variable) were defined according to whether they had previously used the Internet and purchased a product over the Internet:

- **Non-Internet users**: respondents that have never used the Internet;
- **Internet users**: respondents that have used the Internet at least once but never purchased any products or services over the Internet;
- **Internet purchasers**: respondents that have purchased at least one product/service over the Internet.

The non-Internet users sub-group comprises the respondents who had never used computers as well as those who having used them in the past had never used the Internet.

While each sub-group could be regarded as encompassing different stages of the e-commerce adoption path, they were merged into one single group in order to simplify the e-commerce adoption path, reducing it to three stages.

Although this study focused on the leisure context, the experience with product usage was a general experience, that is, irrespective of the context (i.e. whether it was for leisure or business purposes).

Several reasons support the choice of the stage in the e-commerce adoption path as the primary segmentation variable. First, product usage has been regarded as the most important primary segmentation base when compared to the other segmentation bases (Veinstein, 1994). Secondly, as Wedel and Kamakura (1999) highlighted, the choice of a segmentation base follows directly from the purpose of the study. Implicit in the aims of this research is an attempt to understand the extent to which factors influencing the adoption of e-commerce change along the ladder of adoption.

Thirdly, the segmentation fulfils the general criteria of forming good market segments as suggested by Veinstein (1994: 44):

- It shows *homogeneity within the segment* since individuals within each segment show a similarity in a specific characteristic – the previous experience with Internet and Internet purchasing.

- It ensures *heterogeneity between segments*. The three segments are distinctive from one another and each individual belongs to a group based on a key attribute – previous experience with Internet and Internet purchasing.

- It can be expected that the segments provide *meaningful data*. Past usage behaviour can have impact on attitudes and behaviours, such as on subsequent benefits sought by the individual (Veinstein, 1994) and their perceptions (Chon, 1990; Rogers, 1995).

- Each identified segment has sufficient *potential size* to justify the time and effort involved in assessing its characteristics and segments were not very large. In this research, the smallest segment accounts for nearly 18 percent of the sample and no segment accounts for more than half of the sample.

A preliminary analysis of the results indicated that not all the Internet purchasers had purchased leisure travel over the Internet. Moreover, it was visible that this sub-group was highly heterogeneous, notably regarding the purchasing and consumption of travel and regarding the purchasing of leisure travel over the Internet. Consequently, this group was further analysed by dividing it into two sub-groups:

- **e-travel adopters**: the Internet purchasers who had purchased leisure travel over the Internet before.

- **e-travel non-adopters**: the Internet purchasers who had never purchased leisure travel over the Internet before.

While this second independent variable fulfils the criteria mentioned above, due to the reduced number of Internet purchasers within the sample the smallest sub-group had no more than 20 respondents. However, this limitation was mitigated by the employment of the non-parametric tests, which can be used in small samples (Sarantakos, 1998; Diamantopoulos and Schlegelmilch).

5.5.4. Analysis of non-response

The external validity of an investigation is associated with the generalisability of the findings gathered by the means of the instrument (Sarantakos, 1998). Because generalisability is a consequence of the representativeness of the sample (Robson, 2002), an analysis of the representativeness of the sample can gauge the external validity of this investigation. In this research there are two types of samples. The potential sample refers to those individuals that agreed to participate in the study (745 individuals), that is, agreed to supply at least the personal data (Part E of the questionnaire). The actual sample comprises those individuals who have returned usable questionnaires (279 individuals).

As noted in section 4.3.6., this research aimed to have a representative sample, that is, it was aimed that the sample had the same characteristics as its population. As (Oppenheim, 1992) stated, "*the most common way to assess the relationship between a sample and its parent population is by describing both in terms of characteristics which are common to them both*" (p. 38). Age, gender, education and employment status are some of the variables commonly used to

evaluate the success or accuracy of a sampling operation. In this thesis, a Chi-Square test was used to compare the characteristics of the population with those of the potential and actual samples age in terms of age, gender and highest education level completed. As Table 5.6 shows, there were differences between the population and the potential sample in terms of age (χ^2=11.137; p<0.05). An analysis of Table 5.6 suggests that the groups 30-39 and 40-49 are over represented whereas the 50-59 group is under represented. In contrast, the differences between the population and the actual sample were not statistically significant in terms of age (χ^2=2.915; p>0.05). It was not possible to make this comparison in terms of education because the census information is based on the highest educational level achieved and this research asked the highest educational level completed.

Table 5. 6: Population, potential sample and actual sample according to age, gender and education level

Source: INE (2004) and author

Age	Population (A) N=121859		Potential sample(B) N=745		Actual sample (C) N=279		Significance		
	n	%	n	%	n	%	A/B	A/C	B/C
Age									
18-29 Years	30587	25.1	181	24.3	65	23.3	χ^2=11.137 p=0.025	χ^2=2.915 p=0.232	χ^2=1.234 p=0.872
30-39 Years	25590	21.0	168	22.6	66	23.7			
40-49 Years	24494	20.1	176	23.6	67	24.0			
50-59 Years	23397	19.2	116	15.6	48	17.2			
60-69 Years	17791	14.6	104	14.0	33	11.8			
Gender									
Male	56933	46.7	331	44.4	121	43.4	χ^2=13.01 p=0.211	χ^2=13.02 p=0.262	χ^2=0.093 p=0.761
Female	64926	53.3	414	55.6	128	56.6			
Higher educational level completed									
No formal education	-		27	3.6	0	0.0	-	-	χ^2=27.617 p=0.000
Primary School (4 years)	-		193	25.9	46	16.5			
Middle School (9 years)	-		147	19.7	50	17.9			
High School (12 years)	-		192	25.8	84	30.1			
University Degree	-		186	25.0	99	35.5			

The characteristics of the actual and potential samples were also compared. While there were not statistically significant differences in terms of age and gender, there was as association between educational level and completion of the questionnaire χ^2=27.617; p<0.05). An observation of Table 5.6 suggests that the more educated (12 years completed or more) returned more the questionnaire when compared to the less educated respondents (did not complete 12 years of formal education).

It should be noted that by doing a separate analysis between the population and the two categories of sample, there is an increased probability that the hypothesis is rejected when it should have been accepted. In other words, there is an increased probability of having committed a Type I error.

The actual and potential samples were also compared in terms of their previous experience with computers, Internet and Internet purchasing. As Table 5.7 shows, the higher in the experience ladder, the greater the likelihood of completing the questionnaire. While only 22.1 percent of the respondents who had never used computers completed the questionnaire, the majority of Internet purchasers returned usable questionnaires. Therefore, the actual sample is biased towards the respondents higher up the adoption ladder.

Table 5. 7: Response rate according to the stage in the e-commerce adoption path

Source: INE (2004) and author

Level of experience	Potential sample		Actual sample		Response rate	Chi-Square
	N	%	N	%	%	
Never used computers	249	33.4	55	19.7	22.1	
Used computers but never used the Internet	110	14.8	44	15.4	39.1	χ^2=18.742
Used the Internet but never purchased	302	40.5	131	47.3	43.7	p=0.000
Purchased over the Internet	84	11.3	49	17.6	58.3	
Total	745	100	279	100	37.4	

During its administration, the questionnaire was left in the household irrespective of whether the respondent was at home or not. As Table 5.8 indicates, there was an association between delivery of the questionnaire to the respondent and return of an usable questionnaire (χ^2=5.979; $p<0.05$). An analysis of rate of return according to each of the sub-groups of the independent variable shows that delivering the questionnaire to the respondent had a significant effect on the individuals who had used computers but never used the Internet. While nearly half who were contacted personally returned a usable questionnaire, that rate dropped to 25.7 percent when it was another member of the household who received the questionnaire.

Table 5. 8: Rate of return of usable questionnaires according to whom received the questionnaire in the household

	Receiver	Returned (%)	Not returned (%)	Total (%)	Chi-Square
All respondents (N=693)	Respondent	43.8	56.2	100	χ^2=5.979
	Other	34.4	65.6	100	p=0.014
Never used computers (N=204)	Respondent	27.9	72.1	100	χ^2=0.127
	Other	25.6	74.4	100	p=0.721
Used computers but never the Internet (N=106)	Respondent	49.3	50.7	100	χ^2=5.369
	Other	25.7	74.3	100	p=0.020
Used the Internet but never purchased (N=299)	Respondent	46.8	53.2	100	χ^2=1.509
	Other	39.7	60.3	100	p=0.219
Purchased over the Internet (N=84)	Respondent	58.8	41.2	100	χ^2=0.035
	Other	56.3	43.8	100	p=0.851

5.6. Summary

This chapter has presented the methodological steps followed to complete this investigation. This research opted for a quantitative approach and adopted descriptive research design. A survey approach was chosen and each of the steps involved in the planning and implementation of the questionnaire were provided. The questionnaire was implemented in the borough of Cascais (Lisbon, Portugal) and data was analysed using univariate and bivariate statistics. The chapter also addressed the issues related to the validity and the reliability od the research and presented the independent variables used and the rationale for their choice. The demographic differences between the population and the actual sample were not statistically significant, which suggests a successful sampling process.

6. Demographic characteristics, innovation experience and credit card possession

6.1. Introduction

As shown in Chapter Two, the personal characteristics of consumers, such as demographics, are one variable that can explain consumer behaviour (Ajzen and Fishbein, 1980; Engel et al., 1995). In addition, past research on the adoption of e-commerce (section 4.4.6) has suggested that demographic characteristics might provide an important contribution in profiling users and non-users of the innovations. Therefore, section 6.2 is devoted to the examination of the demographic characteristics of the respondents, notably their age, education, gender and professional status.

The literature review also suggested that experience with an innovation influences consumer behaviour in many ways (Sections 3.4.3 and 4.3.3.). For example, it has been suggested that intensity, favourability and confidence of attitudes are influenced by the nature of a consumer's prior experiences with the object of the attitude (Howard and Sheth 1969; Ajzen and Fishbein, 1980; Engel et al., 1995; Rogers, 1995). Bearing in mind the importance of attitudes in shaping consumer behaviour, understanding the respondents' experiences with the three innovations comprising the e-commerce adoption path might assist in an understanding of the barriers facing consumers when adopting e-commerce. Thus, the experience associated with computers, the Internet and Internet purchasing are presented in section 6.3. Within the innovation experience, the chapter examines the context of first usage, current usage and access to computers/the Internet, as well as the products that respondents had attempted to purchase/that had purchased over the Internet.

According to the definition of electronic commerce adopted in this research, an electronic transaction requires both the ordering and payment of the purchase to be made over the Internet. This requires the use of a credit card. Hence, given the widespread use of credit cards in the Western society, it is not surprising that the credit card is one of the most frequently used payment system on the Internet (Walczuch and Duppen, 2004). Moreover, previous research has demonstrated that having access to a credit card is associated with

the likelihood of purchasing from the Web (Slyke et al., 2002; see Section 4.4.6 for a review). Therefore, this research asked respondents whether they had credit cards (section 6.4). In addition, given that the purchasing of leisure travel can be a high value purchase, the survey also asked about the credit limit of the card with the highest credit limit.

Before the results are reported, it is important to explain how the data will be presented. As explained in the methodology chapter, one initial independent variable was selected – the stage in the e-commerce adoption path – and three sub-groups were identified (for an explanation regarding the choice of this independent variable see Section 5.5.3). The *non-Internet users* sub-group encompasses the respondents who had never used the Internet. The *Internet users* includes the respondents who had used the Internet but had never purchased anything over the Internet. Finally, the sub-group *Internet purchasers* comprises the respondents who had purchased at least a product or service over the Internet. Use of an innovation for leisure purposes means its use for purposes other than working or studying, while using an innovation for business purposes refers to using them as part of the tasks needed to develop the respondents' profession or studies/education. The analysis of data regarding this initial independent variable is presented in Chapters 6 to 9. A second independent variable was used to specifically analyse those in the last stage of the e-commerce adoption path (i.e. the Internet purchasers). The respondents in this sub-group were divided into e-travel non-adopters (those who had never purchased travel over the Internet), and e-travel adopters (those who had purchased travel over the Internet). The results are presented in Chapter 10.

The analysis of results will be based on the presentation of two types of analysis: descriptives and hypothesis testing. The descriptives include the mean, the standard deviation and the frequencies (both in number and percentages) and their purpose is to describe the data. Three tests are used for hypothesis testing. When the dependent variable is categorical, a Chi-Square test is provided. In this case, the analysis starts by providing the Chi-Square and the associated significant value and then moves on to the description of the data (frequencies). Both the descriptives and the Chi-Square result are provided in the same table. When the dependent variable is ordinal, Mann-Whitney and Kruskal-Wallis values are provided, according to whether there are two or three sub-groups in the independent variable, respectively.

Some data was collected using interval data (e.g. age, number of hours of use of computers and the Internet, number of journeys undertaken). There are two ways of testing for differences between the subgroups of the independent variable when the dependent variable is interval:

- Use the original data since it was collected as a continuous variable (e.g. the exact age, number of hours and number of journeys taken was obtained). In this case, parametric tests (ANOVA and t-test) would be the most suitable to check for differences between the sub-groups of the independent variable. However, an evaluation of the normality of the data showed that it was not normally distributed. Consequently, because one of the assumptions of parametric tests could not be fulfilled, the tests could not be used. Instead, the Mann-Whitney/Kruskal-Wallis tests can be employed as they are the non-parametric alternative to the t-test/ANOVA (for a description of both non-parametric tests see section 5.4.10.1).

- Use the bands provided for describing data (such as those provided in Table 6.1 for describing age data) as ranking data. If this was to be the case, the band on one end (e.g. 18-30 in the case of age) would be given, for example, the value of 1 and the band on the other end (e.g. 60-69 years old) the value of 5, with the intermediate bands being given, by ascending order, the values of 2, 3 and 4. The Kruskal-Wallis test could then be applied to check for differences in the rankings.

The first way – using the original data – was used to perform the hypothesis testing because it encompasses a higher level of measurement (interval data).

When the analysis involves the use of the Mann-Whitney/Kruskal-Wallis tests, the analysis begins with a description of the data, followed by the reporting of the hypothesis testing. Each of the main type of analysis is reported in separate tables.

6.2. Demographic characteristics of the sample

As demonstrated in the literature review (section 4.4.6), the demographic characteristics of the individual are one of the personal characteristics that can affect the adoption of innovations. Table 6.1 presents the demographic characteristics of the respondents

according to each of the sub-groups of the independent variable (stage in the e-commerce adoption path). As far as age is concerned, the mean age of non-Internet users was 50 years, whereas for Internet users and purchasers it was much lower (mean of 37 and 36 years, respectively). An examination of the frequencies shows that the majority of non-Internet users were 50 or more years old. Conversely, more than half of Internet users and slightly more than 70 percent of Internet purchasers were less than 40 years old. The age band with the highest proportion of individuals was not the same for each of the sub-groups. For non-Internet users the highest proportion of answers was in the 50-59 years old age band (27.6%). For Internet users the largest concentration was between 18 and 29 years old (35.6%) whereas for Internet purchasers it was in the 30-39 years band (44.9%).

Table 6. 1: Demographic profile of respondents: age and highest education level completed (frequencies)

	Non-Internet users (A) (n=98)		Internet users (B) (n= 132)		Internet purchasers (C) (n=49)	
	N	%	N	%	N	%
Age						
18-29 Years	5	5.1	47	35.6	13	26.5
30-39 Years	16	16.3	28	21.2	22	44.9
40-49 Years	25	25.5	35	26.5	7	14.3
50-59 Years	27	27.6	16	12.1	5	10.2
60-69 Years	25	25.5	6	4.5	2	4.1
Total	98	100	132	100	49	100
Mean (SD) (years)	50.21 (11.99)		36.70 (12.76)		35.55 (11.57)	
Highest education level completed						
Primary School (4 years)	44	44.9	1	0.8	1	2.0
Middle School (9 years)	27	27.6	19	14.4	4	8.2
High School (12 years)	14	14.3	52	39.4	18	36.7
University Degree	13	13.3	60	45.5	26	53.1
Total	98	100	132	100	49	100

As the results indicate (Table 6.2), the Kruskal-Wallis (see previous section for an explanation underlying the use of this test) revealed that there is a statistical difference in age according to the stage in the adoption path (χ^2=61.531; p<0.001). The Multiple Comparison Test (MCT) was performed to investigate which groups were different (for an explanation of this test, see section 5.4.10.1). The MCT revealed that non-Internet users were older than Internet users and Internet purchasers (as given by the higher mean rank), but the differences between the Internet users and Internet purchasers were not significant.

Table 6. 2: Demographic profile of respondents: age and highest education level completed (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	$\chi 2$	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Age	191.35	114.21	106.77	61.531	0.000	+	+	ns
Education level completed	80.55	169.58	179.23	89.936	0.000	+	+	ns

Notes: + denotes significance at the 0.05 level; ns - not significant

In respect to education level completed, an analysis of Table 6.1 indicates that more than 7 out of 10 non-Internet users had only completed primary school or middle school, whereas around 85 percent of Internet users and nearly 90 percent of Internet purchasers had completed high school or university. For example, nearly half of Internet users (45.5%) and the majority of Internet purchasers (53.1%) had completed a university degree, compared to only 13 percent of non-Internet users who had done so.

The Kruskal-Wallis test was used to assess whether there was a statistical difference in highest education level completed between the sub-groups of the independent variable. The Kruskal-Wallis test is appropriate given that education level can be regarded as ordinal data. Using the Kruskal-Wallis (and subsequently the MCT) instead of the Chi-Square has the benefit of enabling an understanding not only if there are statistically significant differences but also where those differences lie. To perform this test a value from 1 to 4 was given to each respondent according to the highest level of education they had completed. The value of one was given to those whose highest level of education completed was the primary school and the value of four to those who had completed an university degree. As the result shows (Table 6.2), the Kruskal-Wallis revealed a statistically significant difference in the highest education level completed across the different stages in the adoption path ($\chi 2$=89.936; p<0.001). The MCT demonstrates that the Internet users and the Internet purchasers had completed a higher education level when compared to non-Internet users (as given by the higher mean rank). However, the MCT did not reveal any statistical differences between the Internet users and the Internet purchasers in terms of highest education level completed.

Unlike the two previous variables investigating the demographic profile of the respondents, gender data is nominal and consequently the Kruskal-Wallis test could not be performed. Instead, the Chi-square test is the appropriate one and hence it was used to understand whether there was a difference in gender according to the stage in the adoption path. The Chi-Square test (Table 6.3), indicated that the differences between the sub-groups in terms of gender are statistically significant (χ^2= 116.82; p<0.001). Whereas nearly three quarters of Internet purchasers were males, the majority of non-Internet users (68.4%) and Internet users (59.1%) were females. Therefore, the results suggest that non-Internet users and Internet users were more likely to be females whereas Internet purchasers tended to be males.

Table 6. 3: Demographic profile of respondents: gender and economic status (frequencies and Chi-Square)

	Non-Internet users (A) (n=98)		Internet users (B) (n= 132)		Internet purchasers (C) (n=49)		Chi-Square
	N	%	N	%	N	%	
Gender							
Male	31	31.6	54	40.9	36	73.5	χ^2=111.82 p=0.000
Female	67	68.4	78	59.1	13	26.1	
Total	98	100	132	100	49	100	
Economic Status							
Economically inactive	46	46.9	8	6.1	4	8.2	χ^2=69.654 p=0.000
Economically active	51	52.0	101	76.5	38	77.6	
Student	1	1.0	23	17.4	7	14.3	
Total	98	100	132	100	49	100	

Three categories were used for the analysis of economic status: students, economically active and economically inactive. The category 'students' includes those individuals who indicated studying as their main activity. The 'economically active' category includes those individuals who reported having a job. The 'economically inactive' category consists of the individuals who did not have a job or who were retired. As Table 6.3 demonstrates, the Chi-square test showed a statistically significant difference in terms of economic status across the three stages of the e-commerce adoption path (χ^2=69.654; p<0.001). The proportion of non-Internet users reporting being economically inactive was much higher when compared to that of Internet users and purchasers. Nearly half of non-Internet users (46.9%) were retired or did not have a job. Conversely, the economic status of Internet users and purchasers appears to be remarkably similar. Slightly more than three quarters

were economically active, around 15 percent were students and only a small minority, comprising less than 10 percent, was economically inactive.

In summary, with the exception of gender, Internet users and purchasers appear to have similar demographic characteristics. They tend to be young, well educated and be economically active. However, Internet purchasers were more likely to be male whereas Internet users were more likely to be female. In contrast, the results suggest that non-Internet users have different demographic characteristics when compared to both Internet users and Internet purchasers. They are more likely to be older, have lower levels of formal education and be less economically active.

6.3. Innovation experience

In section 4.3.3, several measures of direct objective experience were presented. The next three subsections present four such measures: (1) context of first usage of computers/the Internet, (2) access to computers/the Internet, (3) current usage of computers/the Internet, and (4) products that attempted to purchase/that purchased by the means of e-commerce.

6.3.1. Context of first usage of computers/the Internet

An understanding of the past experiences associated with a given innovation may contribute to an explanation of current and future behaviour. Therefore, the research explored the context of first usage of both computers and the Internet. As far as computers were concerned, the main leaps in operating system development were used in order to define stages of computer development. More specifically, based on the main developments of the Microsoft Operating System, three stages were defined:

- MS-DOS stage: up to 1991;
- Windows version 3.0 stage: between 1992 and 1995;

- Windows 95 stage: from 1996 onwards.

As the results show (Table 6.4), the largest single concentration of answers of the three groups was on the MS-DOS stage. However, a higher proportion of Internet purchasers (83.3%) used computers for the first time during this stage when compared to that of Internet users (60.8%). Similarly, the proportion of Internet users that used computers in 1991 or before was larger than the proportion of non-Internet users (48.7%). As far as the age of first usage is concerned, nearly half of Internet purchasers used computers for the first time at the age of 17 or younger and more than eight out of ten before 30. The majority of Internet users (67.7%) also used a computer for the first time before they were 30 years old. Conversely, slightly more than three quarters of non-Internet users who had used computers in the past did it for the first time at age 30 or above.

Table 6. 4: Cross tabulation between context of first usage of computers and stage in the e-commerce adoption path (frequencies)

	Non-Internet users (n=39)		Internet users (n= 130)		Internet purchasers (n=48)	
	N	%	N	%	N	%
Stage of computer development						
MS-DOS (1991 or before)	19	48.7	79	60.8	40	83.3
Windows 3.0 (1992/1995)	6	15.4	29	22.3	6	12.5
After Windows 95 (1996/2002)	14	35.9	22	16.9	2	4.2
Total	39	100	130	100	48	100
Age when first used computers						
Less than 18 years	6	15.4	47	36.2	22	45.8
Between 18 and 29 years	3	7.7	41	31.5	19	39.6
Between 30 and 39 years	16	41	27	20.8	4	8.3
Between 40 and 49 years	8	20.5	12	9.2	3	6.3
50 or more years	6	15.4	3	2.3	0	0.0
Total	39	100	130	100	48	100

In order to test for statistical differences between the three sub-groups, the Kruskal-Wallis test was performed. As Table 6.5 indicates, there is a statistically significant difference in the stage of first usage of computers (χ^2=14.738; $p<0.01$). The Multiple Comparison Test (MCT) revealed that the Internet purchasers had used computers for the first time at an earlier stage when compared to both the non-Internet users and the Internet users (as given by the lower mean rank). However, no statistically significant differences were found between the non-Internet users and the Internet users. The Kruskal-Wallis test also revealed a statistical difference in the age when computers were first used between the

stages in the e-commerce adoption path ($\chi 2$=29.485; p<0.001). The Multiple Comparison Test indicates that, when compared to the non-Internet users, both the Internet users and the Internet purchasers were younger when they used computers for the first time. However, no statistical difference was found between the Internet users and the Internet purchasers.

Table 6. 5: Context of first usage of computers and the stage in the e-commerce adoption path (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	$\chi 2$	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Stage of computer development	129.58	111.30	86.06	14.738	0.001	ns	+	+
Age when first used computers	153.72	104.23	85.58	29.485	0.000	+	+	ns

Notes: + denotes significance at the 0.05 level; ns - not significant

A similar analysis to that of the context of first usage of computers was conducted for the Internet. Three stages of development of the Internet were defined:

- Early Internet: up to 1995;
- Paid Internet: between 1996 and 1998;
- Mixed Internet (free/paid): from 1999 onwards.

Given that non-Internet users consist of the individuals who had never used the Internet before, the analysis related to the context of first usage of the Internet encompasses only the Internet users and the Internet purchasers. As shown in Table 6.6, the majority of the Internet users (52.8%) used the Internet for the first time in the 'mixed Internet' period and only a small proportion used it in 1995 or before. Conversely, only slightly less than 30 percent of the Internet purchasers used the Internet for the first time in 1999 or after and more than 40 percent reported using the Internet for the first time in the 'early Internet' period.

Table 6. 6: Cross tabulation between context of first usage of the Internet and the stage in the e-commerce adoption path (frequencies)

	Internet users (n= 130)		Internet purchasers (n=48)	
	N	%	N	%
Stage of Internet development				
Early Internet (1995 or before)	18	14.2	20	42.6
Paid Internet (1996-1998)	42	33.1	13	27.7
Mixed Internet (1999-2002)	67	52.8	14	29.8
Total	127	100	47	100
Age when first used the Internet				
Less than 18 years	13	10.2	8	17.0
Between 18 and 29 years	44	34.6	14	29.8
Between 30 and 39 years	28	22.0	15	31.9
Between 40 and 49 years	26	20.5	6	12.8
50 or more years	16	12.6	4	8.5
Total	127	100	47	100

As to the age of first use of the Internet, both the Internet users reported that it happened when they were between 18 and 39 years old. However, whereas the largest single concentration of answers of the Internet users was at the 18-29 age band, the most frequent answer for the Internet purchasers was the 30-39 years old band. In addition, while 33 percent of Internet users said they had used the Internet for the first time when they were 40 years old or more, the proportion of Internet purchasers was lower – only around 21 percent had used it after they were 40 years old.

The Mann-Whitney test was employed for testing for differences between the Internet users and the Internet purchasers. The original data (rather than the bands) was used as this encompasses a higher level of measurement (for an explanation see the introductory section of this chapter). As the results indicate (Table 6.7), the Mann-Whitney U was found to be 1999 ($Z = -3.615$), with an associated probability of 0.000. Hence, there is enough evidence to conclude that the Internet purchasers had used the Internet for the first time at an earlier stage of the Internet development than the Internet users. As to the age when first use of the Internet, the Mann-Whitney test suggests that the null hypothesis cannot be rejected ($U = 2671$; $Z = -1.097$; $p>0.05$). Hence, any differences between the two sub-groups are likely to have arisen by chance. Therefore, it can be concluded that the Internet purchasers were no more likely to have used the Internet for the first time earlier in their life than the Internet users.

Table 6. 7: Context of first usage of the Internet and the stage in the e-commerce adoption path (Mann-Whitney)

	Internet users	Internet purchasers	U	Z	Sig.
	Mean Rank	Mean Rank			
Stage of Internet development	95.26	66.53	1999.0	– 3.615	0.000
Age when first used the Internet	89.97	80.83	2671.0	– 1.097	0.273

6.3.2. Access to the technology

As the literature has demonstrated, the opportunity to use the innovation is an important element of the innovation experience (see section 4.3.3). Thus, respondents were asked about whether they had a computer/the Internet they could use at home and/or at their workplace/college. The question clearly focused on access to a computer/the Internet that they could use since it is possible that there was a computer/the Internet in the household but not all its members could use it. Similarly, an organisation may have computers/the Internet but some employees may not have access to them. All the respondents were included in the analysis about their access at the workplace/college, irrespective of their current employment status. This was because the question concentrates solely on whether the respondent had access to computers/the Internet at these places and not on why they would have/not have access to them.

From an analysis of the data presented in Table 6.8, it can be observed that there were differences in access to computers according to stage in the e-commerce adoption path. More specifically, Chi-Square tests revealed statistical differences in terms of access to computers at home (χ^2=76.235; p<0.001), at work/school (χ^2=81.218; p<0.001), at either of these places (χ^2=96.384; p<0.001) and at both places (χ^2=80.493; p<0.001). The differences between Internet users and purchasers were very small and in one case (having a computer at work/college), the proportion of Internet users slightly exceeded that of Internet purchasers. More than 90 percent of the respondents in these two sub-groups had access to computers at home and more than 80 percent had access to computers at work/college. Conversely, the proportion of non-Internet users with access to computers at home did not exceed half and only slightly more than one quarter (26.6%) had computers at work/college. Regarding access to computers either at home or at

work/college, all the Internet users and purchasers had access to computers at one of these places. This is in contrast with non-Internet users, since only slightly more than half (55.8%) had access to computers either at home or at work/college. In respect to access to computers in both places, around three quarters of Internet users and purchasers reported having access to them, whereas more than 80 percent of non-Internet users did not have access to computers at both home and work/college.

Table 6. 8: Access to computers (frequencies and Chi-Square)

	Non-Internet users		Internet users		Internet purchasers		Chi-Square
	N	%	N	%	N	%	
At home							
	(N=92)		***(N=131)***		***(N=49)***		
Yes	43	46.7	122	92.4	47	95.9	χ^2=76.235 p=0.000
No	49	53.3	10	7.6	2	4.1	
Total	92	100	132	100	49	100	
At work/college							
	(N=94)		***(N=126)***		***(N=48)***		
Yes	25	26.6	104	82.5	39	81.6	χ^2=81.218 p=0.000
No	69	73.4	22	17.5	9	18.4	
Total	94	100	126	100	48	100	
Either at home or at work/college							
	(N=84)		***(N=132)***		***(N=49)***		
Yes	47	55.8	132	100	49	100	χ^2=96.384 p=0.000
No	37	44.2	0	0.0	0	0.0	
Total	84	100	132	100	49	100	
Both at home and at their work/college							
	(N=95)		***(N=125)***		***(N=48)***		
Yes	16	17.0	93	74.4	37	77.6	χ^2=80.493 p=0.000
No	79	83.0	32	25.6	11	22.4	
Total	95	100	125	100	48	100	

As far as the Internet is concerned (Table 6.9), Chi-Square tests showed statistically significant differences across the stages in the adoption path in terms of access at home (χ^2=93.521; p<0.001), at work/school (χ^2=103.03; p<0.001), either at work/college or at home (χ^2=123.44; p<0.001) and at both places (χ^2=103.39; p<0.001). An analysis of the frequencies provides some insight into the nature of these differences:

- Virtually all (95.9%) Internet purchasers and 80 percent of Internet users had Internet at home, whereas the proportion of non-Internet did not exceed one quarter.

- A large proportion of Internet users (78.4%) and purchasers (81.6) had access to the Internet at work/college, whereas only a minority of non-Internet users (16.1%) did.

- All Internet purchasers and virtually all Internet users (97.7%) and had access to the Internet either at home or at work, whereas less than 40 percent of non-Internet users had it at least at one of these places.

- The majority of Internet users and purchasers had access to the Internet at both places. However, while more than three quarters of the Internet purchasers could use the Internet at both places, the proportion of Internet users was more than nearly 20 percentage points lower (59.2%). In contrast, virtually all non-Internet users (96.8%) had no access to the Internet at both places.

Table 6. 9: Access to the Internet (frequencies and Chi-Square)

	Non-Internet users		Internet users		Internet purchasers		Chi-Square
	N	%	N	%	N	%	
At home							
	(N=92)		***(N=131)***		***(N=49)***		
Yes	21	25.0	106	80.2	47	95.9	χ^2=93.521 p=0.000
No	63	75.0	26	19.8	2	4.1	
Total	84	100	132	100	49	100	
At work/college							
	(N=94)		***(N=126)***		***(N=48)***		
Yes	15	16.1	99	78.4	39	81.6	χ^2=103.026 p=0.000
No	79	83.9	27	21.6	9	18.4	
Total	94	100	126	100	48	100	
Either at home or at work/college							
	(N=84)		***(N=132)***		***(N=49)***		
Yes	33	39.3	129	97.7	49	100	χ^2=123.443 p=0.000
No	51	60.7	3	2.3	0	0.0	
Total	84	100	132	100	49	100	
Both at home and at their work/college							
	(N=95)		***(N=125)***		***(N=48)***		
Yes	3	3.2	74	59.2	37	77.6	χ^2=103.391 p=0.000
No	92	96.8	51	40.8	11	22.4	
Total	95	100	125	100	48	100	

The results also indicate that some respondents had access to computers at home but not the Internet. This is mainly the case of non-Internet users, as nearly half had computers at home but only one quarter had the Internet. In comparison, 12 percent of Internet users

reported having access to a computer at home but not to the Internet. In contrast, all Internet purchasers who had a computer at home had also the Internet.

In summary, a similar (and large) proportion of Internet users and purchasers had access to computers and the Internet. In contrast, although the majority of non-Internet users had access to computers, the majority had no access to the Internet. The differences between non-Internet users and Internet users/purchasers, both in terms of computers and the Internet, are large. Conversely, with the exception of access to the Internet at home and both at home and at work/college, the differences between Internet users and Internet purchasers tend to be small (the differences were smaller than 10 percentual points).

6.3.3. Current usage of computers and the Internet

As noted in section 4.3.3, an understanding of the current amount of usage of an innovation might help explain the outcomes associated with using that innovation (e.g. attitudes, involvement). Thus, respondents were asked to indicate whether they were current users of computers/the Internet for leisure purposes. Use for leisure purposes refers to usage to perform tasks not related with the individual's job or studies. For the purposes of this research, a current user is an individual who has used the innovation at least once in the last month. The data regarding usage included those individuals who had used the technology. The analysis of usage of computers included those non-Internet users who had used computers in the past (43 out of 98 respondents) as well as the Internet users and the Internet purchasers. The analysis regarding the usage of the Internet included the Internet users and the Internet purchasers. The decision of not including those who had never used the computers and/or the Internet was based on the fact that none could be a current user of these technologies.

As Table 6.10 indicates, there is a statistically significant difference in the current usage of computers for leisure purposes ($\chi^2=39.453$; $p<0.001$). The majority of non-Internet users and three out of ten Internet users were not current users of computers for leisure purposes. Conversely, only a small proportion of Internet purchasers (4.1%) were not current users. The Chi-square test also revealed a significant difference in the current usage of the Internet for leisure purposes between the stage of e-commerce adoption path

(χ^2=16.365; p<0.001). While three out of ten Internet users were not current users, virtually all Internet purchasers were current of the Internet for leisure purposes.

Table 6. 10: Current usage of computers and the Internet for leisure purposes (frequencies and Chi-Square)

	Non-Internet users		Internet users		Internet purchasers		Chi-Square
	N	%	N	%	N	%	
Current usage of computers for leisure purposes							
	(n=32)		(n= 129)		(n=49)		
Current users (used last month)	13	40.6	90	69.8	47	95.9	χ^2=39.453 p=0.000
Current non-users (not used last month)	19	59.4	39	30.2	2	4.1	
Total	32	100	129	100	49	100	
Current usage of the Internet for leisure purposes							
			(n= 121)		(n=49)		
Current users (used last month)			84	69.4	48	98.0	χ^2=16.365 p=0.000
Current non-users (not used last month)	n/a		37	30.6	1	2.0	
Total			121	100	49	100	

Notes: n/a – not applicable given that this group had never used the Internet and

The respondents who reported being current users of computers for leisure purposes were asked to indicate the number of hours they used computers in a normal week (weekdays and weekends). In a similar vein, the respondents who reported being current users of the Internet for leisure purposes were also asked to indicate the number of hours they used the Internet in a normal week. To identify different patterns of usage, the answers had to be divided by purpose (leisure and business) and location (home and workplace/college).

Table 6.11 shows the mean hours of usage, as well as the frequencies according to five categories of usage of computers, of those who were current users of computers for leisure purposes. Perhaps not surprisingly, the results show that computers are used for leisure purposes mainly at home. For example, on average, from the 8 hours that Internet purchasers used computers for leisure purposes, six and one half were related to usage from home. Similarly, the results show that computers are used at work/college mainly for business purposes. From the 19 hours the Internet purchasers used computers for business purposes, nearly 12.5 hours consisted of usage at work/college. In addition, the results also demonstrate that computers are used more time for business purposes than for leisure purposes. For example, from the 27 hours the Internet purchasers spent on computers in a normal week, nearly 19 hours (approximately 70 percent) were devoted to business-related

tasks. Similar patterns can be observed for both the non-Internet users and the Internet users.

Table 6. 11: Computer usage in a normal week of current users of computers for leisure purposes (frequencies)

	Non-Internet users (n=13)		Internet users (n= 90)		Internet purchasers (n=47)	
	N	%	N	%	N	%
Leisure purposes at home						
Do not use	2	15.4	11	12.2	2	4.3
Between 1 and 3 hours	3	23.1	31	34.4	10	21.3
Between 4 and 6 hours	5	38.5	18	20.0	19	40.4
Between 7 and 9 hours	1	7.7	13	14.4	5	10.6
10 or more hours	2	15.4	17	18.9	11	23.4
Total	13	100	90	100	47	100
Mean (SD) (hours)	4.46 (3.38)		5.80 (6.27)		6.51 (5.46)	
Total usage for leisure purposes						
Do not use	0	0.0	2	2.2	1	2.1
Between 1 and 3 hours	5	38.5	33	36.7	8	17.0
Between 4 and 6 hours	5	38.5	18	20.0	18	38.3
Between 7 and 9 hours	1	7.7	18	20.0	7	14.9
10 or more hours	2	15.4	19	21.1	13	27.7
Total	13	100	90	100	47	100
Mean (SD) (hours)	4.92 (2.87)		6.98 (6.88)		8.06 (6.65)	
Business purposes at work/college						
Do not use	7	57.1	31	34.4	11	23.4
Between 1 and 3 hours	1	7.1	13	14.4	7	14.9
Between 4 and 6 hours	0	0.0	9	10.0	5	10.6
Between 7 and 9 hours	1	7.1	1	1.1	1	2.1
10 or more hours	4	28.6	36	40.0	23	48.9
Total	13	100	90	100	47	100
Mean (SD) (hours)	5.29 (7.96)		11.70 (14.52)		12.40 (12.59)	
Total usage for business purposes						
Do not use	6	46.2	16	17.8	3	6.4
Between 1 and 3 hours	1	7.7	13	14.4	4	8.5
Between 4 and 6 hours	1	7.7	7	7.8	3	6.4
Between 7 and 9 hours	1	7.7	9	10.0	5	10.6
10 or more hours	4	30.8	45	50.0	32	68.1
Total	13	100	90	100	47	100
Mean (SD) (hours)	6.38 (8.23)		14.91 (14.64)		18.98 (14.77)	
Total usage of computers						
Do not use	0	0.0	0	0.0	0	0.0
Between 1 and 3 hours	4	30.8	9	10.0	1	2.1
Between 4 and 6 hours	0	0.0	7	7.8	2	4.3
Between 7 and 9 hours	1	7.7	9	10.0	3	6.4
10 or more hours	8	61.5	65	72.2	41	87.2
Total	13	100	90	100	47	100
Mean (SD) (hours)	11.31 (8.21)		21.89 (16.52)		27.04 (16.40)	

In order to assess whether there was a relationship between the stage in the e-commerce adoption path and number of hours of usage of computers, the Kruskal-Wallis test was

employed. For the purposes of hypothesis testing, the exact number of hours was used, not the bands. The Kruskall-Wallis was employed instead of ANOVA for the reasons explained in section 6.1.

As the results indicate (Table 6.12), there were no statistically significant differences with respect to usage for leisure purposes at home (χ^2=2.261; p>0.05), total usage for leisure purposes (χ^2=2.845; p>0.05) and usage for business purposes at work/college (χ^2=4.770; p>0.05). Conversely, the Kruskal-Wallis test revealed statistically significant differences for total usage for business purposes (χ^2=10.540; p<0.01) and total usage of computers (χ^2=12.114; p<0.01). Consequently, the Multiple Comparison Test (see section 5.4.10.1 for a description of the test) was used to understand which sub-groups were different. The test revealed that non-Internet users differentiated from both the Internet users and the Internet purchasers, but that no differences existed between the Internet users and purchasers. An analysis of the mean rank values shows that the non-Internet users tended to use computers less hours than both the Internet users and the Internet purchasers in terms of usage for business purposes and total usage of computers.

Table 6. 12: Computer usage in a normal week of current users of computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Leisure purposes at home	69.77	72.26	83.30	2.261	0.323	ns	ns	ns
Total usage for leisure purposes	65.19	72.66	83.79	2.845	0.241	ns	ns	ns
Business purposes at work/college	54.25	75.85	82.77	4.770	0.092	ns	ns	ns
Total usage for business purposes	45.23	73.31	88.07	10.540	0.005	+	+	ns
Total usage of a computer	43.15	73.07	89.11	12.114	0.002	+	+	ns

Notes: + denotes significance at the 0.05 level; ns - not significant

As far as Internet usage is concerned, as the Table 6.13 indicates, Internet users accessed the Internet more times for leisure purposes (5.56 hours) than for business purposes (4.18 hours). In contrast, Internet purchasers use the Internet mainly for business purposes (7.50 hours, as compared to 7 hours of usage for leisure purposes). Similar to the usage of computers, the use of the Internet for leisure purposes takes place mainly at home, and work/college is the main location for using the Internet for business purposes. For

example, in the case of Internet users, around 4.5 hours of the 5.5 hours of usage for leisure purposes took place at home and 2.8 hours of the 4.2 hours of usage for business purposes took place from work/college.

Table 6. 13: Internet usage in a normal week of current users of the Internet for leisure purposes (frequencies)

	Internet users (n= 84)		Internet purchasers (n=48)	
	N	%	N	%
Leisure purposes at home				
Do not use	20	16.7	3	6.3
Between 1 and 3 hours	48	39.3	22	45.8
Between 4 and 6 hours	26	21.4	9	18.8
Between 7 and 9 hours	13	10.7	4	8.3
10 or more hours	14	11.9	10	20.8
Total	121	100	49	100
Mean (SD) (hours)	4.52 (5.44)		5.44 (5.50)	
Total usage for leisure purposes				
Do not use	1	1.2	0.0	0.0
Between 1 and 3 hours	58	47.6	20	41.7
Between 4 and 6 hours	23	19.0	9	18.8
Between 7 and 9 hours	19	15.5	4	8.3
10 or more hours	20	16.7	15	31.3
Total	121	100	49	100
Mean (SD) (hours)	5.56 (5.42)		7.00 (6.32)	
Business purposes at work/college				
Do not use	55	45.2	16	33.3
Between 1 and 3 hours	42	34.5	11	22.9
Between 4 and 6 hours	17	14.3	14	29.2
Between 7 and 9 hours	0	0.0	0	0.0
10 or more hours	7	6.0	7	14.3
Total	121	100	49	100
Mean (SD) (hours)	2.81 (7.67)		4.45 (5.34)	
Total usage for business purposes				
Do not use	30	25.0	5	10.4
Between 1 and 3 hours	45	36.9	13	27.1
Between 4 and 6 hours	29	23.8	16	33.3
Between 7 and 9 hours	7	6.0	3	6.3
10 or more hours	10	8.3	11	22.9
Total	121	100	49	100
Mean (SD) (hours)	4.18 (1.17)		7.50 (9.28)	
Total usage of the Internet				
Do not use	0	0.0	0	0.0
Between 1 and 3 hours	24	20.2	5	10.4
Between 4 and 6 hours	30	25.0	9	18.8
Between 7 and 9 hours	32	26.2	7	14.6
10 or more hours	35	28.6	28	56.3
Total	121	100	49	100
Mean (SD) (hours)	9.74 (10.82)		14.50 (13.13)	

Given that the analysis of hours of Internet usage encompasses only two sub-groups of the independent variable (Internet users and Internet purchasers), the Mann-Whitney test was performed with the aim to check for differences in hours of Internet usage according to the stage in the e-commerce adoption path. As shown in Table 6.14, when compared to the Internet users, the Internet purchasers were more likely to use the Internet more hours in a normal week for business purposes at work/college ($U=1500$; $Z=-2.537$; $p<0.05$), to use it more for business purposes ($U=133.5$; $Z=-3.245$; $p<0.01$) and to use it more irrespective of the motive/location ($U=1420.5$; $Z=-2.537$; $p<0.01$). However, no differences were found for usage for leisure purposes, both at home ($U=1702.5$; $Z=-1.493$; $p>0.05$) and in total ($U=1697.5$; $Z=-1.516$; $p<0.05$).

Table 6. 14: Internet usage in a normal week of current users of the Internet for leisure purposes (Mann-Whitney)

	Internet users	Internet purchasers	U	Z	Sig.
	Mean Rank	Mean Rank			
Leisure purposes at home	62.77	73.03	1702.5	-1.493	0.136
Total usage for leisure purposes	62.71	73.14	1697.5	-1.516	0.130
Business purposes at work/college	60.36	77.25	1500.0	-2.537	0.011
Total usage for business purposes	58.40	80.68	1335.5	-3.245	0.001
Total usage of the Internet	59.41	78.91	1420.5	-2.823	0.005

In summary, the further the stage in the e-commerce adoption path, the greater the likelihood of being a current user of computers and the Internet for leisure purposes. Both computers and the Internet tended to be used more of the time for leisure purposes at home and for business purposes at work/college. The results also indicate that computers were used mainly for business purposes by the three sub-groups of the independent variable. However, while Internet users used the Internet mainly for leisure purposes, the majority of time spent by the Internet purchasers on the Internet was for business purposes. No statistically significant differences were found in terms of hours of usage for leisure purposes, both in total and at home. This is in contrast with total usage for business purposes and total usage of computers/the Internet, where those farther along the e-commerce adoption path used them more time in a normal week.

6.3.4. Products purchased over the Internet

The Internet purchasers were asked to indicate what types of products they had purchased for leisure purposes (Table 6.15). Books (53.1%) and CDs (36.7%) were the most purchased products. Tourist accommodation was the third most purchased product (32.7%), followed by movies and other travel products (flight tickets) which were purchased by 20.4 percent of the respondents. As to the remaining travel-related products, their purchase was less common. Packages, rent-a-car and cruises had been purchased by only 2 respondents (or 4.1%) each.

Table 6. 15: Types of products/services bought on the Internet for leisure purposes (frequencies)

	Products bought (n=49)	
	N*	%
Books	26	53.1
CD's	18	36.7
Tourist accommodation	16	32.7
Flight Tickets	10	20.4
Movies	10	20.4
Tourist entertainment tickets	7	14.3
Financial services	6	12.2
Computers/Accessories	5	10.2
Insurance	3	6.1
Supermarket	3	6.1
Packages	2	4.1
Rent-a-car	2	4.1
Cruises	2	4.1
Other products	8	16.3

Notes: * multiple response

As far as the purchase of travel products is concerned, nearly half of the Internet purchasers (46.9%) had not bought travel over the Internet (Table 6.16). Fourteen (28.6%) had purchased one type travel product, 11 (22.4 percent) had purchased two and only one respondent (2.0%) had bought three different types of travel products. Thus, the majority of Internet purchasers had purchased at least one travel product. From those who had purchased travel before (n=26), slightly more than 60 percent had purchased accommodation, nearly 40 percent flight tickets and 26.9 percent tourist entertainment tickets (26.9%). Packages, rent-a-car and cruises had not been purchased very frequently as only a small minority of respondents (7.7%) had purchased these.

Table 6. 16: Types of products/services bought on the Internet for leisure purposes (frequencies)

	Tourism products bought (n=49)	
	N	%
No tourism products	21	46.9
One tourism product	14	28.6
Two tourism products	11	22.4
Three tourism products	1	2.0
	Types of tourism products bought (n=26)	
	N*	%
Accommodation	16	61.5
Flight Tickets	10	38.5
Tourist Entertainment Tickets	7	26.9
Packages	2	7.7
Rent-a-car	2	7.7
Cruises	2	7.7

Notes: * multiple response

6.4. Credit card possession

Past research has emphasised that payment for purchases is an important determinant of the adoption of e-commerce (see section 4.4.6). In the case of the electronic purchase of travel components, the ordering and reception of the product (that is a confirmation of reservation/purchase) are likely to be simultaneous. Consequently, it is common for the seller to require immediate payment with confirmation of the order, which in the case of Internet purchases requires the use of the credit card. Furthermore, as shown in the literature, it has been suggested that having a credit card is an important determinant of the adoption of e-commerce. Therefore, respondents were asked to indicate whether they had credit cards. Despite the fears concerning the respondents' willingness to provide this type of financial information, an overwhelming majority of respondents did answer the question.

As Table 6.17 demonstrates, when tested using the Chi-Square test, the null hypotheses was rejected at the 95 percent level of confidence (χ^2=17.076; p<0.001), indicating that there was a relationship between the stage in the e-commerce adoption path and the possession of credit cards. The analysis of frequencies shows that the majority of non-Internet users did not have a credit card, whereas the majority of Internet users and

purchasers had at least one. However, the proportion of Internet purchasers having at least one credit card was higher than that of the Internet users (83.7% and 62.5%, respectively).

Table 6. 17: Credit card possession (frequencies)

	Non-Internet users (n=79)		Internet users (n=122)		Internet purchasers (n=43)		Chi-Square
	N	%	N	%	N	%	
Yes	36	45.6	75	62.5	36	83.7	χ^2=17.076 p=0.000
No	43	54.4	47	38.5	7	16.3	
Total	79	100	122	100	43	100	

Purchasing leisure travel may involve the spending of thousands of Euros and therefore a low credit limit may restrict the value of the purchase consumers are able to make. Therefore, the research went further by asking respondents who had credit cards to indicate the credit limit of the card with the highest limit they had. As can be observed in Table 6.18, for at least one quarter of the respondents in all the three sub-groups the card with the highest credit limit had a credit below 1000 euros. The majority of non-Internet users (72.9%) and Internet users (64.0%) and exactly half of the Internet purchasers had a credit limit equal or below 2500 euros.

Table 6. 18: Credit limit of the card with the highest limit (frequencies)

	Non-Internet users (n=37)			Internet users (n=75)			Internet purchasers (n=36)		
	N	%	∑ %	N	%	∑ %	N	%	∑ %
< 500 euros	9	24.3	24.3	9	12.0	12.0	5	13.9	13.9
501-1000 euros	5	13.5	37.8	12	16.0	28.0	4	11.1	25.0
1001-2500 euros	13	35.1	72.9	27	36.0	64.0	9	25.0	50.0
2501-5000 euros	4	10.8	83.7	18	24.0	88.0	10	27.8	77.8
> 5001 euros	6	16.2	100	9	12.0	100	8	22.2	100
Total	37	100	-	75	100	-	36	100	-

The Kruskal-Wallis test was performed in order to understand whether there were differences in credit limit between the three sub-groups. The five bands were given a number from one to five, with the lowest credit limit band being given the value of one and the highest credir limit band the value of five. As Table 6.19 indicates, there was no statistically significant difference between the sub-groups in the credit limit of the card with

the highest credit limit (χ^2=3.315; p>0.05). Therefore, it cannot be concluded that there is a relationship between credit limit and stage in the e-commerce adoption path because it is possible that any differences in the credit limit were due to sampling error.

Table 6. 19: Credit limit of the card with the highest limit (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Credit limit of the card with the highest limit	65.81	74.44	83.56	3.315	0.191	ns	ns	ns

Notes: + denotes significance at the 0.05 level; ns - not significant

6.5. Summary

This chapter started by providing a profile of the respondents in each of the three stages of e-commerce adoption path: the non-Internet users, the Internet users and the Internet purchasers. The findings of the survey suggest that Internet users and purchasers were different when compared to non-Internet users in terms of demographic characteristics. Internet users and purchasers tend to be younger, more educated and more employed/students when compared to non-Internet users. As far as gender is concerned, Internet purchasers were more likely to be males whereas non-Internet users and Internet users were represented by more females. Internet users and purchasers do not appear to be different in terms of education, age and employment status.

Next, the chapter presented the respondents' innovation experience regarding the use of computers, the use of the Internet and the purchasing over the Internet. The earlier the first usage of computers, the greater the likelihood of having moved farther along in the e-commerce adoption path. Similarly, Internet purchasers tend to have used the Internet for the first time earlier than Internet users. The results also show that the younger the person is when first usage of computers takes place, the higher the probability of being further along the e-commerce adoption path, but no such relationship was found for the age when first used the Internet.

Current usage of computers and the Internet was another measure of innovation experience studied. The results show that Internet purchasers were more likely to be current users of computers and the Internet for leisure purposes than Internet users. In addition, Internet users and purchasers used computers more for business purposes and globally than non-Internet users. Although no differences were found between Internet users and purchasers in terms of time of computer use in a week, Internet purchasers used the Internet more time at work/college for business purposes and globally when compared to Internet users.

The opportunity to use both computers and the Internet, and more specifically the access to these technologies, was another measure innovation experience contained in the survey. The results show that when compared to the Internet users and purchasers, a lower proportion of non-Internet users had access to computers and the Internet at home and at work/college. In addition, while no differences appear to exist between Internet users and purchasers in terms of access to computers, the proportion of Internet purchasers with access to the Internet at home and both at home and at work/college was greater when compared to Internet users.

This section also summarised the respondents' previous experience with purchasing over the Internet. Books and compact discs were the most purchased types of products over the Internet. The majority of Internet purchasers had purchased travel-related products and accommodation was clearly the most purchased product, followed by flight tickets and tourist entertainment tickets.

Finally, this chapter also reviewed the important issue of the payment for purchases, notably the possession of credit cards. The further along in the e-commerce adoption path, the greater the likelihood of having credit cards. However, no statistical differences were found between the three sub-groups in terms of credit limit of the credit card with the highest credit limit.

7. Purchase and consumption of travel

7.1. Introduction

Past research suggests that the type of product being purchased influences the extent to which e-commerce is used in the purchasing of that product-category (see section 4.4.5). Consequently, an understanding of the factors influencing the adoption of e-commerce requires an analysis of the purchase and consumption patterns related to the product category being researched. The main aim of this chapter is to examine the respondents' behaviours and preferences regarding the purchasing and the consumption of travel, notably leisure travel, as this is the focus of the research. More specifically, it aims to provide an understanding about how the respondents behave, or would behave, if they were to purchase leisure travel (not necessarily online), as well as to explore the travelling frequency of the respondents, both in regards to leisure and business.

Unlike other product categories (e.g. groceries), in tourism, and in leisure tourism in particular, the purchaser of the product is also likely to be the user of the product. In other words, those who purchase leisure travel are likely to be also those who travel. Based on this assumption, it can be argued that, if an individual does not travel, he/she is not likely to buy travel. Therefore, a necessary condition for becoming an e-commerce adopter of leisure travel is to travel. Moreover, a higher level of consumption of the product category, that is, travel, might provide not only more opportunities to purchase travel, but to motivate consumers to be more adventurous and innovative in terms of the purchasing channel used. Therefore, this chapter starts by providing the frequency of travelling of the respondents (Section 7.2).

In addition, bearing in mind that the extent to which an individual purchases a product is a determinant of the adoption of e-commerce, another question concernes the extent to which the respondents would be the purchaser (that is, would do the reservation) if they were going to travel for leisure purposes (section 7.3).

Broadly speaking, in tourism there are two types of providers: the principals (such as airlines, hotels, rent-a-car) and the intermediaries (such as tour operators and travel agencies). In section 4.4.5.4 it was suggested that the extent to which the type of provider

an individual wants to purchase from has adopted e-commerce can influence the individual's adoption of e-commerce. If a given type of provider has failed to go online, an individual's loyalty to that provider may result in the rejection/postponement of using e-commerce in the purchasing of leisure travel. In Portugal, although they are widely used by travellers, travel agencies have failed to rapidly adopt e-commerce as a distribution channel (Gaio, 2002). Therefore, the respondents were asked to indicate whether they would purchase from principals or travel agencies if they were about to purchase leisure travel (section 7.4).

Media choice theories postulate that the selection of a medium for a specific task is a function of the characteristics of the medium and the task (Vijayasarathy, 2002). In order to understand what would be the medium most likely to be chosen when purchasing leisure travel, the respondents were asked to indicate the most, and the least, preferred communication channels for contacting with the provider if they were going to undertake travel reservations. The results are presented in section 7.5.

Section 7.6 reviews the payment of leisure travel purchases. Purchasing leisure travel can, and usually does involve, a high value transaction. Hence, it can be expected that consumers pay special attention to the payment for such purchases, notably the means they choose to use. Previous research (e.g. Walczuch and Duppen, 2004) has stressed the importance of identifying not only the preferred payment means, but also of understanding the reasons behind that preference. Ultimately this will enable e-commerce developers to develop systems that better satisfy consumer requirements. Therefore, this research asked the respondents to rank the preferred payment means, as well as to indicate the main reason for that preference.

This research is using one main independent variable – the stage in the e-commerce adoption path – and three sub-groups were defined. The *non-Internet users* sub-group includes the respondents who had never used the Internet, while the *Internet users* encompasses the respondents who had used the Internet but had never purchased anything over the Internet. Finally, the sub-group *Internet purchasers* comprises the respondents who had purchased at least a product or service over the Internet. For the purposes of this research, a journey was regarded as any journey away from the usual dwelling staying away at least one night, in Portugal or abroad. To be regarded as a journey, a further requirement was that the respondents had used either commercial transport and/or tourist

accommodation. A business journey was defined as a journey the main purpose of which was to go away in representation of some organisation or company, while a leisure journey was defined as a journey the main purpose of which was to make use of time when not in work (e.g. holidays, weekends). If a journey had been undertaken as part of the respondents' studies, that was considered to be a business journey.

The data is presented as follows. Two statistical procedures are provided. The first, descriptives, include the mean, the standard deviation and the frequencies (both in number and percentages) and their purpose is to describe de data. The second, hypothesis testing, aims to identify differences between the sub-groups of the independent variable. When the dependent variable is categorical, a Chi-Square test is performed. In this case, the analysis starts by providing the Chi-Square and the associated significant value and then moves on to the description of the data (frequencies). Both the descriptives and the Chi-Square result are provided in the same table. When the dependent variable is ordinal, Kruskal-Wallis is used. In this case, a description of the data is provided in one table and the results of the hypothesis testing are reported in a separate table.

7.2. Frequency of travelling

In order to understand the consumption patterns of the product category being researched, respondents were asked about their frequency of travelling. Specifically, they had to indicate the number of journeys they undertook since January 2000 and the day of completion of the questionnaire (the questionnaire run from January until December 2002). The respondents had to divide their answers by main motivation (business or leisure) and by main destination (Portugal or abroad). Given that the exact number of journeys was collected (interval data), hypothesis testing was undertaken by performing the Kruskal-Wallis test (an explanation for using this test is provided in Chapter 6, Section 6.1).

7.2.1. Business Journeys

As the mean values provided in Table 7.1 demonstrate, on average, an Internet purchaser travelled seven times for business purposes and an Internet user went on more than four journeys. The non-Internet users travelled very little abroad as on average a non-Internet user travelled only once for business purposes. An analysis of the frequencies indicates that the proportion of non-Internet users travelling for business purposes was small (12.2%) and for business purposes abroad was even lower (3.1%). The majority of Internet users (60.6%) had not gone on a business journey but more than half of Internet purchasers had (59.2%). In addition, the proportion of Internet purchasers travelling five or more times for business purposes was high, accounting for more than one third of the respondents in this group. In contrast, only 1 out of 20 non-Internet users and nearly 17 percent of Internet users had travelled for business purposes five or more times.

Table 7. 1: Travelling frequency of the respondents – business journeys (frequencies)

	Non-Internet users (n=98)		Internet users (n= 132)		Internet purchasers (n=49)	
	N	%	N	%	N	%
Total of Business Journeys						
No journeys	86	87.8	80	60.6	20	40.8
One journey	1	1.0	12	9.1	5	10.2
Between 2 and 4 journeys	6	6.1	18	13.6	6	12.2
Five or more journeys	5	5.1	22	16.7	18	36.7
Total	98	100	132	100	100	100
Mean (SD) (journeys)	1.00 (4.37)		4.37 (11.10)		7.02 (14.80)	
Business Journeys Abroad						
No journeys	95	96.9	96	72.7	30	61.2
One journey	3	3.1	14	10.6	5	10.2
Between 2 and 4 journeys	0	0.0	11	8.3	6	12.2
Five or more journeys	0	0.0	11	8.3	8	16.3
Total	98	100	132	100	49	100
Mean (SD) (journeys)	0.03 (0.17)		1.30 (3.65)		3.29 (10.17)	

The next step was to assess whether the apparent differences in the number of business journeys taken were statistically significant. As the results indicate (Table 7.2), there was a relationship between the total of business journeys (χ^2=136.230; p<0.001) and business journeys abroad (χ^2=33.055; p<0.001) and the stage in the e-commerce adoption path. The Multiple Comparison Test (for an explanation of this test, see section 5.4.10.1) showed that

Internet purchasers travelled more than Internet users and non-Internet users, and Internet users more than non-Internet users in terms of total of business journeys. In addition, Internet users and Internet purchasers travelled abroad for business purposes more than non-Internet users, but Internet purchasers were not more likely to have travelled for business purposes abroad than Internet users.

Table 7. 2: Travelling frequency of the respondents – business journeys (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	$\chi 2$	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Total of business journeys	110.49	147.59	178.57	36.23	0.000	+	+	+
Total of business journeys abroad	114.72	148.81	166.82	33.06	0.000	+	+	ns

Notes: + denotes significance at the 0.05 level; ns - not significant

7.2.2. Leisure Journeys

As far as leisure journeys is concerned, the mean values provided in Table 7.3 indicate that, on average, non-Internet users had undertaken around four and one half leisure journeys, whereas Internet users and Internet purchasers had taken in excess of seven and eight journeys, respectively. The Internet purchasers was also the group that had taken, on average, more leisure journeys abroad (mean: 3.45), followed by the Internet users (mean: 2.05) and non-Internet users (mean: 0.83). An analysis of the frequencies shows that while all Internet purchasers had gone on at least one leisure journey in the period, nearly 10 percent of Internet users and 22.4 percent of non-Internet users did not travel for leisure purposes. Moreover, a large majority of Internet purchasers, comprising more than three quarters of the respondents, travelled five or more times in the period. This is in contrast with non-Internet users and Internet users as the proportion who travelled more than four times was below 50 percent: 32.2% for the former and 47.7 percent for the latter. In terms of leisure journeys having as the main destination a foreign country, the majority of Internet purchasers had been on two or more journeys, the majority of Internet users did not travel or had travelled only once and the majority of non-Internet users did not travel.

Table 7. 3: Travelling frequency of the respondents: leisure journeys (frequencies)

	Non-Internet users (n=13)		Internet users (n= 90)		Internet purchasers (n=47)	
	N	%	N	%	N	%
Total of Leisure Journeys						
No journeys	22	22.4	13	9.8	0	0.0
One journey	13	13.3	17	12.9	3	6.1
Between 2 and 4 journeys	31	31.6	39	29.5	9	18.4
Five or more journeys	32	32.7	63	47.7	37	75.5
Total	98	100	132	100	49	100
Mean (SD) (journeys)	4.54 (7.58)		7.15 (11.08)		8.29 (6.01)	
Leisure Journeys Abroad						
No journeys	62	63.3	52	39.4	8	16.3
One journey	19	19.4	31	23.5	9	18.4
Between 2 and 4 journeys	13	13.3	29	22.0	17	34.7
Five or more journeys	4	4.1	20	15.2	15	30.6
Total	98	100	132	100	49	100
Mean (SD) (journeys)	0.83 (1.67)		2.05 (2.99)		3.45 (3.69)	

In order to understand if these differences were statistically significant, the Kruskal-Wallis test was performed. As the results show (Table 7.4), total of leisure journeys (χ^2=25.884; p<0.001) and leisure journeys abroad (χ^2=40.271; p<0.01) were both related with the stage in the e-commerce adoption path. The results of the Multiple Comparison Test indicate that the further along in the e-commerce adoption path, the greater the total of leisure journeys and the number of journeys abroad undertaken since January 2000.

Table 7. 4: Travelling frequency of the respondents – leisure journeys (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Total of leisure journeys	113.44	143.23	184.40	25.88	0.000	+	+	+
Total of leisure journeys abroad	106.45	146.41	189.82	40.27	0.000	+	+	+

Notes: + denotes significance at the 0.05 level; ns - not significant

7.2.3. Total of Journeys

In terms of total of journeys undertaken, the mean values demonstrate that Internet purchasers travelled, on average, more than 15 times, the Internet users 11 times and the

non-Internet users five times (Table 7.5). Non-Internet users travelled very little abroad (mean: 0.86), while Internet users did, on average, slightly more that 3 journeys (mean: 3.36). On average, almost half (roughly 7 out of 15) of the journeys undertaken by Internet purchasers, irrespective of the purpose, had as a destination a foreign country. The frequencies show that, in terms of the overall number of journeys, nearly one in four non-Internet users had not gone on a journey in the period. Conversely, an overwhelming majority of Internet users (94.4%) and all Internet purchasers had travelled. However, the proportion of respondents in these two groups who had gone on five or more journeys was different: 57.6 percent of Internet users and 83.7 percent of Internet purchasers. In terms of journeys abroad, only a very small proportion of non-Internet users (4.1%) had travelled abroad 5 or more times. The proportion of Internet purchasers who had travelled to a foreign country five or more times was nearly twice to that of Internet users (42.9% and 22.0%, respectively).

Table 7. 5: Travelling frequency of the respondents: total of journeys (frequencies)

	Non-Internet users (n=13)		Internet users (n= 90)		Internet purchasers (n=47)	
	N	%	N	%	N	%
Total of Journeys						
No journeys	19	19.4	7	5.6	0	0.0
One journey	12	12.2	12	9.1	2	4.1
Between 2 and 4 journeys	30	30.6	37	28.0	6	12.2
Five or more journeys	37	37.8	76	57.6	41	83.7
Total	98	100	132	100	49	100
Mean (SD) (journeys)	5.54 (8.42)		11.52 (15.90)		15.31 (16.85)	
Total of Journeys Abroad						
No journeys	61	62.2	38	28.8	5	10.2
One journey	19	19.4	30	22.7	8	16.3
Between 2 and 4 journeys	14	14.3	35	26.5	15	30.6
Five or more journeys	4	4.1	29	22.0	21	42.9
Total	98	100	132	100	49	100
Mean (SD) (journeys)	0.86 (1.70)		3.36 (4.85)		6.73 (12.35)	

When tested using the Kruskal-Wallis test, there were statistically significant differences both in the total number of journeys (χ^2=35.348; p<0.001) and in the number of journeys abroad (χ^2=58.344; p<0.001) between the stages in the e-commerce adoption path (Table 7.6). The Multiple Comparison Test revealed that the three sub-groups differentiated from each other and hence it can be concluded that the further along in the e-commerce

adoption path the greater the likelihood of having travelled more and travelled more abroad.

Table 7. 6: Travelling frequency of the respondents – total of journeys (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Total of journeys	106.28	147.42	187.45	35.35	0.000	+	+	+
Total of journeys abroad	95.43	153.41	193.01	58.34	0.000	+	+	+

Notes: + denotes significance at the 0.05 level; ns - not significant

In summary, respondents higher in the ladder of adoption of e-commerce had more recent experience with the consumption of the product category under study – leisure travel – as well of the consumption of a related category – business travel. Not surprisingly, a similar pattern emerged in terms of the total of journeys undertaken. The only exception was the number of business journeys abroad, where no differences were found between Internet users and Internet purchasers.

7.3. Participation in the reservation of leisure travel

As highlighted in the literature (Section 4.4.5.1), one of the factors that might explain why an individual does not purchase over the Internet is that he/she does not perform the purchaser role. Therefore, respondents were asked to indicate the extent to which they would do the travel reservations if they were travelling for leisure purposes. As Table 7.7 demonstrates, the majority of respondents in both the three sub-groups of the independent variable would always, or most of the time, do the reservations themselves. However, over one quarter of non-Internet users and Internet purchasers and 18 percent of Internet users said that the reservations would be done most of the time, or always, by other individuals. The highest proportion of answers of the non-Internet users and the Internet users were in the 'always me' category, whereas nearly half of the Internet purchasers said they would do the reservation most of the times.

Table 7. 7: Participation in the reservation of leisure travel components (Frequencies)

	Non-Internet users (n=94)		Internet users (n=131)		Internet purchasers (n=49)	
	n	%	n	%	n	%
Always me	53	56.4	57	43.5	13	26.5
Most of the time me	17	18.1	51	38.9	23	46.9
Most of the time others	13	13.8	14	10.7	7	14.3
Always others	11	11.7	9	6.9	6	12.2
Total	94	100	131	100	49	100

In order to test for differences between the three sub-groups of the independent variable, the Kruskal-Wallis test was performed. The benefit of using Kruskal-Wallis (when compared to the Chi-Square) is that it is possible to identify where the differences between the sub-groups lie performing the Multiple Comparison Test. The data regarding the participation in the reservation of leisure travel components can be regarded as ordinal given that the four answers have an 'order', from the extreme 'always me' to the extreme 'always others'. The value of 1 was given to the first and the value of 4 to the latter, whereas the values of 2 and 3 were given to the answers 'most of the time me' and 'most of the time others', respectively. Hence, the lower the mean rank, the more respondents would do the reservations. Similarly, the higher the mean rank, the more would be others to do the reservations. As the results presented in Table 7.8 show, there was relationship between the stage in the e-commerce adoption path and the participation in the reservations of leisure travel components (χ^2=6.50; $p<0.05$). The Multiple Comparison Test indicated that Internet purchasers differentiated from the other two sub-groups, but no differences exist between non-Internet users and Internet users. Therefore, it can be concluded that non-Internet users and Internet users tended to answer closer to the 'always me' level when compared to the Internet purchasers.

Table 7. 8: Participation in the reservation of leisure travel components (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Participation in the reservation of leisure travel components	128.14	135.48	160.87	6.50	0.390	ns	+	+

The research also asked respondents why it would be them, or others, who would make the reservations. Table 7.9 shows the factors used by people to explain why it would be them making the reservation. In other words, these are the forces that could lead, or are leading, people to carry out the reservations themselves. In hierarchical terms, the top factor influencing the undertaking of the reservations was 'likes to do it' for non-Internet users (19.2%), 'information/details' and 'likes to do it' (same percentage) for Internet users (14.3%) and habit/past experience for Internet purchasers (16.7%). Other factors, mentioned by more than 10 percent of the respondents in each sub-group were 'security/trust' and 'respondent deals with personal issues' (non-Internet users), 'security/trust' and 'keep control of decisions' (Internet users), and 'better position to do it' and 'keep control of decisions' (Internet purchasers). The more specific answers that made up each of these broad categories are shown in Appendix B1. The Chi-square test was performed but the results are not shown because the test failed the validity/reliability criteria (less than 20 percent of the cells had an expected count less than five).

Table 7. 9: Main factor influencing the undertaking of the travel reservations

	Non-Internet users (n=52)		Internet users (n=84)		Internet purchasers (n=30)	
	n	%	n	%	n	%
Habit/past experience	3	5.8	6	7.1	***5***	***16.7***
Likes to do it	***10***	***19.2***	***12***	***14.3***	1	3.3
Time/availability	5	9.6	8	9.5	3	10.0
Information/details	5	9.6	***12***	***14.3***	3	10.0
Better position to do it	2	3.8	5	6.0	4	13.3
Security/trust	8	15.4	9	10.7	1	3.3
Keep control of decisions	4	7.7	10	11.9	4	13.3
Respondent deals with personal issues	8	15.4	7	8.3	1	3.3
Type of group/journey	1	1.9	4	4.8	1	3.3
Convenient/practical	2	3.8	2	2.4	0	0.0
Other reasons	4	7.7	9	10.7	7	23.3
Total	52	100	84	100	30	100

The factors used by people to explain why it would be others who do the reservations are presented in Table 7.10. In other words, these are the forces that could lead, or are leading, people to delegate the reservation task to others. Non-Internet users mentioned 'others are in a better position to do it' (28.6%) as the most frequent reason, whereas Internet users (40.9%) and purchasers (41.7%) indicated 'habit/past experience'. A comparison of the factors influencing for, and against, the undertaking of the reservations show that many are

similar but of an opposite valence. For example, while one of the reasons to do the reservations themselves was the availability/time to do it, the lack of availability/time was a reason to delegate the task on others. Appendix B2 provides a more detailed analysis the sub-components that made up each of these broad categories. The Chi-square test failed the validity/reliability criteria and hence the result is not presented.

Table 7. 10: Main factor influencing against undertaking of the travel reservations

	Non-Internet users (n=21)		Internet users (n=22)		Internet purchasers (n=12)	
	n	%	n	%	n	%
Habit/past experience	5	23.8	9	40.9	5	41.7
Dislikes to do it	0	0.0	1	4.5	3	25.0
Time/availability	3	14.3	4	18.2	3	25.0
Information/details	0	0.0	0	0.0	0	0.0
Others are in a better position to do it	6	28.6	2	9.1	0	0.0
Security/trust	0	0.0	0	0.0	0	0.0
Keep control of decisions	0	0.0	0	0.0	0	0.0
Respondent deals with personal issues	0	0.0	0	0.0	0	0.0
Type of group/journey	2	9.5	4	18.2	0	0.0
Convenient/practical	4	19.0	1	4.5	1	8.3
Other reasons	1	4.8	1	4.5	0	0.0
Total	21	100	22	100	12	100

7.4. Preferred purchasing channels

The literature review (Section 4.4.5.4) demonstrated that in tourism there are two types of purchasing channel: through intermediaries, such as travel agencies and tour operators, and directly with principals, such as airlines and hotels. It was also suggested that the extent to which the companies from which the individuals intend to purchase their travel components have adopted e-commerce influences the adoption of e-commerce by consumers. Because Portugal-based tour operators do not usually sell directly to travellers, respondents were asked to indicate the extent to which they would purchase the travel components from travel agencies or directly from principals if they were to purchase leisure travel components.

As Table 7.11 demonstrates, the majority of respondents in each of the three sub-groups of the independent variable would purchase most of the time, or always, from travel agencies. However, around 30 percent of the non-Internet users and of the Internet purchasers and 22 percent of the Internet users said they would purchase directly from principals.

Table 7. 11: Preferred purchasing channel (frequencies)

	Non-Internet users (n=93)		Internet users (n=128)		Internet purchasers (n=49)	
	n	%	n	%	n	%
Always principals	21	22.6	12	9.4	2	4.1
Most of the times principals	8	8.6	17	13.3	14	28.6
Most of the times travel agencies	33	35.5	73	57.0	27	55.1
Always travel agencies	31	33.3	26	20.3	6	12.2
Total	93	100	128	100	49	100

A similar rationale to that of employed in relation to the participation in the reservation of leisure travel components was used to assess whether there were statistical differences in terms of preferred purchasing channel. The Kruskal-Wallis test was performed based on the values of values of 1, 2, 3 and 4 being attributed to the answers 'always principals', 'most of the time principals', 'most of the time travel agencies' and 'always travel agencies', respectively. Hence, a lower mean rank value means that the respondents answered closer to the 'always principals' level. As shown in Table 7.12, there was no relationship between preferred purchasing channel and the stage in the e-commerce adoption path (χ^2=1.68; p>0.05). Therefore, it cannot be concluded that there is a relationship between the preferred purchasing channel and the stage in the e-commerce adoption path because it is possible that any differences were due to sampling error.

Table 7. 12: Preferred purchasing channel (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple Comparison		
						A/B	A/C	B/C
	Mean Rank	Mean Rank	Mean Rank					
Preferred purchasing channel	138.49	137.95	123.41	1.68	0.434	ns	ns	ns

In order to understand the rationale behind the choice of purchasing channel, the respondents were asked to indicate the main reason why they would purchase from the type of purchasing channel they chose. Tables 7.13 and 7.14 present the factors used by people to explain why they would purchase from principals or from travel agencies. In other words, these are the forces that could lead, or are leading, people to purchase directly from principals (such as hotels and airlines) or from travel agencies. As far as the reasons

for purchasing from principals is concerned (7.13), the non-Internet users mentioned 'security and trust' reasons (28.6%) as the most important, whereas both Internet users and purchasers identified the lower price (25.0% and 26.3%, respectively).

Table 7. 13: Main factors influencing the preference for principals (frequencies)

	Non-Internet users (n=21)		Internet users (n=24)		Internet purchasers (n=15)	
	n	%	n	%	n	%
Price	4	19.0	6	25.0	4	26.7
Security & trust	6	28.6	4	16.7	2	13.3
Preference for doing directly/avoid intermediaries	5	23.8	5	20.8	2	13.3
Types of journey/group	2	9.5	4	16.7	2	13.3
Service	2	9.5	2	8.3	2	13.3
Has contacts/works in the industry	2	9.5	1	4.2	1	6.7
Habit/experience	0	0.0	2	8.3	1	6.7
Easy/simple	0	0.0	0	0.0	1	6.7
Total	21	100	24	100	15	100

In terms of the reason for purchasing from travel agencies (Table 7.14), 'service' was the most frequently cited reason by the three sub-groups. Nearly 36 percent of non-Internet users, 26 percent of Internet users and 33 percent of Internet purchasers quoted a service-related reason. However, an equal proportion of Internet users (i.e. 26 percent) also indicated the convenience/practicality of using travel agencies. In some cases, the factors influencing the purchasing from principals are similar to those influencing the purchasing from travel agencies. For example, some respondents said they would use always, or most of the time, travel agencies due to the lower price these intermediaries offer whereas others said they would use always, or most of the time, principals because they could get better prices from this type of supplier.

The more specific factors reported by the respondents to explain why they would prefer to purchase from principals or from travel agencies are shown in Appendices B3 and B4, respectively. The answers shed light on the situations that can influence the use of one or the other types of purchasing channel. In general, the use of travel agencies or principals can vary according to the type of journey and the type of group. Domestic journeys, single products, simple journeys, on-site purchase and familiar destinations are the cases in which principals are likely to be used as a purchasing channel. In contrast, travel agencies are

more likely to be used if the journey is abroad, in multiple-product journeys, in complex journeys, when the purchase is made in advance and to unknown destinations.

Table 7. 14: Main factors influencing the preference for travel agencies (frequencies)

	Non-Internet users (n=53)		Internet users (n=87)		Internet purchasers (n=30)	
	n	%	n	%	n	%
Service	19	35.8	23	26.4	10	33.3
Convenient/practical	11	20.8	23	26.4	7	23.3
Security & trust	4	7.5	6	6.9	3	10.0
Easy/simple	8	15.1	7	8.0	1	3.3
Time	2	3.8	9	10.3	3	10.0
Habit/experience	1	1.9	11	12.6	1	3.3
Types of journey/group	6	11.3	4	4.6	1	3.3
Price	0	0.0	3	3.4	3	10.0
Has contacts/works in the industry	2	3.8	1	1.1	1	3.3
Total	53	100	87	100	30	100

7.5. Preferred communication channels

According to media choice theories, the individual's choice of a medium for contacting a travel provider is a function of the characteristics of the medium and the task. In Portugal, face-to-face, telephone and electronic mail are three of the most commonly used communication channels by potential travellers for contacting travel suppliers. As shown in Chapter Four (section 4.4.1), each of these channels has its own properties in terms of, for example, the proximity of the parties and the nature of feed-back. Based on the properties of purchasing channels, it can be argued that as a medium, e-commerce is closer to the characteristics of telephone and email as compared with face-to-face. Hence, understanding the most preferred (and the least preferred) medium, as well as the reasons for that preference, may shed some light on why people use or do not use e-commerce in the purchasing of leisure travel. Therefore, respondents were asked to rank the three media according to the order of their preference if they were to contact the travel provider.

7.5.1. Most preferred communication channel

Table 7.15 shows that for 62.4 percent of non-Internet users and 58.8 percent of Internet users the preferred communication means was face-to-face, whereas telephone was the

most preferred means for the majority of Internet purchasers (53.1%). Email was the least chosen as the most preferred means by the three sub-groups. However, whereas only a small proportion non-Internet users and Internet users (around 3 percent) said email would be their most preferred medium, over 20 percent of Internet purchasers would prefer to use email. When tested using Chi-Square, there was a relationship between stage in the e-commerce adoption path and the most preferred communication means (χ^2=30.805; p<0.001).

Table 7. 15: Most preferred communication means to contact the supplier when purchasing leisure travel (frequencies)

	Non-internet users (n=93)		Internet users (n=131)		Internet purchasers (n=49)		Chi-Square
	n	%	n	%	n	%	
Face-to-face	58	62.4	77	58.8	13	26.5	
Telephone	32	34.4	50	38.2	26	53.1	χ2=30.805
Email	3	3.2	4	3.1	10	20.4	p=0.000
Total	93	100	131	100	49	100	

The factors used by people to explain why they would prefer to use a communication means (face-to-face, telephone or email) to communicate with the seller when purchasing leisure travel products are provided in Table 7.16. The Chi-square test failed the validity/reliability criteria and hence the results are not presented. In hierarchical terms, as defined by frequency of answers (in percentage), the most frequent motive to use face-to-face was, for non-Internet users, the preference for personal contact (36.7%), whereas for Internet users (46.4%) and purchasers (46.2%) it was its interactivity capabilities. As far as the reasons for preferring the telephone is concerned, fast/speed was the most frequent motive for non-Internet users (30.8%), whereas for Internet users (30.4%) and purchasers (24.0%) it was the interactivity offered by the medium. The convenience/practicality of email was the most frequent reason for the Internet purchasers to prefer email. The Internet users who said email would be their preferred means supported their preference in terms of the convenience, simplicity and security of the means, while the non-Internet user who reported email as the preferred email indicated speed as the reason for that preference. Appendices B5 to B7 show in more detail the nature of the answers given by the respondents to explain their preferred communication means.

Table 7. 16: Main factor influencing the preference for a communication means (frequencies)

	Non-internet users		Internet users		Internet purchasers	
	n	%	n	%	n	%
Medium: Face to face	(n=49)		(n=69)		(n=13)	
Interactivity	16	32.7	32	46.4	6	46.2
Preference for personal contact	18	36.7	21	30.4	3	23.1
Security & trust	7	14.3	10	14.5	4	30.8
Habit/past experience	3	6.1	4	5.8	0	0.0
Easy/simple	2	4.1	0	0.0	0	0.0
Other	3	6.1	2	2.9	0	0.0
Total	49	100	69	100	13	100
Medium: Telephone	(n=26)		(n=46)		(n=25)	
Fast/speed	6	23.1	14	30.4	6	24.0
Convenience/practical	8	30.8	8	17.4	5	20.0
Interactivity	3	11.5	5	10.9	4	16.0
Easy/simple	4	15.4	5	10.9	3	12.0
Habit/past experience	2	7.7	3	6.5	2	8.0
Preference for personal contact	0	0.0	4	8.7	1	4.0
Other	3	11.5	7	15.2	4	16.0
Total	26	100	46	100	25	100
Medium: Email	(n=2)		(n=3)		(n=10)	
Fast/speed	1	50.0	0	0.0	2	20.0
Convenience/practical	0	0.0	1	33.3	3	30.0
Easy/simple	0	0.0	1	33.3	1	10.0
Security & trust	0	0.0	1	33.3	2	20.0
Other	1	50.0	0	0.0	2	20.0
Total	2	100	3	100	10	100

7.5.2. Least preferred communication channel

As far as the least preferred communication means is concerned (Table 7.17), email was clearly the least preferred for non-Internet users (87.8%) and for Internet users (73.2%). In contrast, for nearly half of Internet purchasers face-to-face was the least preferred means. The telephone was mentioned very little as the least preferred means, which suggests that its characteristics make it an acceptable option to all the three groups. The null hypothesis was rejected at the 95 percent level of confidence (χ^2=39.949; p<0.001) and thus there was a relationship between the stage in the e-commerce adoption path and the least preferred communication medium.

Table 7. 17: Least preferred communication means to contact the supplier when purchasing leisure travel (frequencies)

	Non-internet users (n=74)		Internet users (n=112)		Internet purchasers (n=46)		Chi-Square
	n	%	n	%	n	%	
Face-to-face	2	2.7	23	20.5	22	47.8	
Telephone	7	9.5	7	6.3	6	13.0	$\chi 2=39.949$
Email	65	87.8	82	73.2	18	39.1	$p=0.000$
Total	74	100	112	100	46	100	

The factors used by people to explain why they would not prefer to use face-to-face, telephone or email to communicate with the seller when purchasing leisure travel products are provided in Table 7.18. The result of the Chi-square test is not presented because it failed the validity/reliability criteria. In hierarchical terms, as defined by frequency of answers (percentage), the most frequent motive influencing against the use of face-to-face was time for Internet users (47.6%) and time and journey for Internet purchasers, each accounting for 42.9 percent of the answers. From the two non-Internet users who said face-to-face was the least preferred one reported the need for a journey for the lack of preference for this means.

Technology related reasons, that is, those related with email (40.0%), Internet (12.7%) and computers (14.5%), were the most important factors influencing against the use of email by non-Internet users. Conversely, these were not so important for Internet users and almost irrelevant to Internet purchasers. Internet users and purchasers tended to focus more on the characteristics associated with email, such as the lack of interactivity, the security and the lack of personalisation. However, these two groups were different in terms of the most frequent factors for not preferring email. Internet users indicated security/trust concerns as the most frequent factor (21.9%), whereas Internet purchasers highlighted the lack of personalisation (27.8%).

Table 7. 18: Main factor influencing against the preference for a communication means (frequencies)

	Non-internet users		Internet users		Internet purchasers	
	n	%	n	%	n	%
Medium: Face to face	(n=2)		(n=21)		(n=21)	
Journey	1	50.0	7	33.3	***9***	***42.9***
Time	0	0.0	***10***	***47.6***	***9***	***42.9***
Other reasons	1	50.0	4	19.0	3	14.3
Total	2	100	21	100	21	100
Medium: Telephone	(n=6)		(n=7)		(n=5)	
Security & trust	1	16.7	***3***	***42.9***	1	20.0
Impersonal	***2***	***33.3***	0	0.0	***2***	***40.0***
Do not like	1	16.7	1	14.3	1	20.0
Interactivity	1	16.7	0	0.0	0	0.0
Time	0	0.0	0	0.0	1	20.0
Other reasons	1	16.7	3	42.9	0	0.0
Total	6	100	7	100	5	100
Medium: Email	(n=55)		(n=73)		(n=18)	
Email	***22***	***40.0***	12	16.4	1	5.6
Interactivity	4	7.3	13	17.8	4	22.2
Security/trust	3	5.5	***16***	***21.9***	1	5.6
Impersonal	3	5.5	11	15.1	***5***	***27.8***
Internet	7	12.7	5	6.8	0	0.0
Computer	8	14.5	3	4.1	0	0.0
Lack of habit/past experience	3	5.5	4	5.5	2	11.1
Technologies	0	0.0	2	2.7	1	5.6
Other reasons	5	9.1	7	9.6	4	22.2
Total	55	100	73	100	18	100

As far as the reasons for not preferring telephone, non-Internet users and Internet purchasers indicated the lack of personalisation of the means as the most frequent reason, whereas Internet users mentioned the lack of security/trust.

A more detailed description of the answers given by the respondents to explain the least preferred means is provided in Appendices B8 to B10. As was demonstrated, technological reasons were very important in explaining why respondents did not choose email as a communication means. The analysis of these answers suggests that the reasons for not preferring email were associated with different aspects of the technology. In general, the answers reported five issues: (1) access to, (2) knowledge about, (3) attitude towards, (4) usage of and (5) experience with the technologies. Some reasons were related to specific technologies (e.g. computer, Internet, email) whereas others were more general (e.g. do not like technologies, lack of familiarity with informatics). Using the computer as the example, the respondents indicated they did not have computer (access), they did not know how to

use computers (knowledge), they did not like computers (attitude) or that they did not have the time to use computers (usage).

As noted earlier, media choice theories postulate that the choice of a medium is a function of the characteristics of the medium and the task. From the analysis of the detailed answers provided in Appendices B8 to B10, the following circumstances can be suggested as potentially affecting the choice of communication means:

- The location of the seller: national versus abroad; local versus distant.
- The degree of familiarity with the seller: known versus unknown.
- The stage in the purchasing process: initial versus intermediate versus final stages.
- The level of advice required: knows the types of products versus does not know the types of products (s)he wants to purchase.

In summary, assuming that face-to-face is the most personal communication method and email the least, the results show that non-Internet users and Internet users tended to prefer more personal means whereas Internet purchasers less personal ones. As far as the reasons for their choice of most/least preferred means, the results suggest that the reasons to prefer a given means are not the same as those for not preferring that means. In addition, it seems that the reasons behind the preference for face-to-face are more associated with the personalisation of the purchase, whereas those related to the telephone are more related to the convenience of the means (fast/speed, easy/simple).

7.6. Preferred payment means

Given the importance of the payment for purchases in the adoption of e-commerce (see Section 4.4.6), understanding the preference regarding the payment means, as well as the reasons for that preference, may provide valuable information on the reasons why individuals use, or do not use, e-commerce. Therefore, respondents were asked to indicate the most preferred payment method if they were to buy leisure travel over the Internet. Five payment methods were given as options: payment with credit card using one of three

channels for communicating its details (phone, email, online), as well as bank transfer and debit card.

In order to facilitate analysis (notably to be able to perform the Chi-Square test), the three answers regarding payment by credit card were merged into a single category. As the results show (Table 7.19), there was a relationship between stage in the e-commerce adoption path and preferred payment method when purchasing leisure travel (χ^2=24.636; p<0.001). Both the non-Internet users and the Internet users ranked bank transfer as number one method, whereas Internet purchasers ranked credit card. The three groups also differentiated in terms of the second and third most preferred means. Payment by debit card was the second most preferred method by both the non-Internet users and Internet users, while credit card was the least preferred. In contrast, bank transfer was the second most preferred by Internet purchasers, while debit card was the method that received the least preference by the respondents in this sub-group.

Table 7. 19: Preferred payment method when purchasing leisure travel (frequencies and Chi-Square)

	Non-Internet users (n=72)		Internet users (n=120)		Internet purchasers (n=46)		Chi-Square
	N	%	n	%	n	%	
Credit card	11	15.3	13	10.8	***20***	***43.5***	
Bank transfer	***33***	***45.8***	***62***	***51.7***	16	34.8	χ^2=24.636
Debit card	25	38.9	45	37.5	10	21.7	p=0.000
Total	72	100	120	100	46	100	

With the aim of understanding the factors influencing the preference for a payment method, respondents were asked to indicate a reason for preferring the method they ranked 1. Table 7.20 presents the factors used by people to explain the preference for that method (irrespective of the method), while Table 7.21 presents the results disaggregated by payment method. The Chi-square test is not presented as more than 20 percent of the cells had an expected frequency of less than 5. Not surprisingly, for each of the three sub-groups security was the main factor influencing the preference for a payment method. However, after that the hierarchy, by percentage of answers, was different. For the non-Internet users the hierarchy, in descending order, was (1) security, (2) habit and experience and (3) practical/convenient. For Internet users was (1) security, (2) trust, reliability and credibility and (3) habit and experience. For the Internet purchasers the hierarchy was (1)

security, (2) trust, reliability and credibility and (3) practical/convenient, easy/simple and fast/speed (each accounting for 6.5 percent of the respondents).

Table 7. 20: Factors influencing the preference for a payment method (frequencies)

	Non-Internet users (n=57)		Internet users (n=105)		Internet purchasers (n=45)	
	n	%	n	%	n	%
Security	***27***	***47.4***	***61***	***58.1***	***29***	***64.4***
Habit & experience	9	15.8	11	10.5	1	2.2
Trust, Reliability & Credibility	1	1.8	10	9.5	5	11.1
Practical/convenient	6	10.5	4	3.8	3	6.7
Easy/simple	3	5.3	5	4.8	3	6.7
Fast/speed	3	5.3	4	3.8	3	6.7
Personal financial management	5	8.8	3	2.9	0	0.0
Credit card ownership	2	3.5	4	3.8	0	0.0
Other	1	1.8	3	2.9	1	2.2
Total	57	100	105	100	45	100

The factors influencing the preference for a payment method according to each of the three methods – credit card, bank transfer and debit card – are shown in Table 7.21, with Appendix B11 presenting the more specific answers that made up these broad categories. As far as payment by credit card is concerned, although security was mentioned as the most frequent reason, other factors were also mentioned by the respondents, notably by Internet purchasers. These include the trust, reliability and the credibility, the convenience/practicality, the ease/simplicity and the speed of paying using credit card. More than two thirds of the answers of the respondents in the three sub-groups underlying the choice of debit card were related to security. For all except one of Internet purchasers (i.e. 93.8%) who chose bank transfer, security was the main reason for their choice. A proportion of the non-Internet users and the Internet users, accounting for slightly less than 20 percent of the answers, also mentioned the habit/experience and the trust, reliability and the credibility of the method, respectively.

Table 7. 21: Reasons for preferring the payment method (frequencies)

	Non-Internet users		Internet users		Internet purchasers	
Credit card						
	(n=9)		(n=12)		(n=19)	
Security	4	44.4	6	50.0	5	26.3
Trust, Reliability & Credibility	1	11.1	0	0.0	3	15.8
Habit & Experience	0	0.0	0	0.0	1	5.3
Practical/convenient	1	11.1	2	16.7	3	15.8
Easy/simple	0	0.0	1	8.3	3	15.8
Fast/speed	3	33.3	1	8.3	3	15.8
Other	0	0.0	2	16.7	1	5.3
Total	9	100	12	100	19	100
Bank transfer						
	(n=27)		(n=55)		(n=16)	
Security	18	66.7	38	69.1	15	93.8
Trust, Reliability & Credibility	0	0.0	10	18.2	1	6.3
Habit & experience	5	18.5	2	3.6	0	0.0
Personal financial management	2	7.4	0	0.0	0	0.0
Easy/simple	0	0.0	2	3.6	0	0.0
Practical/convenient	2	7.4	0	0.0	0	0.0
Fast/speed	0	0.0	1	1.8	0	0.0
Credit card ownership	0	0.0	1	1.8	0	0.0
Other	0	0.0	1	1.8	0	0.0
Total	27	100	55	100	16	100
Debit card						
	(n=21)		(n=38)		(n=10)	
Security	5	23.8	17	44.7	9	90.0
Habit & experience	4	19.0	8	21.1	0	0.0
Personal financial management	3	14.3	3	7.9	0	0.0
Credit card ownership	2	9.5	3	7.9	0	0.0
Practical/convenient	3	14.3	2	5.3	0	0.0
Trust, Reliability & Credibility	0	0.0	1	2.6	1	10.0
Easy/simple	3	14.3	2	5.3	0	0.0
Fast/speed	0	0.0	2	5.3	0	0.0
Other	1	4.8	0	0.0	0	0.0
Total	21	100	38	100	10	100

As far as payment by debit card is concerned, once again security was clearly the main reason for both Internet users and purchasers. However, while an overwhelming majority of Internet purchasers (90%) indicated security, the proportion of Internet users who indicated this reason was much lower (44.7%). Habit/experience was also a frequent reason for Internet users, accounting for 21.1 percent of the answers. Notwithstanding the most frequent reason for non-Internet users to use debit card was security (23.8%), the answers were more varied. Habit and experience (19%), personal financial management

(14.3%), practical/convenient (14.3%) and easy/ simple (14.3%) were also mentioned by more than 10 percent of the respondents in this sub-group.

7.7. Summary

The conceptual framework adopted in this research postulated that product category behaviour is one of the main factors influencing the adoption of e-commerce. Bearing in mind that this research focuses on leisure travel, an understanding of the behaviours related to the purchasing of leisure travel provide a valuable contribution to meeting the objectives of the research. Two types of behaviours related to leisure travel were covered in the chapter: consumption and purchasing. This chapter started by studying the recent travel experience of the respondents by asking respondents about the number of journeys they had undertaken since 2000 for leisure and business purposes, either in Portugal or abroad. The results have shown that non-Internet users have travelled little and mainly in Portugal. In contrast, Internet users and purchasers have travelled much more than non-Internet users, but Internet purchasers were more likely to travel than Internet users. Therefore, it can be concluded that the further in the e-commerce adoption path the greater the recent travel experience of the respondents.

Next, the chapter attempted to understand the extent to which the respondents would do the reservations if they were to travel for leisure purposes. This is of most importance to an understanding of the adoption of e-commerce in the purchasing of leisure travel since if the respondent does not undertakes the reservations he/she cannot become an adopter of the electronic commerce. The results have shown that the majority of the respondents would always, or most of the time, make the travel reservations. However, there was a proportion, comprising around 20 percent of the respondents, that reported it would be others, either always or most of the time, to make the travel reservations. In addition, the results have shown that Internet purchasers answered more at the 'most of the time' level when compared to both non-Internet users and Internet users. When asked why it would be them to make the reservations, the most frequent answer was the liking to do it for non-Internet users, the liking to do it and information/details for Internet users and habit/past experience for Internet purchasers. The habit/past experience was the most frequent reason for both Internet users and Internet purchasers not to do the travel reservations,

while for non-Internet users it was the fact that others would be in a better position to do it.

Another question related to the purchasing of leisure travel concerned the purchasing channel the respondents would use if they were to purchase leisure travel. The results have shown that travel agencies would be the favourite channel for the respondents in all the three sub-groups of the independent variable. However, there was a proportion, comprising between roughly 20 and 30 percent of the respondents, who would purchase their leisure travel components always, or most of the time, through principals (e.g. airlines, hotels, rent-a-car). When tested for differences between the three sub-groups, no statistically significant differences were found. As far as the reasons for preferring a purchasing channel is concerned, security/trust received the highest proportion of answers from the non-Internet users, while for both the Internet users and the Internet purchasers price was the guiding force. Service was the most common reason for preferring to purchase from travel agencies. In addition, the convenience/practicality of purchasing from travel agencies was also mentioned by more than 20 percent of the respondents in each sub-group. In fact, service and convenience/practicality received the same proportion of answers from Internet users.

Purchasing can be seen as a communication process between purchasers and sellers. Therefore, the respondents were asked to indicate the most, and the least, preferred communication means when communicating with the supplier of leisure travel. The results revealed that the further along the e-commerce adoption path, the greater the preference for non-personal communication methods. While for the Internet users and purchasers the face-to-face was the most preferred communication method, for the Internet purchasers it was the telephone. Additionally, for non-Internet users and Internet users the email was the least preferred communication method, whereas for Internet purchasers was the face-to-face.

Three reasons emerged as the most important for respondents to prefer face-to-face as a communication means: interactivity, the preference for personal contact and security/trust, while the reasons for not preferring this means were related to the journey it requires and the time it takes. The speed and convenience practicality were the two most frequent answers to explain why they would prefer the telephone, while security/trust concerns and the impersonal nature of this medium were factors discouraging people to use it. Finally,

the preference for email was based on a variety of reasons such as the convenience/practicality, the speed and the security/trust of the medium. In contrast, issues related to technology (such as email, computer and the Internet) was the most frequent reason for non-Internet users not to prefer email, while security concerns and impersonal nature of the medium were the most frequent factors influencing against the use of email by Internet users and Internet purchasers, respectively.

A final issue related to the purchasing of leisure travel addressed in this chapter was payment. When asked about what would be the most preferred payment means when purchasing leisure travel over the Internet, non-Internet users and Internet users indicated bank transfer while for Internet purchasers it was payment by credit card. Security concerns were clearly the main reason guiding the preference for a payment method. When asked about the main reason for choosing a given method, security was clearly the most important reason for the three sub-groups.

8. Attitude towards using the innovation

8.1. Introduction

The literature review on consumer behaviour has shown that attitudes play a central role in shaping behaviour. In Chapter Two, devoted to the analysis of consumer behaviour models, it was demonstrated that attitudes feature in most consumer behaviour models. In Chapter Three (section 3.3) the concept was studied in detail and several models of attitude were presented. This research adopted the multicomponent model, which postulates that attitudes consist of three elements: cognition, affect and conation. The cognitive component refers to the beliefs about the object, that is, the characteristics/attributes ascribed to it. The affective component refers to the consumers' feelings toward the object and the third component, the conative element, consists of the behavioural response. The literature on consumer adoption of electronic commerce (Sections 4.3.2 and 4.4.3) has also demonstrated that attitudes play an important role in the adoption of innovations such as computers, the Internet and the purchasing over the Internet. Therefore, the aim of this chapter is to present the respondents' attitudes towards using the three innovations comprising the conceptual framework of this study.

This chapter starts by examining the cognitive component of attitudes. Six perceived innovation characteristics, as postulated in the adoption of innovations research, were used for this purpose (section 8.2). In section 8.3 the affective component is explored. Based on the literature on affect, eight pairs of words measuring feelings towards using the innovations were selected (see Section 5.4.7 for an explanation). The next section (8.4) focuses on the conative component of attitude. The behavioural manifestations concerning the behaviours, notably their intention to use the innovations, are provided. Finally, a summary of the chapter is presented in section 8.5. Due to length limitations of the questionnaire, it was not possible to gauge the three components of attitude in relation to the three innovations. While the three components were studied in the case of both the using computers for leisure purposes and the purchasing leisure travel over the Internet, only the conative component was studied in terms of using the Internet for leisure purposes.

The main independent variable used for analysis – stage in the e-commerce adoption path – consisted of three sub-groups. The *non-Internet users* sub-group encompasses the respondents who had never used the Internet, while the *Internet users* includes the respondents who had used the Internet but had never purchased anything over the Internet. The sub-group *Internet purchasers* comprises the respondents who had purchased at least a product or service over the Internet.

Some items were measured using semantic differential scale whilst others were measured using Likert scales because it was considered that the use of both would better capture what was being questioned.

Two statistical procedures are presentated: descriptives and hypothesis testing. The descriptives include the mean, the standard deviation and the frequencies (both in number and percentages) and their purpose is to describe the data. The Kruskal-Wallis test is used for hypothesis testing. The data analysis begins with a description of the data and then moves on to reporting the hypothesis testing. The data concerning each of these analyses is reported in separate tables.

8.2. Perceived innovation characteristics

As mentioned earlier, the cognitive component of attitudes was covered by the perceived innovation attributes. In this research, six perceived innovation characteristics associated with using innovations were studied: complexity, visibility, compatibility, relative advantage, image and perceived risk.

The next sub-sections provide the results for each of these attributes. The higher the mean, the more positive the perception is, except for perceived risk where the higher the mean the higher the perceived risk.

8.2.1. Complexity

Perceived complexity refers to the degree to which an innovation is perceived as relatively difficult to understand and use (Rogers, 1995). The scale measuring complexity, based on a 7 point semantic differential scale, comprised four items, two related to the complexity of using and two to the complexity of learning how to use the two innovations.

Complexity of using computers for leisure purposes

As the mean values suggest (Table 8.1), with the exception of how hard/easy it was to learn by themselves, the means of the non-Internet users are very close to the threshold value of four (middle point of the scale). However, on average the non-Internet user clearly regarded using computers for leisure purposes as hard to learn by themselves (mean: 3.18). In contrast, the mean values indicate that both the Internet users and purchasers believe using computers for leisure purposes is simple, easy to use, easy to learn and easy to learn by themselves as shown by the mean values above 5. The exception was how hard/easy to learn by themselves for Internet users, with a mean value of 4.94. Two statements received support above 6 by the Internet purchasers: how complex/simple and how hard/easy to learn was using computers for leisure purposes. When the four items measuring the complexity associated with using computers for leisure purposes were converted into a single 'complexity' category, the mean value for the non-Internet users was below 4 (mean: 3.71), while for Internet users it was slightly over five (mean: 5.21) and for Internet purchasers nearly 6 (mean: 5.86).

Table 8. 1: Complexity associated with using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Complex – simple*	73	3.81	2.05	123	5.14	1.54	48	6.17	1.10
Hard – easy to use*	71	3.85	1.94	125	5.30	1.56	48	5.71	1.74
Hard – easy to learn*	76	3.93	2.11	123	5.51	1.24	48	6.04	1.11
Hard – easy to learn by myself*	73	3.18	1.86	123	4.94	1.46	48	5.52	1.43
Complexity attribute (composite)	80	3.71	1.71	125	5.21	1.10	48	5.86	1.05

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

The analysis of the frequencies (Table 8.2) provides a more detailed indication of the pattern of response. The proportion of non-Internet users evaluating using computers for leisure purposes as complex, hard to use and hard to learn by themselves was greater than the proportion who had a positive perception. Conversely, the opposite happened for the statement regarding the ease of learning. The analysis of the frequencies further suggests that non-Internet users are a highly heterogeneous group, as the answers tend to be concentrated on the central or extreme points of each side of the scale. For example, half of the non-Internet users who said it would be simple to use computers for leisure purposes answered at the highest simplicity level and half of those who said it would be complex at the highest complexity level. One likely reason for the spread of values across the scale is the fact the the non-Internet users group comprises individuals who had used computers before as well as individuals who had never used them.

Table 8. 2: Complexity associated with using computers for leisure purposes (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Complex – simple										
Non-Internet users	19.2	12.3	9.6	27.4	5.5	11.0	15.1	41.1	27.4	31.6
Internet users	3.3	2.4	7.3	20.3	20.3	23.6	22.8	13.0	20.3	66.7
Internet purchasers	-	-	2.1	8.3	14.6	20.8	54.2	2.1	8.3	89.6
Hard – easy to use										
Non-Internet users	16.9	12.7	12.7	19.7	9.9	21.1	7.0	42.3	19.7	38.0
Internet users	2.4	4.8	7.2	12.0	16.8	33.6	23.2	14.4	12.0	73.6
Internet purchasers	4.2	4.2	6.3	6.3	6.3	27.1	45.8	14.7	6.3	79.2
Hard – easy to learn										
Non-Internet users	21.1	10.5	6.6	21.1	11.8	14.5	14.5	38.2	21.1	40.8
Internet users	-	1.6	4.9	14.6	22.8	31.7	24.4	6.5	14.6	78.9
Internet purchasers	-	-	4.2	8.3	8.3	37.5	41.7	4.2	8.3	87.5
Hard – easy to learn by myself *										
Non-Internet users	26.0	19.2	8.2	23.3	8.2	11.0	4.1	53.4	23.3	23.3
Internet users	2.4	2.4	11.4	20.3	24.4	23.6	15.4	16.2	20.3	63.4
Internet purchasers	-	6.3	4.2	8.3	22.9	29.2	29.2	10.5	8.3	81.3

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

The majority of Internet users and Internet purchasers perceived using computers for leisure purposes as simple, easy to use, easy to learn and easy to learn by themselves. However, not only was the proportion of Internet purchasers with a positive perception higher in comparison with Internet users, but Internet purchasers tended to answer closer to the positive end side of the scale. A very large proportion of the respondents in these

two groups (around 95 percent) believed that learning how to use computers for leisure purposes is not hard.

In order to test for differences between the three sub-groups of the independent variable, the Kruskal-Wallis test was performed (Table 8.3). The test revealed that the differences between the sub-groups are significant for all of the four complexity items, as well as the composite item. The Multiple Comparison Test (for a review of this test see section 5.4.10.1) indicated that the three groups were different in respect of how using computers for leisure purposes was perceived as being complex (χ^2=46.90; p<0.001), hard to use (χ^2=37.67; p<0.001), hard to learn (χ^2=42.21; p<0.001) and hard to learn by themselves (χ^2=54.62; p<0.001). In addition, the differences in the computed complexity attribute were also statistically significant (χ^2=62.68; p<0.001). Therefore, the further the stage in the e-commerce adoption path, the less the perceived complexity of using computers for leisure purposes.

Table 8. 3: Complexity associated with using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Complex – simple	83.62	126.71	170.84	46.90	0.000	+	+	+
Hard – easy to use	82.45	132.39	155.98	37.67	0.000	+	+	+
Hard – easy to learn	83.63	134.11	162.02	42.21	0.000	+	+	+
Hard – easy to learn by myself	74.38	135.76	161.70	54.62	0.000	+	+	+
Complexity attribute (composite)	77.61	139.44	176.92	62.68	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Complexity of purchasing leisure travel

The mean values of the statements regarding the complexity of purchasing over the Internet are provided in Table 8.4. The non-Internet users perceived purchasing leisure travel over the Internet as complex (mean: 3.62), hard to use (mean: 3.59), hard to learn (3.48) and hard to learn by themselves (2.74). In contrast, Internet users and purchasers perceived purchasing leisure travel over the Internet as easy and simple. With the exception of how complex it was for Internet users, the mean values were all above 5. Similar to using computers for leisure purposes, the statement regarding how hard/easy it was to use the

innovation received, on average, the lowest support from non-Internet users. In contrast to using computers for leisure purposes, where the statement regarding how hard/easy it was to use yielded the lowest mean value, the statement pertaining to how complex/simple was purchasing leisure travel over the Internet was the least positively evaluated by both Internet users and purchasers.

Table 8. 4: Complexity associated with purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Complex – simple*	69	3.62	1.90	123	4.30	1.48	46	5.22	1.46
Hard – easy to use*	68	3.59	1.85	124	5.34	1.45	46	5.57	1.33
Hard – easy to learn*	66	3.48	1.78	122	5.36	1.28	46	5.80	1.09
Hard – easy to learn by myself*	68	2.74	1.57	122	5.02	1.50	46	5.46	1.41
Complexity attribute (composite)	75	3.39	1.66	125	5.03	1.07	46	5.51	1.12

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

The four items pertaining to the complexity of purchasing leisure travel over the Internet were also computed into a 'complexity category'. Table 8.4 shows that non-Internet users perceived purchasing over the Internet as a complex task (mean: 3.39). Conversely, both Internet users and purchasers perceived it as not complex, although the mean value of the Internet users was lower than of the Internet purchasers (means: 5.03 and 5.51, respectively).

An analysis of the frequencies provides a more detailed understanding of the patterns of response (Table 8.5). As far as the statement regarding the complexity/simplicity, only 30 percent or less of non-Internet users believed that purchasing leisure travel over the Internet would be simple, whereas around 40 percent of Internet users and the majority of Internet purchasers (63%) regarded it as simple. The proportion of respondents opting for the negative side of the scale was also different. More than 4 out of ten non-Internet users (42%) said it would complex, which is in contrast with less than one quarter of Internet users (24.4%) and only a small minority of Internet purchasers (8.7%) who perceived purchasing leisure travel over the Internet as complex. In terms of the ease of use, the proportion of non-Internet users indicating that it would be hard to use exceeded that of who perceived it as easy. Moreover, the negative answers tended to be concentrated on the

extreme side of the scale and the positive ones closer to the middle point of the scale. In contrast, the majority of both Internet users (70.2%) and purchasers (76.1%) regarded purchasing leisure travel over the Internet as easy to use.

Table 8. 5: Complexity associated with purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Complex – simple										
Non-Internet users	17.4	18.8	5.8	27.5	11.6	10.1	8.7	42.0	27.5	30.4
Internet users	4.9	5.7	13.8	35.0	19.5	13.0	8.1	24.4	35.0	40.7
Internet purchasers	2.2	2.2	4.3	28.3	8.7	34.8	19.6	8.7	28.3	63.0
Hard – easy to use										
Non-Internet users	22.1	10.3	5.9	30.9	17.6	5.9	7.4	38.3	30.9	30.9
Internet users	0.8	4.0	6.5	18.5	12.9	33.9	23.4	11.3	18.5	70.2
Internet purchasers	0.0	4.3	0.0	19.6	15.2	32.6	28.3	4.3	19.6	76.1
Hard – easy to learn										
Non-Internet users	22.7	9.1	7.6	36.4	12.1	6.1	6.1	39.4	36.4	24.3
Internet users	0.8	0.8	5.7	19.7	19.7	33.6	19.7	7.4	19.7	73.0
Internet purchasers	0.0	0.0	0.0	19.6	10.9	39.1	30.4	0.0	19.6	80.4
Hard – easy to learn by myself *										
Non-Internet users	32.4	19.1	8.8	26.5	8.8	4.4	0	60.3	26.5	13.2
Internet users	0.8	4.9	9.8	23.8	18.0	22.1	20.5	15.6	23.8	60.7
Internet purchasers	2.2	0.0	6.5	17.4	15.2	32.6	26.1	8.7	17.4	73.9

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

A similar pattern emerged in terms of the perceptions regarding how hard purchasing leisure travel over the Internet was to learn. Only around 32 percent of non-Internet users said it would be easy to learn, while 73 percent of Internet users and more than 80 percent of Internet purchasers (80.4%) opted for the positive side of the scale. As far as how hard to learn by themselves was purchasing leisure travel over the Internet is concerned, the majority of non-Internet users (60.3%) perceived it as hard while the majority of Internet users (60.7%) and purchasers (73.9%) regarded it as easy. The results also show that there is a group of respondents in each of the three sub-groups that, although they perceived learning how to purchase over the Internet as easy, indicated that learning without the help of others would make it harder. This suggests that despite the respondents perceiving a certain degree of ease of learning how to make the purchases, some respondents were likely to need assistance throughout the learning process. For example, whereas 24.3 percent of non-Internet users said it would be easy to learn how to do it, only 13.2 percent said it would be easy to learn to learn by themselves. Similarly, the proportion of non-Internet

users indicating it would be hard to learn by themselves was much higher than the proportion saying it would be hard to learn (60.3 and 39.4, respectively). Similar patterns emerged for Internet users and purchasers, although the differences between how hard it would be to learn and how hard it would be to learn by themselves tend to be smaller, when compared to non-Internet users.

In order to test for differences between the three sub-groups of the independent variable, the Kruskal-Wallis test was performed (Table 8.6). As the results demonstrate, there were statistical differences between the three sub-groups in terms of how complex/simple was purchasing leisure travel over the Internet (χ^2=22.86; p<0.001), how hard/easy was to use (χ^2=45.92; p<0.001), how hard/easy was to learn (χ^2=60.03; p<0.001) and how hard/easy was to learn by themselves (χ^2=75.64; p<0.001). Consequently, in order to identify where the differences lay, the Multiple Comparison Test was undertaken. The results indicate that the non-Internet users perceived purchasing leisure travel over the Internet as more complex, harder to use, harder to learn and harder to learn by themselves than both the Internet users and the Internet purchasers. As far as the individual items is concerned, only one statistical difference emerged between the Internet users and the Internet purchasers, with the latter perceiving purchasing leisure travel over the Internet as simpler than the former (as shown by the higher mean rank of the Internet purchasers). Yet, the Internet purchasers were not more likely to perceive purchasing leisure travel over the Internet as easy to use, easy to learn and easy to learn by themselves when compared to the Internet users.

Table 8. 6: Complexity associated with purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Complex – simple *	95.70	118.84	156.98	22.86	0.000	+	+	+
Hard – easy to use *	72.97	135.56	144.98	45.92	0.000	+	+	ns
Hard – easy to learn *	65.41	132.46	152.57	60.03	0.000	+	+	ns
Hard – easy to learn by myself *	59.56	137.50	155.23	75.64	0.000	+	+	ns
Complexity attribute (composite)	70.05	140.57	164.25	64.94	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

When the four items were computed into a 'perceived complexity' attribute, the Kruskal-Wallis revealed a statistical difference between the three groups (χ^2=64.94; p<0.001). The Multiple Comparison Test indicates that the farther in the e-commerce adoption path, the greater the likelihood regarding purchasing of leisure travel over the Internet as encompassing a lower complexity level.

In summary, not only did non-Internet users tend to perceive both using computers for leisure purposes and purchasing leisure travel over the Internet as complex, hard to use, hard to learn and hard to learn by themselves, but they held more negative perceptions than the other two subgroups. In contrast, the Internet users and the Internet purchasers had a positive perceptions of the complexity associated with using the two innovations. However, they held different perceptions of the complexity associated with using computers for leisure purposes, with the Internet purchasers perceiving it as simpler, easier to use, easier to learn and easier to learn by themselves than the Internet users. There were fewer differences between the Internet users and the Internet purchasers regarding the purchasing of leisure travel over the Internet. The two groups differentiated only in terms of how complex/simple purchasing was, with the Internet purchasers stating that it would be simpler than the Internet users. The computer complexity attribute also revealed statistical differences among the three groups. The further along in the e-commerce adoption path, the greater the likelihood of perceiving using computers and purchasing leisure travel over the Internet as simpler.

8.2.2. Visibility

Visibility refers to the extent to which the individual can see an innovation (Moore and Benbasat, 1991). In this section the perceived visibility of using computers for leisure purposes and purchasing leisure travel over the Internet are reported. All the statements regarding visibility were measured using a 5 point Likert-scale.

Visibility of using computers for leisure purposes

Three statements were used to measure the perceived visibility of using computers for leisure purposes. The first was related to whether the respondents had seen what others do when using computers for leisure purposes. The visibility statements were measured using a 5 point Likert-type scale, with the value of one attributed to a strongly disagree answer and the value of five to a strongly agree answer. As the mean values show (Table 8.7), the mean value of both the non-Internet users and the Internet users was above the threshold value of 3 (the middle point of the scale), whereas the Internet purchasers was below this value, suggesting a lower level of agreement with the sentence by the latter. On average, the three groups agreed that they had had several opportunities to see computers being used, with the lowest mean yielded by the Internet purchasers (mean: 3.55) and the highest by the non-Internet users (mean: 3.71). As far as the statement regarding 'saw important people to me using computers' is concerned, the non-Internet users and the Internet users yielded the highest mean (3.13 and 3.33, respectively), while Internet purchasers, on average, disagreed with the sentence (mean: 2.74). When the three statements were computed into a 'visibility' category, the mean value of non-Internet users and Internet users was positive and very similar (3.48 and 3.46, respectively), while for Internet purchasers was close to 3 (mean: 3.01).

Table 8. 7: Visibility of using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
I saw what others do when using computers*	75	3.41	1.04	124	3.21	1.12	47	2.74	1.17
Had several opportunities to see computers being used*	73	3.71	0.98	124	3.81	0.88	47	3.55	1.12
Saw important people to me using computers*	72	3.13	1.16	123	3.33	1.22	47	2.74	1.19
Visibility attribute (composite)	78	3.48	0.86	125	3.46	0.85	47	3.01	0.82

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

The majority of non-Internet users and Internet users agreed that they had seen what others do when using computers for leisure purposes, whereas only 36 percent of Internet purchasers did so (Table 8.8). In addition, the proportion of respondents disagreeing with the sentence is also different, ranging from 22 percent of non-Internet users to 48 percent

of Internet purchasers. The statement concerning the opportunities to see a computer being used received more agreement as roughly 70 percent of the respondents agreed with the sentence and less than 20 percent disagreed. In addition, an analysis of the distribution of the answers across the scale shows that in both statements the positive answers are heavily concentrated on the agree level. As far as the statement regarding whether they had seen important people to them using computers, the proportion of non-Internet users and Internet users agreeing with the sentence exceeded the proportion that disagreed. In contrast, more Internet purchasers disagreed with the statement than those who agreed that they had seen important people to them using computers.

Table 8. 8: Visibility of using computers for leisure purposes (frequencies)

	Scale					Summary		
	SD	**D**	**U**	**A**	**SA**	**neg**	**mdl**	**pos**
I saw what others do when using computers								
Non-Internet users	4.0	18.7	20.0	46.7	10.7	22.7	20.0	57.4
Internet users	8.9	20.2	19.4	44.4	7.3	29.1	19.4	51.7
Internet purchasers	17.0	29.8	17.0	34.0	2.1	46.8	17.0	36.1
Had several opportunities to see computers being used								
Non-Internet users	2.7	11.0	16.4	52.1	17.8	13.7	16.4	69.9
Internet users	1.6	7.3	18.5	54.0	18.5	8.9	18.5	72.5
Internet purchasers	8.5	10.6	10.6	57.4	12.8	19.1	10.6	70.2
Saw important people to me using computers								
Non-Internet users	11.1	16.7	31.9	29.2	11.1	27.8	31.9	40.3
Internet users	8.1	20.3	21.1	31.7	18.7	28.4	21.1	50.4
Internet purchasers	17.0	27.7	25.5	23.4	6.4	44.7	25.5	29.8

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test was used to identify differences between the sub-groups of the independent variable. As Table 8.9 demonstrates, there were statistically significant differences in the statements 'saw what others do when using computers' (χ^2=9.50; $p<0.01$) and 'saw important people to me using computers' (χ^2=7.80; $p<0.05$) but not in relation to the statement 'had several opportunities to see computers being used' (χ^2=1.08; $p>0.05$). Therefore, the Multiple Comparison Test was performed for the two statements where differences were found in order to identify which sub-groups were different. As the results indicate, the non-Internet users and the Internet users agreed more than the Internet purchasers that they had seen what others do when using computers and that they

had seen important people using computers (as given by the higher mean rank). Yet, no differences were found between the two sub-groups who had never purchasers over the Internet. A similar pattern emerged for the computed 'visibility' attribute (χ^2=10.69; p<0.01).

Table 8. 9: Visibility of using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
I saw what others do when using computers	136.64	125.14	98.20	9.50	0.009	ns	+	+
Had several opportunities to see computers being used	121.42	126.06	114.78	1.08	0.583	ns	ns	ns
Saw important people to me using computers	119.78	131.20	98.74	7.80	0.020	ns	+	+
Visibility attribute (composite)	135.44	130.77	94.99	10.69	0.005	ns	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Visibility of purchasing leisure travel over the Internet

Two statements were selected to measure the visibility of purchasing leisure travel over the Internet, one related to the 'sight visibility' (saw others buying travel on the net) and the other to the 'verbal' visibility (talked with other people about buying travel on the net) (Table 8.10). The statement 'saw others buying travel on the net' received little agreement from the respondents in each of the three sub-groups as the means ranged between 2.26 (Internet purchasers) and 2.32 (Internet users). The statement regarding whether the respondents had talked about purchasing leisure travel over the Internet received more agreement. However, the mean value of both the non-Internet users and the Internet users was below the threshold value of 3, while Internet purchasers agreed with the sentence (mean: 3.49). When the two items were computed into a 'visibility' category, the mean values are below the value of three, although the mean of the Internet purchasers is close to the neutral point of the scale.

Table 8. 10: Visibility of purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Saw others buying travel over the Internet	74	2.30	1.13	125	2.32	1.03	47	2.26	1.13
Talked with other people about buying travel over the Internet	75	2.59	1.19	125	2.66	1.18	47	3.49	1.08
Visibility attribute (composite)	75	2.46	1.06	125	2.49	0.98	47	2.87	0.89

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

A more detailed understanding of the patterns of response can be provided by the analysis frequencies (Table 8.11). The proportion of respondents agreeing and disagreeing that they saw others buying travel over the Internet was remarkably similar across the three sub-groups. While the majority, comprising around 58 percent of the respondents, disagreed, less than 20 percent agreed that they had seen others purchasing travel over the Internet. As far as the statement regarding whether they had discussed the issue with others, around half of the non-Internet users and the Internet purchasers disagreed and only less than a third agreed. In contrast, nearly three quarters of the Internet purchasers reported they had talked with others about buying leisure travel over the Internet and only around 20 percent said they had not.

Table 8. 11: Visibility of purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	**D**	**U**	**A**	**SA**	**neg**	**mdl**	**pos**
Saw others buying travel over the Internet								
Non-Internet users	31.1	27.0	25.7	13.5	2.7	58.1	25.7	16.2
Internet users	25.6	32.8	25.6	16.0	0.0	58.4	25.6	16.0
Internet purchasers	34.0	23.4	27.7	12.8	2.1	57.4	27.7	14.9
Talked with other people about buying travel over the Internet								
Non-Internet users	22.7	26.7	24.0	22.7	4.0	49.4	24.0	26.7
Internet users	18.4	32.0	18.4	27.2	4.0	50.4	18.4	31.2
Internet purchasers	8.5	12.8	6.4	66.0	6.4	21.3	6.4	72.3

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test was used to assess if there were statistical differences between the three sub-groups. When a difference was found the Multiple Comparison Test was performed. The results are provided in Table 8.12. As the results demonstrate, there was not a statistical difference in terms of the statement 'saw others buying leisure travel over the Internet'. In contrast, the Internet purchasers agreed more than the Internet users and the non-Internet users that they have talked to other people about buying leisure travel on the Internet (χ^2=02.36; p>0.05). However, the Internet users were not more likely to agree with the sentence than the non-Internet users. When the visibility items were computed, purchasing leisure travel over the Internet was more visible for Internet users than for both non-Internet users and Internet users (χ^2=6.57; p<0.05). Yet, no differences were found between those who never purchased over the Internet.

Table 8. 12: Visibility of purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Saw others buying travel over the Internet	122.40	125.48	119.96	0.25	0.883	ns	ns	ns
Talked with other people about buying travel over the Internet	111.56	116.18	164.66	20.36	0.000	ns	+	+
Visibility attribute (composite)	116.12	119.90	147.48	6.57	0.037	ns	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

In summary, using computers for leisure purposes was not only visible to the non-Internet users and the Internet users, but it was more visible to these two sub-groups than to the Internet purchasers. The Internet purchasers, in turn, tend to disagree with the sentences regarding whether they had seen what others do when using computers and whether they had seen important people to them using computers. Yet, no differences were found between the sub-groups in terms of the opportunity to see computers being used, with a large majority of the respondents agreeing with the sentence. As far as the visibility of purchasing leisure travel is concerned, not only did the respondents tend not to agree that they had seen others purchasing leisure travel over the Internet, but the sub-groups did not differentiate. Conversely, the Internet purchasers reported having discussed the purchasing of leisure travel with others, while the non-Internet users and the Internet users did not.

8.2.3. Compatibility

Compatibility is the degree to which an innovation is perceived as being consistent with the individuals' existing values, past experiences, and needs (Rogers, 1995). Two items gauged the compatibility of the innovations: the ease of fitting the use of the innovation into daily routine and the extent to which the use of the innovation is approved by friends. The two statements were measured using a 7 point semantic-differential scale.

Compatibility of using computers for leisure purposes

As the mean values suggest (Table 8.13), with one exception the two statements received support by the respondents (mean values above 4). On average, the non-Internet users said that using computers for leisure purposes would be hard to fit into daily routine (mean: 3.62). Although the mean value of both the Internet users and the Internet purchasers was above the threshold value of 4 (the middle point of the scale), the mean for the Internet users (mean: 4.63) was lower than that of the Internet purchasers (mean: 5.04). The three sub-groups clearly reported that using computers for leisure purposes would be approved by friends as the mean values were all above 5. When the two items were computed into a 'compatibility' category, the mean values show that using computers for leisure purposes would be compatible for each of the three groups. However, while the mean value for the non-Internet users was 4.39, the mean of the Internet users was nearly five (mean: 4.94) and the mean of the Internet purchasers above 5 (mean: 5.21).

Table 8. 13: Compatibility of using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Hard – easy to fit into daily routine	71	3.62	2.00	123	4.63	1.78	49	5.04	1.94
Not approved – approved by friends	68	5.21	1.39	121	5.26	1.34	48	5.42	1.27
Compatibility attribute (composite)	71	4.39	1.27	123	4.94	1.27	49	5.21	1.42

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

The frequencies (in percentages), as well as the sum of the answers on the negative and positive sides of the scale, are presented in Table 8.14. While the majority of Internet users (57.6%) and purchasers (67.3%) said that using computers for leisure purposes would be easy to fit into their daily routine, a higher proportion of non-Internet users opted for the negative side of the scale (42.2%) when compared to those of who said it would be easy (29.6%). In terms of the statement concerning approval by friends, the majority of respondents in each of the three groups (around 60 percent) reported that using computers for leisure purposes would be approved by friends, whereas only a very small minority said it would not be approved.

Table 8. 14: Compatibility of using computers for leisure purposes (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Hard – easy to fit into daily routine										
Non-Internet users	19.7	19.7	2.8	28.2	5.6	14.1	9.9	42.2	28.2	29.6
Internet users	7.3	8.9	6.5	19.5	21.1	21.1	15.4	22.7	19.5	57.6
Internet purchasers	8.2	8.2	4.1	12.2	12.2	28.6	26.5	20.5	12.2	67.3
Not approved – approved by friends										
Non-Internet users	1.5	1.5	2.9	32.4	14.7	25.0	22.1	5.9	32.4	61.8
Internet users	-	1.7	3.3	35.5	11.6	23.1	24.8	5.0	35.5	59.5
Internet purchasers	-	-	2.1	35.4	6.3	31.3	25.0	2.1	35.4	62.6

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

The Kruskal-Wallis and the Multiple Comparison Test (Table 8.15) show that for the Internet users and the Internet purchasers using computers for leisure purposes would be more compatible with daily routine than for the non-Internet users (χ^2=18.38; p<0.001). In contrast, there was no statistically significant difference in terms of approval by friends (χ^2=0.47; p>0.05). There was a statistical significant difference between the non-Internet users and the Internet users/purchasers in terms of the computed 'compatibility' attribute, the using computers for leisure purposes being less compatible to the former than to the latter (χ^2=13.58; p<0.001).

Table 8. 15: Compatibility of using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Hard – easy to fit into daily routine	94.20	128.49	146.00	18.38	0.000	+	+	ns
Not approved – approved by friends	116.74	118.00	124.73	0.47	0.791	ns	ns	ns
Compatibility attribute (composite)	98.23	127.19	143.43	13.58	0.001	+	+	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Compatibility of purchasing leisure travel over the Internet

As far as purchasing leisure travel over the Internet is concerned, the results show a similar pattern to that of using computers for leisure purposes (Table 8.16). On average, the respondents reported that purchasing leisure travel over the Internet would be easy to fit into daily routine and approved by friends (mean values above 4). The exception was the non-Internet users, who said that purchasing leisure travel over the Internet would be hard to fit into daily routine (mean: 3.21). The 'compatibility' category, resulting from the computing of the two items, suggests that purchasing leisure travel over the Internet was compatible to both the Internet users and the Internet purchasers. In contrast, it is not compatible to the non-Internet users. However, the mean value of this sub-group is very close to the threshold value of 4 and consequently caution should be taken when interpreting this result.

Table 8. 16: Compatibility of purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Hard – easy to fit into daily routine	67	3.21	1.72	122	4.62	1.56	46	5.13	1.65
Not approved – approved by friends	64	4.41	1.38	123	4.57	1.19	46	4.63	1.18
Compatibility attribute (composite)	67	3.82	1.37	123	4.59	1.15	46	4.88	1.17

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 8.17) shows that nearly half of the non-Internet users (47.8%) said that purchasing leisure travel over the Internet would be hard to fit into their daily routine, whereas exactly half of Internet users and the majority of Internet purchasers (65.2%) answered on the positive side of the scale. Additionally, Internet purchasers tended to answer closer to the positive end side of the scale, whereas Internet users closer to the mid point of the scale. In terms of the statement regarding approval by friends, the main feature is the large concentration of answers on the middle point of the scale. Those opting for one side of the scale tended to report that purchasing leisure travel over the Internet was approved by friends as more than 30 percent of the respondents in each of the sub-groups said it would be approved while only around or less than around 10 percent said it would not be approved.

Table 8. 17: Compatibility of purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Hard – easy to fit into daily routine										
Non-Internet users	23.9	14.9	9	34.3	10.4	1.5	6.0	47.8	34.3	17.9
Internet users	5.6	4.0	5.6	34.7	16.1	21.0	12.9	15.3	34.7	50.0
Internet purchasers	6.5	0.0	8.7	19.6	6.5	41.3	17.4	15.2	19.6	65.2
Not approved – approved by friends										
Non-Internet users	4.7	1.6	4.7	57.8	12.5	6.3	12.5	11.0	57.8	31.3
Internet users	0.0	4.1	4.1	55.3	13.8	13.0	9.8	8.1	55.3	36.6
Internet purchasers	2.2	0.0	2.2	58.7	8.7	21.7	6.5	4.3	58.7	37.0

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

The Kruskal-Wallis and the Multiple Comparison Tests (Table 8.18) revealed that the farther along the e-commerce adoption path the more compatible with daily routine was purchasing leisure travel over the Internet (χ^2=38.48; p<0.001). Similar to using computers for leisure purposes, there were not statistical differences in terms of approval by friends (χ^2=0.96; p>0.05). The Kruskal-Wallis showed that, when the two items are computed into a 'compatibility' attribute, there is a relationship between the stage in the e-commerce adoption path and the compatibility of purchasing leisure travel over the Internet (χ^2=25.65; p<0.001). As the Multiple Comparison Test and the mean rank values demonstrate, the farther the stage in the path, the greater the compatibility.

Table 8. 18: Compatibility of purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Hard – easy to fit into daily routine	77.31	128.50	149.42	38.48	0.000	+	+	+
Not approved – approved by friends	111.09	118.22	121.98	0.96	0.618	ns	ns	ns
Compatibility attribute (composite)	85.28	126.15	146.43	25.65	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

In summary, while using computers and purchasing leisure travel over the Internet were not compatible to non-Internet users, the use of these two innovations were compatible to both the Internet users and the Internet purchasers. However, while using computers for leisure purposes was not more compatible with daily routine to the Internet purchasers than to the Internet users, the Internet purchasers reported a higher level of compatibility with daily routine than the Internet users in terms of purchasing leisure travel over the Internet. Both using computers for leisure purposes and purchasing leisure travel over the Internet would be approved by friends and no differences were found between the three sub-groups in either case.

8.2.4. Relative advantage

Relative advantage refers to the degree to which an innovation is perceived as better than the idea that it supersedes (Rogers, 1995). Four statements assessed the relative advantage of the innovations: two about the saving of resources (time and effort), one about improved support (more quality) and one about personal enhancement (quality of life). These statements were measured using a 5 point Likert-type scale.

Relative advantage of using computers for leisure purposes

Table 8.19 contains the mean value for each of the advantages of using computers for leisure purposes. The sub-groups clearly agreed with the three first statements as the mean values were all close to 4. The statement regarding the benefits for the quality of life received less agreement, although the mean values are above the threshold value of 3 (middle point of the scale). Not surprisingly, the mean values of the computed 'relative advantage' category are similar among the three sub-groups, ranging from 3.75 (non-Internet users) to 3.84 (Internet purchasers).

Table 8. 19: Relative advantage of using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
A way to execute tasks faster*	76	3.96	1.09	125	3.91	1.11	49	3.84	1.16
A way to execute tasks with less effort*	74	3.82	0.98	127	3.91	1.02	49	3.84	1.03
A way to improve quality of tasks*	74	3.86	0.98	124	3.85	1.06	49	3.98	1.01
A way to improve quality of life*	72	3.33	1.16	123	3.42	1.11	49	3.71	1.10
Relative advantage attribute (composite)	78	3.75	0.85	127	3.80	0.84	49	3.84	0.82

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

The frequencies show that a large proportion of the respondents in each of the three sub-groups agreed that using computers for leisure purposes is a way to reduce resources, notably time and effort (Table 8.20). Around three quarters of the respondents in each of the groups agreed with the first two sentences, while only a minority, between 10 and 15 percent, disagreed. In addition, over 70 percent of the Internet users and purchasers also agreed that it was a way to improve the quality of the tasks (73.4 and 77.6 percent, respectively), but the proportion of non-Internet users who agreed with this sentence was slightly lower (67.5%). Conversely, the statement concerning to the improvements in the quality of life received less agreement, notably from non-Internet users and Internet users. Less than half of non-Internet users and slightly less than 60 percent of Internet users agreed that using computers for leisure purposes was a way to improve the quality of life. Additionally, 22.2 percent of the non-Internet users, more than one quarter of the Internet users and 18.4 percent of the Internet purchasers disagreed with the sentence.

Table 8. 20: Relative advantage of using computers for leisure purposes (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
A way to execute tasks faster								
Non-Internet users	3.9	9.2	9.2	42.1	35.5	13.1	9.2	77.6
Internet users	5.6	6.4	12.8	41.6	33.6	12.0	12.8	75.2
Internet purchasers	6.1	8.2	14.3	38.8	32.7	14.3	14.3	71.5
A way to execute tasks with less effort								
Non-Internet users	2.7	10.8	9.5	55.4	21.6	13.5	9.5	77.0
Internet users	3.9	6.3	14.2	45.7	29.9	10.2	14.2	75.6
Internet purchasers	4.1	8.2	12.2	51.0	24.5	12.3	12.2	75.5
A way to improve quality of tasks								
Non-Internet users	1.4	8.1	23.0	37.8	29.7	9.5	23.0	67.5
Internet users	4.8	6.5	15.3	45.2	28.2	11.3	15.3	73.4
Internet purchasers	4.1	4.1	14.3	44.9	32.7	8.2	14.3	77.6
A way to improve quality of life								
Non-Internet users	8.3	13.9	30.6	30.6	16.7	22.2	30.6	47.3
Internet users	4.9	20.3	16.3	44.7	13.8	25.2	16.3	58.5
Internet purchasers	4.1	14.3	10.2	49	22.4	18.4	10.2	71.4

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test was performed to understand if there were differences between the three sub-groups. As the results demonstrate (Table 8.21), there were no statistical differences between the sub-groups in terms of computers being a way to execute tasks faster (χ^2=0.36; p>0.05), a way to execute tasks with less effort (χ^2=0.66; p>0.05), a way to improve quality of tasks (χ^2=0.72; p>0.05) and a way to improve quality of life (χ^2=4.20; p>0.05). A similar results emerged in terms of relative advantage as a category (χ^2=0.69; p>0.05). Therefore, it can be concluded that the respondents in the three sub-groups had similar perceptions of the advantages of using computers for leisure purposes.

Table 8. 21: Relative advantage of using computers for leisure purposes (Kruskal-Wallis)

Innovation characteristic/belief	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
A way to execute tasks faster	128.66	125.26	121.21	0.36	0.806	ns	ns	ns
A way to execute tasks with less effort	121.40	128.83	123.07	0.66	0.720	ns	ns	ns
A way to improve quality of tasks	120.99	123.00	131.08	0.72	0.699	ns	ns	ns
A way to improve quality of life	114.47	120.48	139.37	4.20	0.123	ns	ns	ns
Relative advantage attribute (composite)	122.67	128.12	133.57	0.69	0.709	ns	ns	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Relative advantage of purchasing leisure travel over the Internet

As far as the relative advantage of purchasing leisure travel over the Internet is concerned, the results were mixed (Table 8.22). The three sub-groups agreed with the statements concerning the saving of time and saving of effort. The mean values of non-Internet users and Internet users were very close to 4, while the mean values of non-Internet users were slightly over 4. The statement concerning the quality of purchase received little agreement by the three sub-groups as the mean values were below the threshold value of 3 (middle point of the scale), although mean of the Internet purchasers was close to this value (mean: 2.85). The statement regarding the quality of life received agreement by the Internet purchasers (mean value: 3.36), while the mean values of both the non-Internet users and the Internet purchasers was below 3 (means: 2.56 and 2.72, respectively). When the four items were computed, the results indicate that respondents perceived purchasing leisure travel over the Internet as encompassing benefits. The Internet purchasers yielded the highest mean (mean: 3.69), followed by the non-Internet users (mean: 3.35) and the Internet users (mean: 3.27).

Table 8. 22: Relative advantage of purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
A way to buy faster*	76	4.01	0.96	126	3.96	0.87	47	4.34	0.79
A way to buy with less effort*	75	3.96	0.89	127	3.92	0.86	47	4.19	0.82
A way to purchase with more quality*	74	2.64	0.88	126	2.44	0.75	47	2.85	0.98
A way to improve quality of life*	73	2.56	1.04	126	2.72	1.04	47	3.36	1.05
Relative advantage attribute (composite)	77	3.35	0.70	127	3.27	0.69	47	3.69	0.72

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 8.23) shows that more than three quarters of the non-Internet users and Internet users and around than 90 percent of the Internet purchasers agreed that purchasing leisure travel over the Internet was a way to buy faster and a way to buy with less effort. The proportion of respondents disagreeing with the two first sentences was also low, not exceeding 10 percent. In either sentence the largest concentration of answers was at the agree level. The exception was the sentence regarding the saving of time where a higher proportion of Internet purchasers answered at the strongly agree level when compared to that of who answered at the agree level.

Table 8. 23: Relative advantage of purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
A way to buy faster								
Non-Internet users	2.6	3.9	17.7	42.1	34.2	6.5	17.7	76.3
Internet users	0.8	6.3	15.9	50.0	27.0	7.1	15.9	77.0
Internet purchasers	2.1	0.0	6.4	44.7	46.8	2.1	6.4	91.5
A way to buy with less effort								
Non-Internet users	1.3	5.3	17.3	48.0	28.0	6.6	17.3	76.0
Internet users	1.6	7.1	10.2	59.8	21.3	8.7	10.2	81.1
Internet purchasers	2.1	2.1	6.4	53.2	36.2	4.3	6.4	89.4
A way to purchase with more quality								
Non-Internet users	9.5	32.4	45.9	9.5	2.7	41.9	45.9	12.2
Internet users	11.1	38.1	46.0	4.8	0.0	49.2	46.0	4.8
Internet purchasers	10.6	19.1	48.9	17.0	4.3	29.8	48.9	21.3
A way to improve quality of life								
Non-Internet users	16.4	31.5	35.6	12.3	4.1	47.9	35.6	16.4
Internet users	15.1	25.4	32.5	26.2	0.8	40.5	32.5	27.0
Internet purchasers	6.4	12.8	29.8	40.4	10.6	19.1	29.8	51.1

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The statement concerning whether purchasing leisure travel over the Internet was a way to purchase with more quality did not receive much agreement from the three groups. While slightly more than 20 percent of the Internet purchasers agreed that purchasing leisure travel over the Internet was a way to purchase with more quality, only 12.2 percent of non-Internet users and less than 5 percent of Internet users did it. In addition, 42 percent of non-Internet users and nearly half of Internet users disagreed with the sentence, whereas less than 30 percent of Internet purchasers did not think that purchasing leisure travel over the Internet was a way to buy with more quality. In terms of the statement regarding the enhancement of the quality of life, the majority of Internet purchasers agreed with the sentence and only less than 20 percent disagreed. In contrast, not only was the proportion of non-Internet users and Internet purchasers agreeing with the statement smaller (16.4% and 27%, respectively), the proportion that disagreed was more than twice (47.9% and 40.5%, respectively) that of the Internet purchasers.

In order to test for statistical differences between the stages in the e-commerce adoption path, the Kruskal-Wallis test was performed. As the results indicate (Table 8.24), there were statistically significant differences in three of the four statements. The three sub-groups

were different in terms of the perceptions regarding whether purchasing leisure travel over the Internet was a way to buy faster (χ^2=7.77; p<0.05), a way to purchase with more quality (χ^2=7.79; p<0.05) and a way to improve quality of life (χ^2=17.32; p<0.001). However, no differences were found as to the advantage of effort saving (χ^2=4.351; p>0.05). Given that statistical differences were found, the Multiple Comparison Test was performed to identify where those differences lay. When compared to the two sub-groups who had never purchased over the Internet, Internet purchasers were more likely to perceive that it is a way to buy faster, a way to purchase with more quality, and a way to improve the quality of life. However, no differences were found between the non-Internet users and the Internet users.

Table 8. 24: Relative advantage of purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
A way to buy faster	123.63	116.98	148.71	7.77	0.021	ns	+	+
A way to buy with less effort	122.81	119.78	142.60	4.351	0.114	ns	ns	ns
A way to purchase with more quality	127.49	114.07	145.12	7.79	0.020	ns	+	+
A way to improve quality of life	107.26	119.54	159.35	17.32	0.000	ns	+	+
Relative advantage attribute (composite)	119.38	116.71	161.95	14.44	0.001	ns	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

When the four items measuring the relative advantage associated with purchasing leisure travel over the Internet were computed into a single item, the Kruskal-Wallis revealed a statistically significant difference (χ^2=14.44; p<0.01). Not surprisingly, the Multiple Comparison Method showed that Internet purchasers perceived a higher degree of relative advantage when compared to both non-Internet users and Internet users, but no differences were found between the latter.

In summary, there appears to be a consensus among the three sub-groups in respect of the advantages of using computers for leisure purposes. In general, respondents perceived using computers for leisure purposes as a way to execute tasks faster and with less effort, as well as a way to improve the quality of the tasks and the quality of life. In contrast, when compared to non-Internet users and Internet users, Internet purchasers were more likely to perceive purchasing leisure travel over the Internet as a way to buy faster, with more quality

and to improve the quality of life. However, no differences in the relative advantage of purchasing leisure travel over the Internet were found between non-Internet users and Internet users.

8.2.5. Image

Image refers to the degree to which an individual believes than an innovation will bestow them with higher social approval among their relevant community (Plouffe et al., 2001). Four aspects of image were covered in this research: prestige, status, self-image and compatibility with image that wants to convey to others. A 5 point Likert-type scale was used to measure the image statements.

Image resulting from using computers for leisure purposes

Using computers for leisure purposes was not thought to enhance the image of the respondents as shown by the low mean values (Table 8.25). None of the mean values were above 3 (the middle point of the scale) and in some cases it was below 2. The statement pertaining to the status, on average, received the least agreement with all the means below 2: 1.90 for the non-Internet users, 1.71 for the Internet users and 1.73 for the Internet purchasers. In contrast, the statement regarding whether using computers for leisure purposes was a means to build a positive self-image received the highest agreement from all the three sub-groups. When the four items were computed into an 'image' attribute, the mean of the non-Internet users was above 2 (mean: 2.16) while the means of the Internet users and the Internet purchasers was below 2 (means: 1.82 and 1.87, respectively).

Table 8. 25: Image associated with using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Opportunity to increase prestige among friends*	74	2.15	0.99	123	1.80	0.94	49	1.86	0.91
A symbol of status*	73	1.90	0.93	124	1.71	0.94	49	1.73	1.06
A mean to build a positive self image*	72	2.49	1.26	123	1.94	1.10	49	1.98	1.07
Compatible with image that want to convey to others*	73	2.05	1.01	124	1.82	1.02	49	1.90	1.07
Image attribute (composite)	74	2.16	0.85	124	1.82	0.87	49	1.87	0.90

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

The proportion of respondents disagreeing that using computers for leisure purposes is an opportunity to increase prestige among friends was large, above 70 percent (Table 8.26). Yet, the non-Internet users were the sub-group disagreeing the least and agreeing the most with the sentence. In addition, their disagreement answers tended to be concentrated at the disagree level, while both the Internet users and purchasers answered at the strongly disagree level. In terms of the status associated with using computers for leisure purposes, more than three quarters of the respondents in each of the sub-groups disagreed, with the majority of the disagreement answers being at the strongly disagree level. The proportion of agreement answers was low and the vast majority at the agree level. The statement regarding whether using computers for leisure purposes was a means to build a positive self-image received a lower level of disagreement, notably from the non-Internet users. In addition, one quarter of the non-Internet users agreed that using computers for leisure purposes would be a means to build a positive self-image, but only less 11.4 percent of Internet users and 10.2 percent of Internet purchasers agreed with the sentence. Finally, a large proportion of the respondents disagreed that using computers for leisure purposes was compatible with the image they wanted to convey to others. Yet, while the disagreement answers of the non-Internet users were concentrated at the disagree level, the answers of the Internet users and purchasers on the negative side of the scale were located at the strongly disagree level.

Table 8. 26: Image associated with using computers for leisure purposes (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Opportunity to increase prestige among friends								
Non-Internet users	28.4	41.9	16.2	13.5	-	70.3	16.2	13.5
Internet users	47.2	31.7	16.3	3.3	1.6	78.9	16.3	4.9
Internet purchasers	44.9	28.6	22.4	4.1	-	73.5	22.4	4.1
A symbol of status								
Non-Internet users	41.1	34.2	17.8	6.8	-	75.3	17.8	6.8
Internet users	54.0	28.2	11.3	5.6	0.8	82.2	11.3	6.4
Internet purchasers	59.2	20.4	8.2	12.2	-	79.6	8.2	12.2
A mean to build a positive self image								
Non-Internet users	29.2	23.6	22.2	19.4	5.6	52.8	22.2	25.0
Internet users	48.0	22.8	17.9	9.8	1.6	70.8	17.9	11.4
Internet purchasers	46.9	18.4	24.5	10.2	-	65.3	24.5	10.2
Compatible with image that want to convey to others								
Non-Internet users	34.2	39.7	12.3	13.7	-	73.9	12.3	13.7
Internet users	48.4	33.1	8.1	8.9	1.6	81.5	8.1	10.5
Internet purchasers	49.0	24.5	14.3	12.2	-	73.5	14.3	12.2

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The results of the Kruskal-Wallis and the Multiple Comparison Tests are reported in Table 8.27. Despite the sentences about the image of using computers for leisure purposes receiving very low agreement by the three groups, when compared to Internet users and purchasers the non-Internet users were more likely to regard using computers for leisure purposes as an opportunity to increase prestige their among friends (χ^2=6.75; $p<0.05$) and a means to build a positive self-image (χ^2=9.90; $p<0.01$). Yet, there were no differences in terms of using computers for leisure purposes being a symbol of status (χ^2=3.48; $p>0.05$) or compatible with image that they want to convey to others (χ^2=3.49; $p>0.05$). When all the statements capturing image were computed into a single category, the non-Internet users perceived more image benefits when compared to the Internet purchasers, but no differences were found between the non-Internet users and the Internet users and the between Internet users and the Internet purchasers (χ^2=9.32; $p<0.01$).

Table 8. 27: Image associated with using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Opportunity to increase prestige among friends	140,11	114,89	120,02	6.72	0.035	+	+	ns
A symbol of status	135,36	119,17	116,81	3.48	0.176	ns	ns	ns
A mean to build a positive self image	143,31	112,98	115,83	9.90	0.007	+	+	ns
Compatible with image that want to convey to others	135,48	117,32	121,30	3.49	0.174	ns	ns	ns
Image attribute (composite)	144,69	133,86	118,41	9.32	0.009	ns	+	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Image resulting from purchasing leisure travel over the internet

As far as the image of purchasing leisure travel over the Internet is concerned, in general the statements received even less agreement when compared to using computers for leisure purposes (Table 8.28). The mean values were all below 2 with the exception of the non-Internet users regarding the purchasing of leisure travel over the Internet as a means to build a positive self-image (mean: 2.10).

Table 8. 28: Image associated with purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Opportunity to increase prestige among friends*	73	1.84	0.87	126	1.74	0.77	47	1.66	0.84
A symbol of status*	73	1.82	0.86	126	1.77	0.95	47	1.62	0.9
A mean to build a positive self image*	73	2.10	1.03	126	1.83	0.92	47	1.91	1.14
Compatible with image that want to convey to others*	73	1.92	0.97	126	1.81	0.91	47	1.91	1.14
Image attribute (composite)	73	1.92	0.80	126	1.79	0.76	47	1.78	0.90

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

Only a very small proportion of the respondents in the three sub-groups, not exceeding 6.4 percent, agreed that purchasing leisure travel over the Internet was an opportunity to increase prestige among friends and a symbol of status (Table 8.29). In contrast, more than

three quarters of the respondents disagreed with these two sentences. The statements concerning self-image and compatibility with the image that the respondent wants to convey to others received slightly more agreement, notably from the Internet purchasers. In all the four items the negative answers were concentrated and the strongly disagree level and the positive ones at the agree level.

Table 8. 29: Image associated with purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Opportunity to increase prestige among friends								
Non-Internet users	43.8	31.5	21.9	2.7	0.0	75.3	21.9	2.7
Internet users	44.4	38.9	15.1	1.6	0.0	83.3	15.1	1.6
Internet purchasers	55.3	25.5	17.0	2.1	0.0	80.9	17.0	2.1
A symbol of status								
Non-Internet users	43.8	32.9	20.5	2.7	0	76.7	20.5	2.7
Internet users	49.2	32.5	11.9	4.8	1.6	81.7	11.9	6.3
Internet purchasers	59.6	25.5	8.5	6.4	0.0	85.1	8.5	6.4
A mean to build a positive self image								
Non-Internet users	35.6	31.5	20.5	12.3	0	67.1	20.5	12.3
Internet users	43.7	37.3	13.5	4.0	1.6	81.0	13.5	5.6
Internet purchasers	51.1	23.4	8.5	17.0	0.0	74.5	8.5	17.0
Compatible with image that want to convey to others								
Non-Internet users	42.5	31.5	17.8	8.2	0.0	74.0	17.8	8.2
Internet users	44.4	37.3	11.9	5.6	0.8	81.7	11.9	6.3
Internet purchasers	51.1	21.3	14.9	10.6	2.1	72.3	14.9	12.8

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

As shown in Table 8.30, Kruskal-Wallis tests did not reveal any significant differences between the sub-groups in either of the statements or in the computed 'image' category ($p>0.05$ for all the statements). Therefore, it can be concluded that the respondents in the three sub-groups had similar perceptions of the image associated with purchasing leisure travel over the Internet.

Table 8. 30: Image associated with purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Opportunity to increase prestige among friends	129.42	123.46	114.40	1.49	0.475	ns	ns	ns
A symbol of status	130.92	123.70	111.43	2.55	0.280	ns	ns	ns
A mean to build a positive self image	135.68	118.35	118.38	3.45	0.178	ns	ns	ns
Compatible with image that want to convey to others	128.09	121.31	122.23	0.50	0.778	ns	ns	ns
Image attribute (composite)	133,08	121,23	114,70	2.28	0.319	ns	ns	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

In summary, both using computers for leisure purposes and purchasing leisure travel over the Internet are not though to enhance the image of the respondents. Despite the sentences about image receiving very low agreement by the three sub-groups, for the non-Internet users using computers for leisure purposes was though to enhance to a greater extent their image when compared to the other two groups. More specifically, not only did they agree more that it would be an opportunity to increase prestige among friends but also that it would be a means to build a positive self image. In contrast, no differences were found in respect to the image of purchasing leisure travel over the Internet.

8.2.6. Perceived Risk

Perceived risk is the degree to which risks are perceived as associated with the using the innovation (Ostlund, 1974). For the purposes of this research, two statements measured the risk associated with using each of the innovations. The statements regarding perceived risk were measured using a 5 point Likert-type scale. Contrary to the other attributes, the lower the mean value the more positive the perception is, that is, the lower the perceived risk.

Perceived risk associated with using computers for leisure purposes

In terms of using computers for leisure purposes, the three groups did not attach a high level of risk to using this innovation as shown by the low mean value (Table 8.31). The mean values were all below 2 and in the case of the Internet users and the Internet purchasers the mean values for the statement concerning whether they considered using computers was a waste of time were below 1.5. Not surprisingly, the computed mean values of the 'perceived risk' category were also low, ranging from 1.67 (Internet purchasers) to 1.93 (non-Internet users).

Table 8. 31: Perceived risk of using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Afraid life becomes dependent on computers*	71	1.97	1.08	123	1.85	0.92	47	1.98	1.13
Using computers is a waste of time*	70	1.87	0.96	121	1.45	0.71	47	1.36	0.70
Perceived risk attribute (composite)	72	1.93	0.75	123	1.65	0.63	47	1.67	0.76

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 8.32) shows that only around 10 percent of the respondents agreed that they were afraid life became dependent on the computer, while around 80 percent disagreed. The statement concerning whether using computers was a waste of time received even greater disagreement by the respondents as more than 80 percent of the non-Internet users and more than 90 percent of the Internet users and the Internet purchasers opted for the negative side of the scale. The percentage of respondents agreeing with the sentence was very low, not exceeding the 4.3 percent. In both statement, the disagreement answers of the non-Internet users tended to be concentrated at the disagree level, whereas those of the Internet users and the Internet purchasers at the strongly disagree level.

Table 8. 32: Perceived risk of using computers for leisure purposes (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Afraid life becomes dependent on computers								
Non-Internet users	38.0	42.3	9.9	4.2	5.6	80.3	9.9	9.8
Internet users	40.7	43.9	6.5	8.1	0.8	84.6	6.5	8.9
Internet purchasers	42.6	34.0	10.6	8.5	4.3	76.6	10.6	12.8
Using computers is a waste of time								
Non-Internet users	40.0	41.4	14.3	-	4.3	81.4	14.3	4.3
Internet users	65.3	27.3	5.0	2.5	-	92.6	5.0	2.5
Internet purchasers	74.5	17.0	6.4	2.1	-	91.5	6.4	2.1

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test, shown in Table 8.33, revealed that there was no statistical difference between the respondents as far as the statement regarding fears of life becoming dependent on computer (χ^2=0.40; p>0.05). In contrast, there were differences in terms of regarding using computers as a waste of time (χ^2=17.31; p<0.001) and the perceived risk as a category (χ^2=7.947; p<0.05). In either case, the Multiple Comparison Test showed that the non-Internet users perceived using computers for leisure purposes as more risky when compared to both the Internet users and the Internet purchasers, but no differences emerged between the latter.

Table 8. 33: Perceived risk of using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Afraid life becomes dependent on computers	124.37	118.48	122.50	0.40	0.817	ns	ns	ns
Using computers is a waste of time	144.01	111.89	102.60	17.31	0.000	+	+	ns
Perceived risk attribute (composite)	140.24	114.69	110.61	7.947	0.019	+	+	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Perceived risk associated with purchasing leisure travel over the internet

As the mean values suggest (Table 8.34), both the non-Internet users and the Internet purchasers perceived using the Internet in the purchasing of leisure travel as risky. While the mean values of the two sub-groups who had never purchased over the Internet were above 3 (the middle point of the scale), the mean value for the Internet purchasers was below that threshold value. Yet, the mean values of the Internet purchasers are close to 3 and consequently its interpretation should be made with caution. A similar pattern emerged when the two items were computed into a 'perceived risk' category.

Table 8. 34: Perceived risk of purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
The probability of not doing the best deal is high*	74	3.57	0.97	125	3.38	0.97	47	2.81	0.80
When buying travel over the Internet can lose money*	74	3.30	0.99	125	3.34	0.93	47	2.77	0.94
Perceived risk attribute (composite)	74	3.43	0.92	125	3.36	0.87	47	2.79	0.67

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

As Table 8.35 demonstrates, more than half of non-Internet users and 41 percent of Internet users agreed that the probability of not doing the best deal is high. Similarly, slightly less than 40 percent of non-Internet users and exactly 40 percent of Internet users agreed that when buying travel over the Internet they can lose money. In addition the proportion of the respondents in these two groups disagreeing with the sentences was low, ranging from 13.6 to 18.9 percent. In contrast, Internet purchasers did not perceive purchasing leisure travel over the Internet as risky. The proportion of Internet purchasers agreeing that the probability of not doing the best deal was high was around 13 percent, whereas 34 percent disagreed with the sentence. A similar result emerged for the statement concerning the possibility of losing money, as 17 percent agreed, and 36 percent disagreed, that they could lose money.

Table 8. 35: Perceived risk of purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
The probability of not doing the best deal is high								
Non-Internet users	1.4	12.2	32.4	36.5	17.6	13.6	32.4	54.1
Internet users	3.2	11.3	44.4	26.6	14.5	14.5	44.4	41.1
Internet purchasers	2.1	31.9	53.2	8.5	4.3	34.0	53.2	12.8
When buying components through the internet can lose money								
Non-Internet users	2.7	16.2	43.2	24.3	13.5	18.9	43.2	37.8
Internet users	0.8	16.8	42.4	27.2	12.8	17.6	42.4	40.0
Internet purchasers	8.5	27.7	46.8	12.8	4.3	36.2	46.8	17.1

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test (Table 3.36) indicates that the Internet purchasers differentiated from the other two sub-groups in terms of the whether they considered that the probability of not doing the best deal was high (χ^2=20.83; p<0.001) and that when buying leisure travel over the Internet they could lose money (χ^2=12.04; p<0.01). Yet, no differences were found between the non-Internet users and the Internet users. A similar pattern was found for the 'perceived risk' as a category (χ^2=19.02; p<0.001).

Table 8. 36: Perceived risk of purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
The probability of not doing the best deal is high	141.24	127.46	85.04	20.83	0.000	ns	+	+
When buying travel over the Internet can lose money	128.84	131.83	92.95	12.04	0.002	ns	+	+
Perceived risk attribute (composite)	137.97	129.56	84.60	19.02	0.000	ns	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

In summary, the results suggest that although the three sub-groups do not perceive using computers as encompassing risks, the non-Internet users perceived it as more risky when compared to the Internet users and purchasers. In contrast, while both the non-Internet

users and the Internet users regard purchasing leisure travel over the Internet as risky, the Internet purchasers regard it as not risky.

8.3. Affective feelings

According to the multicomponent model attitudes, the beliefs about using an innovation are translated into a personal reaction of like or dislike. This section reports the results of the affective feelings towards using the innovations, that is, using computers for leisure purposes and purchasing leisure travel over the Internet.

Affective feelings about using the for leisure purposes.

Table 8.37 presents the mean value of the answers for a series of descriptors that can describe the affective states associated with using computers for leisure purposes. The data was collected by the means of a 7 point semantic differential scale. As the results show, there was a general positive attitude towards using computers for leisure purposes by all the three sub-groups as, on average, no feelings received negative evaluation from the respondents (mean less than 4). While the majority of the mean values of the non-Internet users were below 5, the majority of the items of both the Internet users and the Internet purchasers were above this value. In hierarchical terms, the groups differentiated in the order of importance of the descriptive pairs. The three most positive feelings, in descending order of the means, were (1) enjoyed, (2) entertained and (3) happy for non-Internet users; (1) enjoyed, (2) entertained and (3) stimulated for Internet users; and (1) entertained, (2) excited and (3) enjoyed for Internet purchasers. When the eight items were computed into a 'feeling' category, the mean values of both the Internet users and the Internet purchasers was above 5 (5.10 and 5.34, respectively), while the mean of the non-Internet users was slightly below this value (mean: 4.82).

Table 8. 37: Feelings associated with using computers for leisure purposes (mean values)

factor	Non-Internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Bored – enjoyed *	73	5.21	1.86	124	5.48	1.38	48	5.50	1.27
Stressed – relaxed *	72	4.74	1.91	122	5.16	1.33	48	5.38	1.51
Not stimulated – stimulated *	70	4.96	1.84	123	5.17	1.32	48	5.31	1.26
Insecure – confident *	69	4.54	1.75	123	4.98	1.13	48	5.35	1.14
Not excited – excited *	73	4.84	1.86	122	5.15	1.42	48	5.54	1.15
Not entertained – entertained *	76	5.01	2.00	123	5.35	1.49	49	5.80	1.27
Unhappy – happy *	69	4.99	1.48	122	4.80	1.15	48	4.75	1.12
Frustrated – fulfilled *	70	4.73	1.59	122	4.88	1.10	47	5.00	1.02
Affection (composite)	82	4.82	1.68	128	5.10	1.20	49	5.34	0.77

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

The analysis of the frequencies shows that the proportion of the respondents who opted for the positive side of the scale clearly exceeded that of who opted for the negative side (Table 8.38). In addition, with no exceptions, more than half of the Internet users and the Internet purchasers opted for the positive side of the scale. Although the majority of the items also received a positive evaluation by more than half of the non-Internet users, the proportion who indicated that they would feel confident and fulfilled was slightly less than 50 percent. The frequencies also indicate that the answers on the positive side of the scale were fairly distributed across its three levels, but in come cases the answers are concentrated around the middle and higher points of the scale. With no exceptions, the non-Internet users were the sub-group who opted more for the negative side of the scale. In half of the items, more than 20 percent of the respondents in this sub-group answered at the negative side of the scale. In contrast, with two exceptions, the proportion of Internet users and purchasers opting for the negative side of the scale was below 10 percent. One of the exceptions were the Internet users where 10.7 percent said they would feel not excited and the other were the Internet purchasers where 14.6 percent reported they would feel stressed when using computers for leisure purposes.

Table 8. 38: Feelings associated with using computers for leisure purposes (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Bored – enjoyed										
Non-Internet users	6.8	8.2	-	12.3	19.2	21.9	31.5	15.0	12.3	72.6
Internet users	2.4	1.6	3.2	13.7	21.0	33.1	25.0	7.2	13.7	79.1
Internet purchasers	2.1	-	-	22.9	16.7	35.4	22.9	2.1	22.9	75
Stressed – relaxed										
Non-Internet users	8.3	6.9	8.3	20.8	16.7	12.5	26.4	23.5	20.8	55.6
Internet users	0.8	4.1	3.3	23.0	23.0	30.3	15.6	8.2	23.0	68.9
Internet purchasers	-	8.3	6.3	8.3	16.7	37.5	22.9	14.6	8.3	77.1
Not stimulated – stimulated										
Non-Internet users	7.1	5.7	7.1	14.3	22.9	15.7	27.1	19.9	14.3	65.7
Internet users	2.4	1.6	3.3	20.3	29.3	27.6	15.4	7.3	20.3	72.3
Internet purchasers	2.1	-	2.1	25.0	16.7	39.6	14.6	4.2	25.0	70.9
Insecure – confident										
Non-Internet users	7.2	5.8	10.1	30.4	13.0	15.9	17.4	23.1	30.4	46.3
Internet users	-	2.4	3.3	31.7	28.5	25.2	8.9	5.7	31.7	62.6
Internet purchasers	2.1	-	2.1	18.8	16.7	54.2	6.3	4.2	18.8	77.2
Not excited – excited										
Non-Internet users	8.2	6.8	6.8	13.7	23.3	17.8	23.3	21.8	13.7	64.4
Internet users	2.5	3.3	4.9	18.9	23.8	30.3	16.4	10.7	18.9	70.5
Internet purchasers	2.1	-	-	12.5	29.2	37.5	18.8	2.1	12.5	85.5
Not entertained – entertained										
Non-Internet users	11.8	3.9	5.3	10.5	15.8	23.7	28.9	21.0	10.5	68.4
Internet users	3.3	4.1	1.6	14.6	21.1	32.5	22.8	9.0	14.6	76.4
Internet purchasers	2.0	2.0	2.0	6.1	10.2	51.0	26.5	6.0	6.1	87.7
Unhappy – happy										
Non-Internet users	1.4	2.9	4.3	40.6	11.6	15.9	23.2	8.6	40.6	50.7
Internet users	-	2.5	2.5	44.3	24.6	15.6	10.7	5.0	44.3	50.9
Internet purchasers	2.1	4.2	-	29.2	41.7	20.8	2.1	6.3	29.2	64.6
Frustrated – fulfilled										
Non-Internet users	5.7	2.9	2.9	40.0	17.1	12.9	18.6	11.5	40.0	48.6
Internet users	-	1.6	2.5	39.3	30.3	15.6	10.7	4.1	39.3	56.6
Internet purchasers	-	2.1	2.1	27.7	34.0	29.8	4.3	4.2	27.7	68.1

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

In order to test for differences between the sub-groups, the Kruskal-Wallis test was employed (Table 8.39). As the results demonstrate, the sub-groups were only different in terms of how insecure/confident they would feel (χ^2=9.33; p<0.01). The Multiple Comparison Test revealed that the Internet purchasers would feel more confident than the remaining two sub-groups but no differences were found between the non-Internet users and the Internet users (χ^2=9.33; p<0.01). The sub-groups did not differentiate in terms of how bored/enjoyed (χ^2=0.13; p>0.05), stressed/relaxed (χ^2=3.80; p>0.05), stimulated (χ^2=4.92; p>0.05), excited (χ^2=3.75; p>0.05), entertained (χ^2=4.54; p>0.05), happy/unhappy (χ^2=0.76; p>0.05), and fulfilled/frustrated (χ^2=1.56; p>0.05) they would

feel. In addition, there was no statistical difference for the computed 'feeling' category (χ^2=2.36; p>0.05).

Table 8. 39: Feelings associated with using computers for leisure purposes (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Bored – enjoyed	120.77	124.45	122.66	0.13	0.936	ns	ns	ns
Stressed – relaxed	111.06	122.00	135.90	3.80	0.150	ns	ns	ns
Not stimulated – stimulated	118.26	120.25	126.92	4.92	0.782	ns	ns	ns
Insecure – confident	105.13	120.03	143.80	9.33	0.009	ns	+	+
Not excited – excited	113.68	120.67	138.04	3.75	0.154	ns	ns	ns
Not entertained – entertained	117.51	121.39	143.15	4.54	0.103	ns	ns	ns
Unhappy – happy	125.07	116.55	121.50	0.76	0.683	ns	ns	ns
Frustrated – fulfilled	114.56	119.27	129.99	1.56	0.461	ns	ns	ns
Affection (composite)	122.66	129.58	143.39	2.36	0.307	ns	ns	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Affective feelings regarding the purchasing of leisure travel over the internet

The same eight pairs of words were used to measure the affective component of attitudes towards purchasing leisure travel over the Internet. As the mean values indicate (Table 8.40), on average the respondents also evaluated positively their purchasing of leisure travel over the Internet (mean value above 4, the middle point of the scale). However, two feelings (insecure and not excited) received negative evaluation from non-Internet users and one (insecure) from Internet users. There were many items, notably in the case of the non-Internet users and the Internet users, whose mean was very close to the threshold value of 4 (the middle point of the scale). In addition, opposite to using computers for leisure purposes, no items yielded a mean value above 5. Similar to using computers, the groups can also be differentiated in the order of importance of the descriptive pairs. The three most positive feelings, in descending order of the mean, were (1) happy, (2) enjoyed and (3) entertained for non-Internet users; (1) enjoyed, relaxed (same mean value) and (3) happy for Internet users; and (1) enjoyed, (2) stimulated and (3) entertained for Internet purchasers.

Table 8. 40: Feelings associated with purchasing leisure travel over the Internet (mean values)

	Non-Internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Bored – enjoyed *	67	4.28	1.51	122	4.26	1.16	46	4.67	1.01
Stressed – relaxed *	65	4.08	1.60	121	4.26	1.16	46	4.37	1.37
Not stimulated – stimulated *	68	4.00	1.74	121	4.12	1.38	46	4.61	1.16
Insecure – confident *	70	3.81	1.97	126	3.56	1.66	46	4.30	1.62
Not excited – excited *	66	3.95	1.62	122	4.01	1.52	46	4.52	1.30
Not entertained – entertained *	65	4.12	1.57	122	4.05	1.54	46	4.57	1.36
Unhappy – happy *	64	4.41	1.16	122	4.22	0.95	46	4.46	0.91
Frustrated – fulfilled *	65	4.09	1.35	121	4.21	0.91	46	4.46	0.96
Affection (composite)	78	3.98	1.65	128	3.98	1.14	46	4.49	1.01

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the Tables 8.37 and 8.40, suggests that when compared to using computers for leisure purposes, purchasing leisure travel over the Internet arouses lower affective states. For example, the mean value of the composite affection toward using computers for leisure purposes was 4.82, 5.10 and 5.34 for non-Internet users, Internet users and Internet purchasers, respectively, whereas for purchasing leisure travel over the Internet the values were 0.84, 1.12 and 0.85 points lower.

As can be observed in Table 8.41, with no exceptions the largest concentration of answers of the non-Internet users and the Internet users was on the middle point of the scale. For example, nearly 7 out of 10 Internet users would feel neither happy nor unhappy when purchasing leisure travel over the Internet. In contrast, in four of the items (stressed/relaxed, stimulated, insecure/confident and excited) the proportion of the Internet purchasers opting for the positive side of the scale was greater than that of opting for the middle point. In any case the proportion of positive answers was above 50 percent. Nonetheless, in the majority of the items the proportion of respondents in the three sub-groups opting for the positive side of the scale was greater than that of opting for the negative side of the scale. The exception were the non-Internet users and the Internet users' evaluation of how insecure/confident they would feel. While 35.7 and 44.4 of the non-Internet users and the Internet users, respectively, said they would feel insecure, 31.5 and 25.4 percent said they would feel confident.

Table 8. 41: Feelings associated with using purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Bored – enjoyed										
Non-Internet users	7.5	4.5	6.0	44.8	17.9	10.4	9.0	18.0	44.8	37.3
Internet users	3.3	4.1	4.9	54.9	19.7	9.8	3.3	12.3	54.9	32.8
Internet purchasers	0.0	0.0	4.3	54.3	15.2	21.7	4.3	4.3	54.3	41.3
Stressed – relaxed										
Non-Internet users	9.2	9.2	3.1	47.7	15.4	4.6	10.8	21.5	47.7	30.8
Internet users	1.7	4.1	9.1	57.0	14.0	8.3	5.8	14.9	57.0	28.1
Internet purchasers	4.3	4.3	10.9	37.0	21.7	17.4	4.3	19.6	37.0	43.5
Not stimulated – stimulated										
Non-Internet users	14.7	7.4	4.4	38.2	14.7	13.2	7.4	26.5	38.2	35.3
Internet users	7.4	5.8	5.8	47.9	18.2	11.6	3.3	19.0	47.9	33.1
Internet purchasers	0.0	6.5	2.2	43.5	23.9	19.6	4.3	8.7	43.5	47.8
Insecure – confident										
Non-Internet users	21.4	5.7	8.6	32.9	10.0	8.6	12.9	35.7	32.9	31.5
Internet users	11.9	19.8	12.7	30.2	11.1	9.5	4.8	44.4	30.2	25.4
Internet purchasers	6.5	8.7	10.9	30.4	15.2	21.7	6.5	26.1	30.4	43.5
Not excited – excited										
Non-Internet users	10.6	10.6	7.6	37.9	16.7	10.6	6.1	28.8	37.9	33.4
Internet users	9.8	9.0	4.1	44.3	17.2	11.5	4.1	23.0	44.3	32.8
Internet purchasers	4.3	2.2	6.5	39.1	21.7	23.9	2.2	13.0	39.1	47.8
Not entertained – entertained										
Non-Internet users	9.2	7.7	3.1	47.7	13.8	10.8	7.7	20.0	47.7	32.3
Internet users	10.7	9.0	1.6	41.0	23.0	10.7	4.1	21.3	41.0	37.7
Internet purchasers	4.3	2.2	4.3	45.7	15.2	21.7	6.5	10.9	45.7	43.5
Unhappy – happy										
Non-Internet users	3.1	0.0	6.3	57.8	15.6	10.9	6.3	9.4	57.8	32.8
Internet users	1.6	1.6	5.7	68.0	12.3	8.2	2.5	9.0	68.0	23.0
Internet purchasers	0.0	0.0	8.7	54.3	21.7	13.0	2.2	8.7	54.3	37.0
Frustrated – fulfilled										
Non-Internet users	9.2	3.1	0.0	61.5	13.8	7.7	4.6	12.3	61.5	26.1
Internet users	1.7	3.3	1.7	68.6	16.5	6.6	1.7	6.6	68.6	24.8
Internet purchasers	0.0	4.3	0.0	60.9	15.2	19.6	0.0	4.3	60.9	34.8

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

As far as the distribution of answers across the positive/negative side of the scale is concerned, it can be observed that in the case of the non-Internet users and the Internet users the answers were fairly distributed across the negative side of the scale, and in some cases the answers were concentrated around the middle and end of the scale. In contrast, the negative answers of the Internet purchasers tend to be concentrated either on the middle or on the least negative point of the scale. In terms of the positive answers, while the answers of both the non-Internet users and the Internet users were concentrated on the

least positive point of the scale, the answers of the Internet purchasers are mostly concentrated on the middle point of the positive side of the scale.

The Kruskal-Wallis test was performed to identify significant differences across the sub-groups. However, not many statistical differences were evident as respondents displayed a high degree of similarity (Table 8.42). Similar to using computers for leisure purposes, the null hypothesis was only rejected for insecure/confidence feeling (χ^2=6.36; p<0.05). The Multiple Comparison Test revealed that the Internet purchasers would feel more confident than the remaining two groups but no differences were found between the non-Internet users and the Internet users.

Table 8. 42: Feelings associated with purchasing leisure travel over the Internet (Kruskal-Wallis)

Factor	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Bored – enjoyed	116.28	113.69	131.95	2.90	0.235	ns	ns	ns
Stressed – relaxed	111.68	115.65	125.53	1.37	0.504	ns	ns	ns
Not stimulated – stimulated	112.15	114.17	136.71	4.84	0.089	ns	ns	ns
Insecure – confident	122.71	113.06	142.78	6.36	0.042	ns	+	+
Not excited – excited	111.26	113.80	136.26	4.85	0.088	ns	ns	ns
Not entertained – entertained	113.07	113.57	131.65	2.99	0.224	ns	ns	ns
Unhappy – happy	121.63	110.59	125.05	2.75	0.253	ns	ns	ns
Frustrated – fulfilled	111.88	114.36	128.65	2.70	0.260	ns	ns	ns
Affection (composite)	123.22	119.98	150.20	6.10	0.047	ns	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Despite only one item showing a statistical difference, when the results of the eight affective pairs were computed to create an aggregated 'affection' category towards purchasing leisure travel over the Internet, the Kruskal-Wallis test revealed a statistically significant difference between the three sub-groups. This was possibly because two further items (excited and stimulated) were very close to the significance threshold value of 0.05 and with the exception of stressed-relaxed, the other significance values were below 0.3. The Multiple Comparison Method further showed that Internet purchasers had more positive attitudes than those who had never purchased over the Internet. Not surprisingly, no significant association between non-Internet users and Internet users was uncovered.

In summary, the respondents in the three sub-groups tended to display positive feelings towards using computers for leisure purposes. As far as purchasing leisure travel over the Internet is concerned, Internet purchasers clearly had positive feelings whereas the non-Internet users and Internet users seemed to display indifferent feelings (mean values very close to 4). Not many statistical differences between the three groups were found as the three groups were only different in terms of how insecure/confident they would feel. Internet purchasers would feel more confident when using computers for leisure purposes and when purchasing leisure travel over the Internet when compared to non-Internet users and Internet users. Interestingly, Internet users were not more likely to display more positive feelings than non-Internet users.

8.4. Intention to use the innovations

According to the multicomponent model of attitude, one of the elements through which the conative component of attitude can be assessed are the verbal statements concerning behaviour (Rosenberg and Hovland, 1960; Triandis, 1971). One way of gauging the conative component is asking the individual about what he/she will do in a given situation (Fishbein and Ajzen, 1975). Therefore, the respondents were asked about their intention to use both computers and the Internet for leisure purposes, as well as their intention to purchase leisure travel on the Internet. All respondents had to indicate their intentions in the near future and those who were uncertain or did not agree that they intended to use them in the near future were asked to indicate whether they intended to do it in the long term future. These statements were measured using a 5 point Likert-type scale.

Intention to use computers for leisure purposes

As far as using computers for leisure purposes is concerned (Table 8.43), the mean values indicate that, on average, the three sub-groups intended do use them in the near future. Yet, while the mean value of the non-Internet users was slightly over 3 (mean: 3.29), the mean value of the Internet users and purchasers was above 4 (means: 4.15 and 4.49, respectively). The mean values also suggest that a small proportion of the non-Internet users and the Internet users answered at a higher level of agreement when asked about

their intention to use computers for leisure purposes in the long term future, while the mean value of the Internet purchasers did not change.

Table 8. 43: Intention to use computers for leisure purposes (mean values)

factor	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Intention to use in the near future*	70	3.29	1.13	121	4.15	1.09	47	4.49	1.04
Intention to use in the long future*	70	3.41	1.11	121	4.17	1.08	47	4.49	1.04

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

Table 8.44 reports the frequencies (percentages) regarding the intention to use computers for leisure purposes. The results indicate that the majority of the non-Internet users did not intend or were uncertain about using computers for leisure purposes. In contrast, an overwhelming majority of the Internet users and the Internet purchasers intended to use them in the near future. Yet, not only was the proportion of the Internet purchasers agreeing with the sentences higher than that of the Internet users (91.5% and 80.2% in the near future, respectively), the Internet purchasers answered more at the strongly agree level. While 70.2 percent of Internet purchasers strongly agreed that they intended to use computers for leisure purposes, only slightly less than half of Internet users answered at the highest positive side of the scale.

The results also show that there are non-Internet users, who despite their uncertainty or lack of intention to use computers for leisure purposes in the near future, believed that in the long future they were likely to become users. These account for around five percent of the respondents. Conversely, the results suggest that the intentions of both the Internet users and purchasers to use computers for leisure purposes remain stable between the two time spans. It is also noteworthy that the Internet users and purchasers were more certain about their intention (i.e. agreed or disagreed), whereas slightly more than one third of non-Internet users were uncertain about their intention to use computers for leisure purposes.

Table 8. 44: Intention to use computers for leisure purposes (frequencies in percentages)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Intention to use in the near future								
Non-Internet users	11.4	7.1	34.3	35.7	11.4	18.5	34.3	47.1
Internet users	5.0	4.1	10.7	31.4	48.8	9.1	10.7	80.2
Internet purchasers	6.4	-	2.1	21.3	70.2	6.4	2.1	91.5
Intention to use in the long future								
Non-Internet users	10.0	4.3	34.3	37.1	14.3	14.3	34.3	51.4
Internet users	5.0	3.3	10.7	32.2	48.8	8.3	10.7	81.0
Internet purchasers	6.4	-	2.1	21.3	70.2	6.4	2.1	91.5

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

Use of the Kruskal-Wallis test (Table 8.45) demonstrated that there was a relationship between the stage along the e-commerce adoption path and the intention to use computers for leisure purposes in the near (χ^2=48.36; p<0.001) and long term future (χ^2=42.28; p<0.001). The Multiple Comparison Test further showed that the Internet purchasers were more likely than the Internet users and the non-Internet users, and the Internet users were more likely than the non-Internet users, to intend to use computers for leisure in the near and long term future.

Table 8. 45: Intention to use computers for leisure purposes (Kruskal-Wallis)

Factor	Non-internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Intention to use in the near future	76.55	130.32	155.62	48.36	0.000	+	+	+
Intention to use in the long future	79.84	128.98	154.16	42.28	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Intention to use the Internet for leisure purposes

The Table 8.46 reports the mean values regarding the statement about using the Internet for leisure purposes. The mean values suggest, on average, the three sub-groups intended to use the Internet for leisure purposes, both in the near and long term futures. Yet, while in terms of intention to use in the near future the mean value of the Internet users and the

Internet purchasers was above 4 (means: 4.29 and 4.78, respectively), the mean value of the non-Internet users was closer to three than to 4 (mean: 3.16). Similar to using computers for leisure purposes, the mean values suggest that a small proportion of the non-Internet users and the Internet users answered at a higher level of agreement in the long term future, while the mean value of the Internet purchasers did not change.

Table 8. 46: Intention to use the Internet for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Intention to use in the near future*	83	3.16	1.31	127	4.29	0.94	49	4.78	0.42
Intention to use in the long future*	83	3.30	1.26	127	4.35	0.88	49	4.78	0.42

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

According to the results provided in the Table 8.47, the majority of the non-Internet users did not intend or were uncertain about using the Internet for leisure purposes. However, despite they had never used the Internet, four out of ten non-Internet users said that they intended to use the Internet in the near future. Conversely a large percentage of both Internet users and purchasers agreed that they intended to use the Internet for leisure purposes in the near future. Nevertheless, the proportion of Internet purchasers reporting they intended to perform these two behaviours was higher than that of Internet users. For example, whereas all Internet purchasers intended to use the Internet for leisure purposes, around 20 percent of Internet users were uncertain or did not intend to do it. In addition, Internet purchasers tended to answer more at the strongly agree level. For example, 77.6 percent of the Internet purchasers strongly agreed that they intended to use the Internet for leisure purposes in the near future, whereas only slightly more than half of the Internet users answered at the highest positive side of the scale.

Similar to using computers, the results also demonstrate that there is a group within the non-Internet users who, despite their uncertainty or lack of intention to use the Internet for leisure purposes in the near future, intended to use it in the long term future. These account for six percent of the respondents. A change in intention was reported by around 3 percent of the Internet users. Conversely, the intentions of the Internet purchasers do not change between the two time spans. Another similar pattern to that of using computers for

leisure purposes was the higher degree of certainty about their intention showed by the Internet users and purchasers. Whereas nearly one third of non-Internet users were uncertain about their intention to use the Internet for leisure purposes, only around 10 percent of Internet users and none of the Internet purchasers opted for the middle point of the scale.

Table 8. 47: Intention to use the Internet for leisure purposes (frequencies in percentages)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Intention to use in the near future								
Non-Internet users	18.1	7.2	32.5	25.3	16.9	25.3	32.5	42.2
Internet users	3.1	0.8	12.6	30.7	52.8	3.9	12.6	83.5
Internet purchasers	0.0	0.0	0.0	22.4	77.6	0.0	0.0	100
Intention to use in the long future								
Non-Internet users	15.7	3.6	32.5	31.3	16.9	19.3	32.5	48.2
Internet users	2.4	0.8	10.2	33.1	53.5	3.2	10.2	86.6
Internet purchasers	0.0	0.0	0.0	22.4	77.6	0.0	0.0	100

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

According to the Kruskal-Wallis result (Table, 8.48), there was a relationship between the stage in the e-commerce adoption path and the intention to use the Internet for leisure purposes in the near (χ^2=48.36; p<0.001) and in the long term future (χ^2=42.28; p<0.001). Therefore, the Multiple Comparison Test was performed. As the results indicate, the further along in the e-commerce adoption path, the greater the likelihood of intending to use the Internet for leisure purposes.

Table 8. 48: Intention to use the Internet for leisure purposes (Kruskal-Wallis)

Factor	Non-internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Intention to use in the near future	79.39	144.30	178.67	72.03	0.000	+	+	+
Intention to use in the long future	80.15	144.38	177.16	70.10	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

Intention to purchase leisure travel over the Internet

Based on the analysis of the mean values (Table 8.49), the Internet users were the only sub-group who intended to purchase leisure travel over the Internet in the near future (mean: 3.38). In contrast, the mean values of both the non-Internet users (mean: 2.59) and the Internet purchasers (mean: 2.70) were below 3 (the middle point of the scale). The mean values also suggest that there are some respondents in each of the sub-groups who were uncertain or did not intend to do it in the near future but in the long term was uncertain or intended. In the long term, on average both the Internet users and the Internet purchasers intended to do it. Although the mean value of the non-Internet users was below 3, it was very close to this threshold value and hence caution should be taken when concluding that this sub-group did not intend.

Table 8. 49: Intention to purchase leisure travel over the Internet (mean values)

factor	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Intention to purchase in the near future*	73	2.59	1.03	125	2.70	0.97	47	3.38	0.97
Intention to purchase in the long future*	73	2.90	1.11	125	3.18	0.98	47	3.64	0.82

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of Table 8.50 shows that the percentage of non-Internet users and Internet users indicating they intend to purchase leisure travel over the Internet in the near future is relatively low. Only 12.3 percent of non-Internet users and 21.6 percent of Internet users agreed with the sentence. In contrast, nearly half of Internet purchasers agreed that they intend to purchase leisure travel over the Internet in near future. As far as intention to purchase in the long term future, virtually all Internet purchasers either were uncertain or intended to purchase leisure travel in the long future, whereas 20 percent of Internet users and 30 percent of non-Internet users did not intend. The proportion of respondents in each of the sub-groups reporting the intention to do it was not similar. While the majority of Internet purchasers (57.5%) agreed with the sentence, a lower proportion of Internet users (37.6%) and an even lower proportion of non-Internet users (22%) said they intended to purchase leisure travel over the Internet in the long term future. An analysis of the two time spans suggests that there are some respondents in the three sub-groups who, despite

their uncertainty or lack of intention to purchase in the near future, believed that in the long term future they would do it. When compared to intentions to purchase in the near future, 9.7 percent of non-Internet users, 16 percent of Internet users and 8.6 percent of Internet purchasers accepted the possibility of becoming purchasers in the long future. It is also noteworthy that a high percentage of respondents in both the three groups (around 40%) were uncertain about their intentions to purchase leisure travel over the Internet.

Table 8. 50: Intention to purchase leisure travel over the Internet (frequencies in percentages)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Intention to purchase in the near future								
Non-Internet users	16.4	26.0	45.2	6.8	5.5	42.4	45.2	12.3
Internet users	14.4	23.2	40.8	21.6	0.0	37.6	40.8	21.6
Internet purchasers	6.4	6.4	38.3	40.4	8.5	12.8	38.3	48.9
Intention to purchase in the long future								
Non-Internet users	12.3	17.8	47.9	11.0	11.0	30.1	47.9	22.0
Internet users	7.2	12.0	43.2	31.2	6.4	19.2	43.2	37.6
Internet purchasers	2.1	2.1	38.3	44.7	12.8	4.2	38.3	57.5

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale (SD + D); Mdl – percentage of answers on the middle point of the scale (U); Pos – percentage of answers on the positive side of the scale (A + SA).

The Kruskal-Wallis test (Table 8.51) revealed that there were statistical differences in terms of both the intention to purchase leisure travel in the near future (χ^2=21.44; p<0.001) and in the long-term future (χ^2=17.21; p<0.001). Thus, in order to understand where those differences lay, the Multiple Comparison Test was performed. The results indicate that the Internet purchasers agreed more that they intended to purchase in the near future when compared to both the non-Internet users and the Internet users, but no differences existed between the latter. As far as intention to purchase in the long term future is concerned, the farther along in the e-commerce adoption path, the greater the intention to purchase leisure travel.

Table 8. 51: Intention to purchase leisure travel over the Internet (Kruskal-Wallis)

Factor	Non-internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Intention to purchase in the near future	107.16	117.21	163.00	21.44	0.000	ns	+	+
Intention to purchase in the long future	102.66	123.00	154.61	17.21	0.000	+	+	+

Notes: + – denotes significance at the 0.05 level; ns – not significant.

In summary, the three sub-groups intended to use computers and the Internet for leisure purposes, both in the near and long term futures. However, the further along the e-commerce adoption path, the greater the likelihood of indicating a higher level of intention. Not only did the non-Internet users and the Internet users not intend to purchase leisure travel over the Internet in the near future, but their level of intention was not different. In contrast, the Internet purchasers intended to purchase leisure travel over the Internet and at a higher level than the remaining two groups. The three sub-groups were also different regarding their intention to purchase leisure travel over the Internet in the long-term future. Both the Internet users and the Internet purchasers intended to do it, but the latter at a higher level of agreement. In contrast, the non-Internet Internet users did not to purchase leisure travel over the Internet in the long term future. Finally, the results suggest that there are some respondents who, despite their uncertainty about their intention to use the innovations in the near future, intended to use them the long term future. This was notably the case of non-Internet users in terms of using computers for leisure purposes, the non-Internet users and the Internet purchasers in terms of using the Internet for leisure purposes and the three sub-groups in terms of purchasing leisure travel over the Internet.

8.5. Summary

This chapter was devoted to attitudes of the respondents towards the three innovations comprising the conceptual framework: using computers for leisure purposes, using the Internet for leisure purposes and purchasing leisure travel over the Internet. Based on the tri-partite model of attitudes, the survey collected data mainly about using computers for leisure purposes and purchasing leisure travel over the Internet. Data regarding the three

components of the multicomponent model – cognitive, affective and conative – were collected about these two innovations. In addition, the conative component was also covered by the survey in respect to using the Internet for leisure purposes.

The cognitive component of attitudes was covered by studying six perceived innovation attributes drawn from the adoption of innovations research. In general, the stage in the e-commerce adoption path was a major determinant of the perceptions about using a computer for leisure purposes. More specifically, the further along the path the less complex (simpler, easy to learn, easy to learn by myself, easy to use) and the more compatible (with daily routine) using a computer for leisure purposes was. In addition, using computers for leisure purposes would bring more image benefits (an opportunity to increase prestige among friends and a means to build a positive self image) for non-Internet users than for Internet users and purchasers. Moreover, Internet purchasers perceived using computers for leisure purposes as less observable than the remaining groups (saw less what other people do when using a computer and saw less important people using a computer). The three sub-groups considered using a computer was not a waste of time. However, the non-Internet users agreed more frequently than the other two sub-groups that it would be a waste of time. The stage in the e-commerce adoption path was also a major determinant of the perceptions about purchasing leisure travel on the Internet. Those who had previous experience with Internet purchasing (i.e. Internet purchasers) had more positive perceptions about purchasing on the Internet than those who had not (i.e. Internet users and non-Internet users). Internet purchasers perceived it as less complex (simpler, easy to learn, easy to learn by myself), encompassing more advantages (faster, purchase with more quality and enhance quality of life), as more compatible (with daily routine), more visible (have talked more with others), less risky (better chance to do a better deal, cannot lose money). Very little difference was found between non-Internet users and Internet users. The only differences found revealed that the latter perceived it as simpler and more compatible with daily routine.

As far as the affective component is concerned, the three sub-groups evaluated using computers for leisure purposes positively. In contrast, the feelings towards purchasing leisure travel over the Internet were less positively evaluated, with some being negatively evaluated, notably by those who had never purchased over the Internet. There was very little difference between the sub-groups in terms of affection towards using computers for leisure purposes and purchasing leisure travel over the Internet. In both cases, the only

difference found was in terms of security, with Internet purchasers indicating that they would feel more confident than Internet users and non-Internet users. No differences were found between non-Internet users and Internet users.

The questions regarding the conative component covered the three innovations. The farther along in the e-commerce adoption path, the greater the intention to use computers and the Internet for leisure purposes, both in the near future and long term future. There were only minor changes in the intention to use computers and the Internet for leisure purposes between the short and long-terms. In general, those who did not intend to do so in the near future, did not intend to do so in the long term future either. The respondents further in the e-commerce adoption path were also more likely to intend to purchase leisure travel over the Internet. The exception was the purchasing in the near future, were no differences were found between the non-Internet users and the Internet users. An overwhelming majority of non-Internet users and Internet users did not intend to purchase leisure travel over the Internet in the near future. Conversely, nearly half of Internet purchasers indicated they intended to do it. There were some respondents in each of the three sub-groups who said they did not intend to purchase leisure travel in the near future but that they intended to do it in the long future.

9. Motives and Involvement

9.1. Introduction

As shown in the literature (section 3.4.1), motives are an important concept in consumer behaviour. Motives influence behaviour in several ways, such as helping consumers to develop and identify the desired end states (i.e. terminal values) they wish to achieve and to identify goal objects deemed to satisfy their needs. Therefore, an understanding of the motives to use the innovations comprising the conceptual framework of this research will provide a valuable contribution to the study of the factors influencing the adoption of e-commerce. Similarly, given that a large proportion of the sample had never used, or were not current users of, the innovations, understanding the factors mitigating against their use might also contribute to the achievement of the objectives of this research.

To the extent that motives are linked with needs, the higher the intensity of the felt need the higher the likelihood of the individual to engage in action to satisfy the need, and hence the more intense will be the motives. The cognitive-based approach to involvement conceptualises involvement as the extent to which the characteristics of the innovation are linked to the needs and values of the individual. Bearing in mind that motives are a way of consumers expressing their needs, involvement with using an innovation reflects the strength of the link between motives and the innovation.

Therefore, the aim of this chapter is to examine the motives and involvement associated with using the innovations included in the conceptual framework. Section 9.2 is devoted to the study of the factors influencing the use of computers and the Internet for leisure purposes, as well as the factors influencing the purchasing of leisure travel over the Internet. The motives/reasons for not being current users of, or not having used before, the innovations, are reported in section 9.3. In section 9.4 the involvement with using computers for leisure purposes as well as purchasing leisure travel over the Internet are examined. Finally, section 9.5 provides a summary of the chapter.

Similar to the previous chapters, one independent variable was used: stage in the e-commerce adoption path. Three sub-groups were defined. The *non-Internet users* includes the respondents who had never used the Internet, while the *Internet users* encompasses the

respondents who had used the Internet but had never purchased anything over the Internet. Finally, the *Internet purchasers* comprises the respondents who had purchased at least a product or service over the Internet.

In this chapter two statistical procedures are reported. The first, descriptives, is presented to describe the data and includes the mean, the standard deviation and the frequencies (both in number and percentages). The second, hypothesis testing, aims to identify differences between the sub-groups of the independent variable. Two statistical tests were used, according to whether the dependent variable was categorical or ordinal. A Chi-Square test was performed if dependent variable was categorical. In this case, the analysis of the results starts by providing the Chi-Square and the associated significance values and then moves on to the description of the data (frequencies). Both the descriptives and the Chi-Square result are provided in the same table. The Kruskal-Wallis test is provided when the dependent variable is ordinal. In this case, a description of the data is provided in one table and the results of the hypothesis testing are reported in a separate table.

9.2. Motives to use the innovations

As the literature review has demonstrated (section 3.4.1), motives are an important element of consumer behaviour. It was suggested that motives are associated to needs and that they perform important functions in guiding consumer behaviour. Thus, the aim of this section is to understand the motives behind using computers and the Internet for leisure purposes, as well as the motives for purchasing leisure travel over the Internet. To achieve this aim, the respondents had to write in the main motive to use each of the innovations.

9.2.1. Motives to use computers for leisure purposes

Table 9.1 shows the main factors used by people to explain why they would use computers for leisure purposes, while a more detailed analysis of the types of answers given by the respondents is provided in Appendix C1. In other words, these are the main forces that could direct, or are directing, people to use them. The majority of non-Internet users

(56.9%) and nearly half of Internet users (44.9%) indicated entertainment as the most important reason. In contrast, the Internet (39.1%), rather than entertainment (32.6%), was the most important reason for Internet purchasers. The proportion of Internet users indicating the Internet as the main motive (38.8%) was similar to that of Internet purchasers, but only a small minority of non-Internet users (7.8%) indicated they would use computers for leisure purposes to access the Internet. In relation to the information reasons for using a computer, 19.6 percent of purchasers indicated this reason, a relatively higher percentage when compared to non-Internet users (13.7%) and Internet users (11.2%). Many of the motives provided by non-Internet users tended to be at a high level of abstraction. These could not be coded with confidence under any of the three main motives (entertainment, Internet and information) and hence the large percentage of answers in the 'other' category (21.6%). The Chi-square test indicated that these differences in the proportion of the answers were statistically significant (χ^2=25.538; p<0.001). However, it is possible that this difference is caused by the large proportion of answers in the 'other' category.

Table 9. 1: Factors influencing the use of computers for leisure purposes (% of respondents)

	Non-Internet users (n=51)		Internet users (n=98)		Internet purchasers (n=46)		Chi-Square
	n	%	N	%	n	%	
Entertainment	29	56.9	44	44.9	15	32.6	
Internet	7	7.8	38	38.8	18	39.1	χ^2=25.538
Information	7	13.7	11	11.2	9	19.6	p=0.000
Other	11	21.6	5	5.1	4	8.7	
Total	52	100	98	100	46	100	

9.2.2. Motives to use the Internet for leisure purposes

As far as the motives to use the Internet for leisure purposes is concerned, the answers were coded in six main categories of motive: browsing, communication, entertainment, specific benefits, education/curiosity and other motives (Table 9.2). Appendix C2 provides the more specific answers that made up each of these broad categories of motives. In hierarchical terms, as defined by frequency of response of the main factor, browsing was the most frequent force influencing the use of the Internet for leisure purposes for the three sub-groups, although the percentage of Internet purchasers indicating this reason

(39.1%) was slightly higher than that of non-Internet users (32.7%) and Internet users (33.3%). Browsing refers to *"using a browser to surf the web to read or view web documents"* (Teo, 1998). However, after the first most frequent motive, the hierarchy was different. The second and third most frequent motives why non-Internet users would use the Internet were (2) education/curiosity (23.1%) and (3) entertainment (21.2%). For Internet users these were (2) communication (24.1%) and (3) entertainment (18.5%), while for Internet purchasers (2) communication and (3) other motives, each accounting for 17.4% of the answers, were the second and third most frequent motives to use the Internet for leisure purposes. When assessing whether there was a relationship between the stage in the e-commerce adoption path and the motives to use the Internet for leisure purposes, the Chi-square test revealed a statistically significant difference (χ^2=23.684; p<0.01).

Table 9. 2: Main factor influencing the use of the Internet for leisure purposes (frequencies)

	Non-Internet users (n=52)		Internet users (n=108)		Internet purchasers (n=46)		Chi-Square
	n	%	n	%	n	%	
Browsing	17	32.7	36	33.3	18	39.1	χ^2=23.684 p=0.008
Communication	4	7.7	26	24.1	8	17.4	
Entertainment	11	21.2	20	18.5	4	8.7	
Education/curiosity	12	23.1	9	8.3	2	4.3	
Specific benefits	2	3.8	10	9.3	6	13.0	
Other motives	6	11.5	7	6.5	8	17.4	
Total	52	100	108	100	46	100	

9.2.3. Motives for purchasing leisure travel over the Internet

In order to understand what would motivate the purchasing of leisure travel over the Internet, the respondents were asked to indicate the main reason why they would do it. Two broad types of answers were given (Table 9.3). More than one fifth of the respondents indicated that they would not buy with the remainder indicating a motive. These two types of answers are different since motives are what can trigger the action whereas 'would not purchase' is the action itself (although presumably a consequence of the lack of motives). A Chi-square test was performed in order to understand if there was a significant difference between the three sub-groups of the independent variable. The result shows that the further along the e-commerce adoption path, the less the respondents said

they would not purchase (χ^2=6.819; p<0.05). While nearly one quarter of non-Internet users (23.5%) said they would not buy, only slightly more than 10 percent of Internet users and around 5 percent of Internet purchasers indicated that they would not purchase leisure travel by the means of e-commerce.

Table 9. 3: Direction of answer when asked about the motives to purchase leisure travel over the Internet (frequencies)

	Non-Internet users (n=51)		Internet users (n=75)		Internet purchasers (n=36)		Chi-Square
	n	%	n	%	n	%	
Indicated a factor	39	76.5	67	89.3	34	94.4	χ^2=6.819 p=0.033
Would not purchase	12	23.5	8	10.7	2	5.6	
Total	51	100	75	100	36	100	

The responses which indicated a motive to purchase were coded into six main categories, with the answers not pertaining to any of these categories being coded as 'other' reasons (Table 9.4). In hierarchical terms, as defined by frequency of response of the main factor, the top three factors, in order of descending importance, were, for non-Internet users, time and practicality/convenience (each accounting for 20.5% of the answers) and ease/simplicity (15.4%). In terms of Internet users, time was the most frequent motive (25.4%), followed by practicality/convenience (17.9%) and journey (13.4%). For the Internet purchasers, practicality/convenience was the most important motive (23.5%), while time and product/information were the second, each accounting for 20.6% of the answers. The Chi-Square test was performed but more than 20 percent of the cells had an expected count less than five. Given than one of the assumptions of the test could not be met, the result is not reported. A more detailed analysis of the types of answers given by the respondents when asked to indicate the motives to purchase leisure travel over the Internet is provided in Appendix C3.

Table 9. 4: Factors influencing the purchasing of leisure travel over the Internet (frequencies)

	Non-Internet users (n=39)		Internet users (n=67)		Internet purchasers (n=34)	
	n	%	n	%	n	%
Time	8	20.5	17	25.4	7	20.6
Practical/convenient	8	20.5	12	17.9	8	23.5
Product/information	4	10.3	5	7.5	7	20.6
Ease/simplicity	6	15.4	6	9.0	2	5.9
Price	1	2.6	7	10.4	6	17.6
Journey	3	7.7	9	13.4	1	2.9
Other	9	23.1	11	16.4	3	8.8
Total	39	100	67	100	34	100

9.3. Motives not to use the innovations

Unlike the questions regarding the motive to use the innovations, where the answer was open, the questions pertaining to the factors influencing against their use had a pre-defined set of answers. However, the respondents were given the possibility of writing in other reasons not covered by the provided set. In order to have a more in-depth understanding of the factors influencing against the use of the innovations, respondents were further asked to explain why the most important reason was so important to them.

9.3.1. Motives not to use computers for leisure purposes

The question regarding the factors influencing against the use of computers for leisure purposes was adapted to match the past experience of the respondents. Since the population included respondents who had never used computers, these were asked to indicate the reasons why they have never used computers for leisure purposes. This group (55 of the 98 non-Internet users in the sample) was given five possible reasons: no advantages, no need, no opportunity, no knowledge and would not like to. There was another group who, despite have used computers in the past, had not used computers for leisure purposes the last month. This included 43 of the 98 non-Internet users as well as the Internet users and purchasers. Thus, they were asked the reasons for not being current

users of computers for leisure purposes. Four possible answers were given: no access to computers, no advantages, no need and do not like to.

The results are provided in Table 9.5. In hierarchical terms, the three main factors influencing the lack of previous use of computers for leisure purposes were, in descending order, the lack of knowledge about using computers (41.5%), the lack of need (28.3%) and the lack of opportunity (18.9%) to use computers. None of the non-Internet users who had never used computers said they had not done so because they disliked using computers. As far as the reasons for not using computers the last month is concerned, while no access to computers was the most frequent motive for non-Internet users (26.3%), the lack of need was the most important motive for Internet users (36.4%) and purchasers (100%). Additional important reasons for non-Internet users included the lack of need and not liking to use it (each accounting for 21.1% of the responses), while for Internet users the not liking to use it (33.3%) and the lack of time to use computers (18.2%) were the second and third most frequent reasons. Appendix C4 presents the explanations given by the respondents when asked to explain the choice of the main factor.

Table 9. 5: Main factor influencing against the use of a computer for leisure purposes (frequencies)

	Never used		Why are not current users					
	Non-Internet users (n=53)		Non-Internet users (n=19)		Internet users (n=33)		Internet purchasers (n=2)	
	n	%	n	%	n	%		
No knowledge how to use	***22***	***41.5***	*n/a*		*n/a*		*n/a*	
Lack of need	15	28.3	4	21.1	***12***	***36.4***	***2***	***100***
No access to computers	*n/a*		***5***	***26.3***	1	3.0	0	0.0
No opportunity to use	10	18.9	*n/a*		*n/a*		*n/a*	
No time to use	*n/a*		3	15.8	6	18.2	0	0.0
Would not/do not like to use	0	0.0	4	21.1	11	33.3	0	0.0
No advantages	5	9.4	0	0.0	1	3.0	0	0.0
Other	1	1.9	3	15.8	2	6.1	0	0.0
Total	53	100	19	100	33	100	2	100

Notes: n/a – not applicable

9.3.2. Motives not to use the Internet for leisure purposes

Similarly to using computers for leisure purposes, the question about the factors influencing against the use of the Internet for leisure purposes was sub-divided in two. The

respondents who had never used the Internet (i.e. non-Internet users) were asked to indicate reasons why they have never used the Internet for leisure purposes. They were provided with six possible reasons: no advantages, no need, no opportunity, no knowledge, would not like and no access to computers. The respondents who had used the Internet at least once before (i.e. Internet users and purchasers), but who had not used it for leisure purposes the last month, were asked why they were not current users. Four possible answers were given: no access to computers, no advantages, no need and disliking.

As Table 9.6 indicates, lack of need was the most frequent reason for not being a current user of the Internet for leisure purposes. However, the proportion of Internet users indicating this factor was nearly twice that of non-Internet users (52.5% and 27.7%, respectively). For non-Internet users the second most frequent factor was the lack of access to computers (25.3%) and the third the lack of opportunity to use it. In contrast, the second most frequent reason for Internet users was the lack of time (22.5%) followed by the lack of access to computers (10%). A very low proportion of respondents indicated a dislike or a lack of advantages as the main reason for never having used, and for not being a current user, of the Internet for leisure purposes. The explanations given by the respondents to justify their choice of the most important reason are provided in Appendix C5.

Table 9. 6: Main factor influencing against the use of the Internet for leisure purposes (frequencies)

	Never used		No use last month			
	Non-Internet users (n=83)		Internet users (n=40)		Internet purchasers (n=1)	
	n	%	N	%	n	%
Lack of need	***23***	***27.7***	***21***	***52.5***	***1***	***100***
No access to a computer	21	25.3	4	10.0	0	0.0
No opportunity to use	16	19.3	*n/a*		*n/a*	
No knowledge how to use	12	14.5	*n/a*		*n/a*	
No time to use	*n/a*		9	22.5	0	0.0
Would not/do not like to use	1	1.2	2	5.0	0	0.0
No advantages	3	3.6	1	2.5	0	0.0
Other	7	8.4	3	7.5	0	0.0
Total	83	100	40	100	1	100

Notes: n/a – not applicable

9.3.3. Motives not to purchase leisure travel over the Internet

The respondents who had never purchased leisure travel over the Internet were asked to indicate the reasons for not having done so. They were given a list of possible reasons that could explain why individuals never purchased leisure travel over the Internet. These reasons included structural, psychological and behavioural factors. Within the psychological reasons, three reasons were beliefs (no advantages, no trust and lack of knowledge) and one reason was a feeling (would not like to buy). The structural factors referred to access to computers and the Internet and the behavioural factors to travelling. The seven reasons given to respondents as options were broad reasons and therefore the respondents were asked to explain the factor they ranked as the most important. These answers can be regarded as more specific forces linked to the broad force influencing against the purchasing of leisure travel over the Internet and are shown in Appendix C6.

Table 9.7 provides the frequency of response for the main reason. Two reasons emerged as the most important reasons for each of the sub-groups of the independent variable. Non-Internet users indicated structural reasons, that is no access to computers (28.7%) and to the Internet (26.4%), whereas Internet users and Internet purchasers psychological reasons. For the latter two groups a lack of trust emerged as the main factor influencing against the purchasing of travel components on the Internet (41.1% for Internet users and 34.8% for Internet purchasers). However, while the second most frequent important reason for Internet users was the dislike of purchasing on the Internet (24.2%), for Internet purchasers it was the lack of advantages (21.7%). Access to the technology was not a very frequent reason for Internet users and not a reason at all for Internet purchasers. Chi-square test result is not presented because more than 20 percent of the cells had an expected count less than five.

Table 9. 7: Main factor influencing against the purchasing of leisure travel on the Internet (frequencies)

	Non-Internet users (n=87)		Internet users (n=124)		Internet purchasers (n=23)	
	n	%	n	%	n	%
Do not trust purchasing	9	10.3	51	41.1	8	34.8
Do not like to buy	10	11.5	30	24.2	3	13.0
Do not have Internet	23	26.4	8	6.5	0	0.0
It has not any advantages	12	13.8	11	8.9	5	21.7
Do not have computer	25	28.7	1	0.8	0	0.0
Would not know how to buy	4	4.6	9	7.3	1	4.3
Not travelled	2	2.3	7	5.6	2	8.7
Other	2	2.3	7	5.6	4	17.4
Total	87	100	124	100	23	100

Usually it is not a single reason that explains a behaviour but rather a group of reasons. Table 9.8 presents the mean value based on the respondents ranking the three most important influences by order of importance. The values of 1, 2 and 3 were attributed to the first, second and third most important factors, respectively. If a factor was not selected a value of five was allocated. Thus, the lower the mean, the higher the importance of the factor in influencing against the use of the Internet in the purchasing of leisure travel. As the results show, when considering the three most important factors as ranked by the respondents the order of the factors changes in the case of non-Internet users but not for the Internet users and purchasers. The lack of access to the Internet was the most important reason for the non-Internet users (mean: 3.16), while for the Internet users and purchasers a lack of trust in purchasing (means: 2.34 and 2.53, respectively) remained the most important. The second and third most important reasons for the non-Internet users were a lack of access to computers (mean: 3.65) and a dislike for buying (3.92). A dislike of buying and a lack of advantages were the second and third most important reasons for both the Internet users and the Internet purchasers. Because the mean values were either 5 or very close to 5 (the number given when a motive was not selected), the results lend further support to lack of relevance of the technological reasons (a lack of access to a computer and to the Internet) to the Internet users and purchasers for not having purchased leisure travel over the Internet.

Table 9. 8: Three main factors influencing against the purchasing of leisure travel on the Internet (mean value)

factor	Non-Internet users (n=85)		Internet users (n=117)		Internet purchasers (n=19)	
	Mean	SD	Mean	SD	Mean	SD
It has not any advantages	4.06	1.51	3.84	1.43	3.42	1.80
Do not have computer	3.65	1.86	4.94	0.46	5.00	0.0
Do not have Internet	***3.16***	1.80	4.64	1.09	5.00	0.0
Do not trust purchasing	4.09	1.48	***2.34***	1.58	***2.53***	1.68
Do not like to buy	3.92	1.57	2.83	1.62	3.53	1.68
Would not know how to buy	4.05	1.31	4.30	1.30	4.68	1.00
Not travelled	4.47	1.04	4.42	1.19	3.84	1.61

Notes: SD – Standard Deviation.

In order to understand if there were differences between the three groups in terms of the three most important factors, a series of Kruskal-Wallis tests were conducted. By attributing the value of 1, 2, 3 and 5 to the factors (as explained above), the data is given an order of importance. Bearing in mind that Kruskal-Wallis uses data at the ordinal level, this test is appropriate for the purposes of identifying differences between the sub-groups. As table 9.9 demonstrates, there were statistical differences in five of the seven factors: the null hypothesis was not rejected in relation to the reasons pertaining to the lack of advantages and the lack of travelling. According to the Kruskal-Wallis and the Multiple Comparison Tests, the lack of computers (χ^2=48.502; p<0.001) and the Internet (χ^2=50.968; p<0.001) were more important for the non-Internet users when compared to both the Internet users and purchasers. Conversely, a lack of trust in purchasing was more important for both the Internet users and purchasers than for the non-Internet users (as shown by the lower mean rank). In addition, a dislike of purchasing leisure travel over the Internet (χ^2=20.132; p<0.001) was more important for Internet users than for both non-Internet users and Internet purchasers. Finally, while a lack of knowledge (χ^2=6.011; p<0.05) was not very important for each of the groups, it was more important for non-Internet users than for Internet users and purchasers. However, no differences were found between the latter two.

Table 9. 9: Three main factors influencing against the purchasing of leisure travel on the Internet (Kruskal-Wallis)

	Non-Internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
It has not any advantages	118.45	108.07	95.74	3.248	0.197	ns	ns	ns
Do not have computer	87.88	125.20	127.0	48.502	0.000	+	+	ns
Do not have Internet	82.15	128.44	140.0	50.968	0.000	+	+	ns
Do not trust purchasing	146.80	87.81	93.63	48.714	0.000	+	+	ns
Do not like to buy	132.19	94.33	118.84	20.132	0.000	+	ns	+
Would not know how to buy	101.93	114.45	130.34	6.011	0.050	ns	+	ns
Not travelled	112.82	112.70	92.37	3.255	0.196	ns	ns	ns

Notes: + – denotes significance at the 0.05 level; ns – not significant.

9.4. Involvement

Section 3.4.2 was devoted to the presentation of concept of involvement. It was shown that there have been different approaches to study involvement. Laaksonen (1994) classified these approaches into four categories: the cognitively-based approach, the individual state approach, the response-based approach and the pot-pouri approach. This research adopted the cognitively-based approach, which views involvement as the degree to which the object characteristics are associated to the needs, values and interests of the individual. According to Laaksonen (1994), the degree of involvement is formed by the strength of the linkage between an object and the higher order cognitive elements (values, needs, motives). According to the cognitively-based approach, involvement is seen as a mediating variable between the sources and the consequences. One of the sources of involvement are the motives. A list of possible motives for being involved with using the innovations were shown section 9.2, while section 9.3 reported the motives that are likely to contribute for the individual's lack of involvement with using those innovations. As far as the consequences of involvement is concerned, they can be of two main types: behavioural consequences (such as using the innovation, presented in section 6.3) and the impact on the hierarchy of communication effects.

The aim of this section is to examine the respondents' involvement with using computers for leisure purposes and purchasing leisure travel over the Internet. What is being reported is the level of 'psychological' involvement, that is, the level of personal relevance, rather

than behaviours that may, or may not, reflect the level of personal relevance. A shortened version of the Personal Involvement Inventory (Zaickowsky, 1985) was used to gauge respondents' involvement with using the two innovations. The scale consisted of 8 pairs of words measured on a 7 point semantic differential scale. The value of 1 was attributed to the most negative answer whereas the value of 7 to the higher positive one.

9.4.1. Involvement with using computers for leisure purposes

Table 9.10 contains the mean value for each descriptor and for the eight descriptors when aggregated. The higher the mean, the more positively involved is the individual. In general, respondents were positively involved with using computers for leisure purposes as shown by the mean values above 4. However, some of the mean values, notably from the non-Internet users, are close the middle value of the scale and hence some caution should be taken when interpreting these results. While the means values of the non-Internet users were all below five, in at least half of the items the mean values of the Internet users and purchasers were above 5.

Table 9. 10: Involvement with using computers for leisure purposes (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Worthless – valuable *	74	4.14	1.93	124	4.90	1.55	49	5.35	1.39
Prejudicial – beneficial *	74	4.86	1.78	123	5.21	1.40	48	5.58	1.22
Irrelevant – Relevant *	72	4.15	1.77	126	4.64	1.62	47	4.85	1.76
Undesirable – desirable *	73	4.78	1.63	122	5.19	1.49	48	5.63	1.20
Not appealing – appealing *	75	4.83	1.77	124	5.11	1.66	48	4.96	1.86
Not important – important *	74	3.62	1.97	124	4.50	1.65	48	5.02	1.52
Useless – useful *	73	4.84	1.81	124	5.48	1.46	48	5.81	1.45
Dispensable – essential *	72	3.19	1.76	125	4.34	1.69	48	4.48	1.57
Involvement (composite) *	83	4.26	1.43	128	4.88	1.24	49	5.22	0.98

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

In hierarchical terms, the three most positively evaluated items were, in descending order of the mean value, (1) beneficial, (2) useful and (3) appealing for non-Internet users; (1) useful, (2) beneficial and (3) desirable for Internet users; and (1) useful, (2) desirable and (3) beneficial for Internet purchasers. The extent to which using computers for leisure purposes was dispensable/essential received, on average, the least support from the three sub-groups. In fact, based on the mean value, the non-Internet users regarded using computers for leisure purposes as dispensable. When computing the eight items into an aggregate 'involvement' item, the mean values indicate that the three sub-groups were involved with using computers for leisure purposes. Yet, the mean value of the non-Internet users (4.26) needs to be treated with caution as it is close to 4.

Table 9. 11: Involvement with using computers for leisure purposes (frequencies in percentages)

	Scale							Total	Summary		
	1	2	3	4	5	6	7		neg	mdl	pos
Worthless – valuable											
Non-Internet users	10.8	13.5	10.8	25.7	12.2	9.5	17.6	100	35.1	25.7	39.3
Internet users	3.2	5.6	7.3	21.0	22.6	25.0	15.3	100	16.1	21.0	62.9
Internet purchasers	4.1	-	2.0	16.3	26.5	30.6	20.4	100	6.1	16.3	77.6
Prejudicial – beneficial											
Non-Internet users	8.1	4.1	4.1	25.7	13.5	24.3	20.3	100	16.2	25.7	58.1
Internet users	1.6	4.1	5.7	13.0	29.3	28.5	17.9	100	11.4	13.0	75.6
Internet purchasers	2.1	-	-	16.7	20.8	37.5	22.9	100	2.1	16.7	81.2
Irrelevant – Relevant											
Non-Internet users	11.1	9.7	6.9	31.9	15.3	15.3	9.7	100	27.8	31.9	40.3
Internet users	6.3	4.8	7.9	23.8	27.8	15.1	14.3	100	19.0	23.8	57.1
Internet purchasers	6.4	6.4	6.4	23.4	6.4	36.2	14.9	100	19.1	23.4	57.4
Undesirable – desirable											
Non-Internet users	2.7	8.2	8.2	27.4	11.0	27.4	15.1	100	19.2	27.4	53.5
Internet users	4.9	0.8	4.1	18.0	23.0	31.1	18.0	100	9.8	18.0	72.1
Internet purchasers	2.1	-	-	14.6	20.8	39.6	22.9	100	2.1	14.6	83.3
Not appealing – appealing											
Non-Internet users	4.0	8.0	9.3	24.0	13.3	17.3	24.0	100	21.3	24.0	54.6
Internet users	4.8	4.8	6.5	14.5	16.9	32.3	20.2	100	16.1	14.5	69.4
Internet purchasers	6.3	8.3	6.3	16.7	10.4	29.2	22.9	100	20.8	16.7	62.5
Not important – important											
Non-Internet users	21.6	12.2	9.5	27.0	9.5	9.5	10.8	100	43.2	27.0	29.8
Internet users	8.1	7.3	4.0	25.8	26.6	18.5	9.7	100	19.4	25.8	54.8
Internet purchasers	4.2	4.2	-	25.0	31.3	14.6	20.8	100	8.3	25.0	66.7
Useless – useful											
Non-Internet users	6.8	5.5	6.8	24.7	15.1	16.4	24.7	100	19.2	24.7	56.2
Internet users	2.4	2.4	4.0	14.5	17.7	30.6	28.2	100	8.9	14.5	76.6
Internet purchasers	2.1	4.2	2.1	6.3	10.4	37.5	37.5	100	8.3	6.3	85.4
Dispensable – essential											
Non-Internet users	26.4	13.9	8.3	30.6	9.7	8.3	2.8	100	48.6	30.6	20.8
Internet users	8.0	8.8	8.0	29.6	17.6	17.6	10.4	100	24.8	29.6	45.6
Internet purchasers	8.3	-	12.5	31.3	18.8	20.8	8.3	100	20.8	31.3	47.9

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

An analysis of the frequencies (Table 9.11, above) indicates that the percentage of respondents opting for the positive side of the scale exceeded the percentage opting for the negative side of the scale. However, there were two exceptions. The proportion of non-Internet users who perceived using a computer for leisure purposes as not important (43.2%) and dispensable (48.6%) was greater than that of who perceived it as important (29.8%) and essential (20.8%). With the exception of the how dispensable/essential using computers was, the majority of both the Internet users and purchasers opted for the positive side of the scale. Nonetheless, more that 45 percent of the respondents in these two sub-groups regarded it as essential. In contrast, in only half of the items the majority of the non-Internet users opted for the positive side of the scale.

With the aim to identify differences between the sub-groups, the Kruskal-Wallis test was performed. As the test revealed statistical differences, the Multiple Comparison Test was performed in order to gauge which sub-groups were different. As the results show (Table 9.12), for all but 'prejudicial/beneficial' and 'not appealing/appealing' items the mean ranks differed significantly according to the stage in the e-commerce adoption path. The stage in the e-commerce adoption path was related to the perceived value (χ^2=15.07; $p<0.01$), relevance (χ^2=10.13; $p<0.01$), desirability (χ^2=10.13; $p<0.01$), importance (χ^2=10.13; $p<0.01$), usefulness (χ^2=10.13; $p<0.01$) and dispensability (χ^2=10.13; $p<0.01$) of using computers for leisure purposes. The Multiple Comparison Method indicated that not many differences existed among Internet users and purchasers. The only exception was that the Internet purchasers perceived using computers for leisure purposes as more important than the Internet users (as shown by the higher mean rank). In contrast, the non-Internet users perceived using computers for leisure purposes as less valuable, less important, less useful and more dispensable than the Internet users and purchasers. In addition, Internet purchasers reported that using computers for leisure purposes was more desirable and more relevant when compared to non-Internet users. The Kruskal-Wallis test for the aggregated 'involvement' category revealed a statistical difference between the three sub-groups (χ^2=20.02; $p<0.001$). According to the Multiple Comparison Test, the farther along in the e-commerce adoption path, the greater the level of involvement with using computers for leisure purposes (as shown by the higher mean rank).

Table 9. 12: Involvement with using computers for leisure purposes (Kruskal-Wallis)

	Non-internet users (A)	Internet users (B)	Internet purchasers (C)	χ2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Worthless – valuable	100.04	128.66	148.39	15.07	0.001	+	+	ns
Prejudicial – beneficial	112.06	122.83	140.30	4.87	0.088	ns	ns	ns
Irrelevant – Relevant	107.22	126.71	137.21	6.02	0.049	ns	+	ns
Undesirable – desirable	105.65	123.56	142.91	8.72	0.013	ns	+	ns
Not appealing – appealing	116.96	128.11	124.38	1.19	0.552	ns	ns	ns
Not important – important	96.11	129.61	149.94	19.20	0.000	+	+	+
Useless – useful	102.90	126.40	144.80	11.31	0.004	+	+	ns
Dispensable – essential	91.06	134.96	139.75	21.72	0.000	+	+	ns
Involvement (composite)	102.18	138.03	158.81	20.02	0.000	+	+	+

Notes: * – 7 point semantic differential scale. + – denotes significance at the 0.05 level; ns – not significant.

9.4.2. Involvement with purchasing leisure travel over the Internet

A different pattern to that of using computers for leisure purposes emerged for the involvement with purchasing leisure travel over the Internet. For the non-Internet users and the Internet users, the majority of items were very below the threshold value of 4, although in some cases very close to it (Table 9.13). In contrast, with one exception (dispensable/essential), the mean value of the Internet purchasers was above 4, but only in one case above 5 (useless/useful). In hierarchical terms, the three most positively evaluated items, in descending order of the mean value, were (1) beneficial, (2) useful and (3) appealing for the non-Internet users; (1) useful, (2) beneficial and (3) desirable for the Internet users; and (1) useful, (2) desirable and (3) beneficial for the Internet purchasers. Similar to using computers for leisure purposes, the lowest mean value was, for each of the three sub-groups, how dispensable/essential purchasing leisure travel was. The mean values of the computed 'involvement' category suggests that the non-Internet users (mean: 3.48) were not involved with purchasing leisure travel over the Internet. In contrast, the Internet purchasers were involved with using this innovation (mean: 4.55). The mean of the Internet users is close to the threshold value of 4 (mean 3.77) and hence based on the mean it cannot be concluded with certainty that they were not involved.

Table 9. 13: Involvement with purchasing leisure travel over the Internet (mean values)

	Non-internet users			Internet users			Internet purchasers		
	N	Mean value	SD	N	Mean value	SD	N	Mean value	SD
Purchasing leisure travel over the Internet									
Worthless – valuable *	69	3.07	1.81	124	3.48	1.77	46	4.30	1.70
Prejudicial – beneficial *	66	4.11	1.67	124	4.08	1.50	46	4.89	1.16
Irrelevant – Relevant *	64	3.47	1.75	122	3.79	1.72	46	4.52	1.74
Undesirable – desirable *	68	4.01	1.63	125	4.02	1.65	46	4.74	1.36
Not appealing – appealing *	67	3.91	1.95	122	3.86	1.82	47	4.85	1.59
Not important – important *	69	3.06	1.63	123	3.71	1.57	46	4.15	1.75
Useless – useful *	66	4.42	1.87	124	4.46	1.57	47	5.13	1.60
Dispensable – essential *	68	3.21	1.85	125	3.38	1.56	46	3.72	1.57
Involvement (composite) *	76	3.48	1.48	128	3.77	1.38	47	4.55	1.20

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 9.14) demonstrates that the non-Internet users and Internet purchasers perceived purchasing leisure travel over the Internet as worthless, irrelevant, not important and dispensable (the proportion of negative answers was higher than the proportion of the positive answers). In contrast, they perceived it as beneficial, desirable, appealing and useful since the proportion opting for the positive side of the scale exceeded that of opting for the negative side. As far as the Internet purchasers is concerned, purchasing leisure travel over the Internet was perceived as valuable, beneficial, relevant, desirable, appealing, important and useful. However, 37 percent regarded it as dispensable when compared to 30.4 percent who said it was essential. In terms of the distribution of the answers across the scale, it can be observed that the positive answers of the non-Internet users and the Internet users were concentrated around the least positive point of the scale, while the answers of the Internet purchasers around the middle point of the positive side of the scale. Those who opted for the negative side of the scale usually opted for the two most negative points.

Table 9. 14: Involvement with purchasing leisure travel over the Internet (frequencies in percentages)

	Scale							Total	Summary		
	1	2	3	4	5	6	7		neg	mdl	pos
Worthless – valuable											
Non-Internet users	29.0	15.9	10.1	23.2	11.6	5.8	4.3	100	55.0	23.2	21.7
Internet users	22.6	8.1	12.1	32.3	11.3	8.9	4.8	100	42.8	32.3	25.0
Internet purchasers	10.9	4.3	13.0	21.7	19.6	26.1	4.3	100	28.2	21.7	50.0
Prejudicial – beneficial											
Non-Internet users	13.6	3.0	6.1	40.9	16.7	12.1	7.6	100	22.7	40.9	36.4
Internet users	6.5	8.9	11.3	41.9	12.9	12.1	6.5	100	26.7	41.9	31.5
Internet purchasers	0.0	2.2	6.5	34.8	17.4	34.8	4.3	100	8.7	34.8	56.5
Irrelevant – Relevant											
Non-Internet users	20.3	12.5	12.5	25.0	17.2	9.4	3.1	100	45.3	25.0	29.7
Internet users	13.1	13.1	13.1	25.4	18.9	10.7	5.7	100	39.3	25.4	35.3
Internet purchasers	6.5	13.0	0.0	28.3	17.4	23.9	10.9	100	19.5	28.3	52.2
Undesirable – desirable											
Non-Internet users	11.8	7.4	8.8	36.8	14.7	16.2	4.4	100	28.0	36.8	35.3
Internet users	10.4	9.6	9.6	34.4	16.0	13.6	6.4	100	29.6	34.4	36.0
Internet purchasers	4.3	4.3	0.0	32.6	26.1	28.3	4.3	100	8.6	32.6	58.7
Not appealing – appealing											
Non-Internet users	16.4	13.4	7.5	23.9	13.4	14.9	10.4	100	37.3	23.9	38.7
Internet users	13.9	14.8	8.2	25.4	17.2	13.1	7.4	100	36.9	25.4	37.7
Internet purchasers	4.3	6.4	2.1	29.8	17.0	25.5	14.9	100	12.8	29.8	57.4
Not important – important											
Non-Internet users	24.6	15.9	14.5	27.5	13.0	0.0	4.3	100	55.0	27.5	17.3
Internet users	13.8	11.4	6.5	40.7	17.1	7.3	3.3	100	31.7	40.7	27.7
Internet purchasers	13.0	8.7	2.2	32.6	19.6	17.4	6.5	100	23.9	32.6	43.5
Useless – useful											
Non-Internet users	12.1	3.0	12.1	24.2	16.7	15.2	16.7	100	27.2	24.2	48.6
Internet users	5.6	6.5	7.3	36.3	16.1	17.7	10.5	100	19.4	36.3	44.3
Internet purchasers	4.3	4.3	4.3	19.1	17.0	31.9	19.1	100	12.9	19.1	68.0
Dispensable – essential											
Non-Internet users	25.0	19.1	5.9	29.4	8.8	4.4	7.4	100	50.0	29.4	20.6
Internet users	17.6	13.6	10.4	40.8	11.2	2.4	4.0	100	41.6	40.8	17.6
Internet purchasers	8.7	19.6	8.7	32.6	19.6	6.5	4.3	100	37.0	32.6	30.4

Notes: Neg – percentage of answers on the negative side of the scale (1+ 2 + 3); Mdl – percentage of answers on the middle point of the scale (4); Pos – percentage of answers on the positive side of the scale (5 + 6 + 7).

Similar to using computers for leisure purposes, the Kruskal-Wallis and the Multiple Comparison Tests were performed in order to identify differences between the sub-groups. With the exception of 'dispensable/essential' (χ^2=3.41; p>0.05), the mean ranks for each of the descriptors were different across the three sub-groups of the independent variable (Table 9.15). The Internet purchasers perceived purchasing leisure travel over the Internet as more valuable (χ^2=13.28; p<0.01), beneficial (χ^2=10.97; p<0.01), relevant (χ^2=10.13; p<0.01), desirable (χ^2=8.84; p<0.05), appealing (χ^2=10.38; p<0.01) and useful (χ^2=7.27;

p<0.05) than both non-Internet users and Internet users as demonstrated by the higher mean rank. However, no differences were found in these items between non-Internet users and Internet users. As to how important purchasing leisure travel over the Internet was, non-Internet users perceived it as less important than Internet users and purchasers but no differences emerged between the latter (χ^2=14.30; p<0.01). There was also a statistical difference in terms of the aggregated 'involvement' category (χ^2=18.15; p<0.001), with the Internet purchasers being more involved than the non-Internet users and Internet users. Yet, no differences were found between the two sub-groups who had never purchased over the Internet.

Table 9. 15: Involvement with purchasing leisure travel over the Internet (Kruskal-Wallis)

	Non-internet users (A)	Internet users (B)	Internet purchasers (C)	χ^2	Sig.	Multiple comparison		
	Mean rank	Mean rank	Mean rank			A/B	A/C	B/C
Worthless – valuable	103.46	118.04	150.11	13.28	0.001	ns	+	+
Prejudicial – beneficial	114.76	109.93	146.97	10.97	0.004	ns	+	+
Irrelevant – Relevant	102.64	113.97	142.50	10.13	0.006	ns	+	+
Undesirable – desirable	113.68	113.70	146.48	8.84	0.012	ns	+	+
Not appealing – appealing	112.88	110.72	146.70	10.38	0.006	ns	+	+
Not important – important	96.40	123.75	142.78	14.30	0.001	+	+	ns
Useless – useful	114.03	112.70	142.61	7.27	0.026	ns	+	+
Dispensable – essential	111.11	119.42	134.71	3.41	0.181	ns	ns	ns
Involvement (composite)	108.36	122.30	164.62	18.15	0.000	ns	+	+

Notes: * – 7 point semantic differential scale. + – denotes significance at the 0.05 level; ns – not significant.

A comparison of the mean values presented in the Tables 9.10 and 9.13 also suggest that the respondents were more involved with using computers for leisure purposes than purchasing leisure travel over the Internet. For example, the differences in the mean value for the composite involvement item are 0.78, 1.11 and 0.67 points for non-Internet users, Internet users and Internet purchasers, respectively.

In summary, the results demonstrate that both the Internet users and purchasers were involved with using computers for leisure purposes, while the non-Internet users were little or no involved. The hypothesis testing showed that the further along the e-commerce adoption path, the greater the level of involvement with using computers for leisure purposes. A different pattern emerged for purchasing leisure travel over the Internet. Not only did the non-Internet users and the Internet users tend not to be involved, in general

they did not display different levels of involvement. The exception was how important purchasing leisure travel over the Internet was, with the Internet users attaching more importance than the non-Internet users. In contrast, the Internet purchasers tended to be involved and at a significantly higher level than the remaining two sub-groups.

9.5. Summary

This chapter has examined the motives associated with using computers and the Internet for leisure purposes and with purchasing leisure travel over the Internet, as well as the involvement with using computers for leisure purposes and purchasing leisure travel over the Internet.

This chapter started by exploring the motives to use the three innovations contained in the conceptual framework. For those who had never purchased on the Internet (i.e. non-Internet users and Internet users), entertainment was the most important reason for using computers for leisure purposes, whereas for Internet purchasers it was the Internet. In addition, a higher proportion of the Internet users and purchasers mentioned the Internet as a motive when compared to the non-Internet users, with the reverse taking place in terms of information motives. In terms of using the Internet for leisure purposes, browsing was the main motive for each of the three sub-groups. However, while communication was the second most frequent motive for both the Internet users and purchasers, for the non-Internet users it was education. When asked about the motives to purchase leisure travel over the Internet, several respondents said they would not do it. Further tests showed that these answers were given mainly by the non-Internet users. As far as the motives to use the Internet in the purchasing of leisure travel is concerned, time and practicality/convenience were the most frequent motives for each of the three groups.

Next, the chapter described the factors influencing against the use each of the three innovations. For the non-Internet users the main reason influencing against the use of the computers for leisure purposes was the lack of knowledge on how to use them, whereas the Internet users mainly indicated the lack of access to computers and the Internet purchasers a dislike about using computers. In terms of the reasons for not using the Internet, the lack of need was the main reason for each of the three groups. Technological

issues, notably a lack of access to the Internet, were the most important reason for the non-Internet users never having purchased leisure travel over the Internet. Conversely, psychological reasons, notably a lack of trust, were the most frequent reasons for the Internet users and purchasers.

The last section of the chapter was devoted to the examination of the involvement with using computers for leisure purposes and with the purchasing of leisure travel over the Internet. The results suggest that the non-Internet users were less involved with using computers for leisure purposes than the Internet users and the Internet purchasers. They perceived using computers for leisure purposes as less valuable, less important, less useful and less essential than the Internet users and purchasers. Additionally, they also perceived it as less relevant and less desirable than the Internet purchasers. Internet users only differentiated from Internet purchasers in terms of how important using a computer for leisure purposes was, with the first perceiving it as less important than the latter. However, when aggregating the eight items measuring involvement, the results have shown that the farther along in the e-commerce adoption path, the greater the involvement with using computers for leisure purposes. As far as the involvement with purchasing leisure travel over the Internet is concerned, the Internet purchasers were more involved than Internet users and non-Internet users. However, no differences were found between the Internet users and the non-Internet users, except on the level of importance attached to purchasing leisure travel on the Internet, where the first perceived it as more important than the latter.

10. The Internet purchasers

10.1. Introduction

The previous four chapters have presented data in relation to the three stages in the e-commerce path. One such stage – the Internet purchasers – comprised individuals who had purchased travel over the Internet before as well as individuals who, having purchased a product/service over the Internet before, had not done so in relation to travel. An analysis of the frequencies suggested that this group was not homogeneous, notably regarding the adoption of purchasing of leisure travel over the Internet. As a consequence, this chapter seeks to understand the factors influencing the adoption of e-commerce in the purchasing of leisure travel once the individual has reached the last stage of the e-commerce adoption path. The respondents who had not purchased leisure travel are named 'e-travel non-adopters', while those who had purchased travel 'e-travel adopters'.

Statistical analysis was undertaken is relation to the adoption of computers and the Internet. The results showed that there were no statistical differences between the e-travel adopters and the e-travel non-adopters, which indicates that the Internet purchasers' use of e-commerce in the purchasing of leisure is not related to the adoption of these two technologies. In contrast, many statistical differences emerged in relation to the adoption of purchasing leisure travel over the Internet in relation to travel consumption and purchasing patterns. Due to a detailed description of data related to the adoption of computers and the Internet adding little of value, only data regarding travel behaviour and the adoption of purchasing leisure travel over the Internet is presented in this chapter.

The analysis will be based on 49 respondents: 23 e-travel non-adopters and 26 e-travel adopters. Due to the small number of questionnaires in each sub-group, it was not possible to perform Chi-Square on some variables as one of the assumptions of the test was not met (no more than 20 percent of cells with expected frequency less than 5). When this was the case, only the frequencies are presented and a subjective interpretation is undertaken.

The analysis of the results will be similar to earlier chapters. Two statistical procedures will be presented: descriptives and hypothesis testing. The descriptives include the mean, the standard deviation and the frequencies (both in number and percentages). The Chi-Square

and the Mann-Whitney tests are used for hypothesis testing. As in previous chapters, the analysis begins with a description of the data, first in terms of the means and then in terms of the frequencies, and then moves on to reporting the hypothesis testing. The data concerning each of these analyses is reported in separate tables, other than in respect of the variables requiring the use of the Chi-Square, where both descriptives and hypothesis testing are shown in the same table.

This chapter begins by analysing the data regarding the adoption of purchasing leisure travel over the Internet. More specifically, the respondents' attitude (Section 10.2), involvement (Section 10.3) and preferred payment means (Section 10.4) are examined. Next, the travel purchasing and consumption patterns of the e-travel adopters and non adopters are examined (Section 10.5). The last section provides a summary of the chapter.

10.2. Attitude towards purchasing leisure travel over the Internet

As explained in Section 5.4.7, this research used the multi-component model of attitude. This model postulates that attitude consists of cognitive, affective and conative elements. The cognitive element was covered by perceived innovations attributes, the affective component by pairs of affective feelings and the conative component by intention to use.

10.2.1. Perceived innovation characteristics

The research included six attributes of purchasing leisure travel over the Internet: relative advantage, complexity, visibility, compatibility, perceived risk and image. The data regarding each of these attributes is examined in this section. The higher the mean, the more positive the perception is, except for perceived risk where the higher the mean the higher the perceived risk.

10.2.1.1. Relative advantage

As far as relative advantage is concerned, the mean values (Table 10.1) indicate that in general both groups perceived purchasing leisure travel over the Internet as encompassing benefits. However, while the e-travel adopters recognised the four benefits included in the scale, the e-travel non-adopters did not support the statement that purchasing leisure travel over the Internet is a way to purchase with more quality (mean: 2.48). The results also indicate that the two more tangible benefits received greater support (mean values above four) than the two more intangible ones (mean values below four).

Table 10. 1: Relative advantage associated with purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
A way to by faster*	21	4.08	0.97	26	4.58	0.50
A way to buy with less effort*	21	4.05	0.92	26	4.31	0.74
A way to purchase with more quality*	21	2.48	0.93	26	3.15	0.92
A way to improve quality of life*	21	2.95	1.02	26	3.69	0.97
Relative advantage attribute (composite)	21	3.38	0.77	26	3.93	0.58

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

As Table 10.2 demonstrates, more than 80 percent of the respondents in both sub-groups agreed that purchasing leisure travel over the Internet was a way to buy faster and with less effort. Moreover, all the e-travel adopters recognised that purchasing leisure travel over the Internet was a way to buy faster, with the majority strongly agreeing with the statement.

Table 10. 2: Relative advantage associated with purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
A way to by faster								
e-travel non-adopters	4.8	0.0	14.3	47.6	33.3	4.8	14.3	80.9
e-travel adopters	0.0	0.0	0.0	42.3	57.7	0.0	0.0	100
A way to buy with less effort								
e-travel non-adopters	4.8	0.0	9.5	57.1	28.6	4.8	9.5	85.7
e-travel adopters	0.0	3.8	3.8	50.0	42.3	3.8	3.8	92.3
A way to purchase with more quality								
e-travel non-adopters	19.0	23.8	47.6	9.5	0.0	42.8	47.6	9.5
e-travel adopters	3.8	15.4	50.0	23.1	7.7	19.2	50.0	30.8
A way to improve quality of life								
e-travel non-adopters	9.5	23.8	28.6	38.1	0.0	33.3	28.6	38.1
e-travel adopters	3.8	3.8	30.8	42.3	19.2	7.6	30.8	61.5

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

With the exception of the item related to the saving of effort (U=228.0; Z=-1.075; p>0.05) the e-travel adopters perceived greater benefits than the e-travel non-adopters (Table 10.3). More specifically, they agreed more that purchasing leisure travel over the Internet was a way to buy faster (U=184.5; Z=-2.106; p<0.05), a way to purchase with more quality (U=174.0; Z=-2.271; p<0.05) and a way to improve their quality of life (U=168.5; Z=-2.351; p<0.05). Not surprisingly, when the four items were computed into a relative advantage attribute there was also a statistical difference (U=145.5; Z=-2.752; p<0.05).

Table 10. 3: Relative advantage associated with purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
A way to by faster	19.79	27.40	184.5	-2.106	0.035
A way to buy with less effort	21.86	25.73	228.0	-1.075	0.282
A way to purchase with more quality	19.29	27.81	174.0	-2.271	0.023
A way to improve quality of life	19.02	28.02	168.5	-2.351	0.019
Relative advantage attribute (composite)	17.93	28.90	145.5	-2.752	0.006

10.2.1.2. Complexity

Both the e-travel adopters and non-adopters perceived purchasing leisure travel over the Internet as simple and easy to learn (Table 10.4). However, while the mean values of the e-travel non-adopters were closer to five, the mean values of the e-travel adopters were closer to six. The results also demonstrate that from the four statements measuring complexity, the extent to which purchasing leisure travel over the Internet was perceived as easy to learn received the greatest support while how simple it was to do received the least support.

Table 10. 4: Complexity associated with purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Complex – simple*	20	4.90	1.48	26	5.46	1.42
Hard – easy to use*	20	5.20	1.44	26	5.85	1.19
Hard – easy to learn*	20	5.40	1.23	26	6.12	0.86
Hard – easy to learn by myself*	20	5.05	1.61	26	5.77	1.18
Complexity attribute (composite)	20	5.14	1.23	26	5.80	0.97

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

The data provided in Table 10.5 shows that the proportion of respondents opting for the negative side of the scale was small in both sub-groups, not exceeding 10 percent. However, an analysis of the frequencies in the middle and positive side of the scale suggests a differentiated pattern of responses. Not only was the proportion of e-travel adopters opting for the positive side of the scale greater, but they tended to answer closer to the positive end side of the scale.

Table 10. 5: Complexity associated with purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Complex – simple										
e-travel non-adopters	5.0	0.0	5.0	35.0	10.0	35.0	10.0	10.0	35.0	55.0
e-travel adopters	0.0	3.8	3.8	23.1	7.7	34.6	26.9	7.6	23.1	69.2
Hard – easy to use										
e-travel non-adopters	0.0	5.0	0.0	35.0	15.0	20.0	25.0	5.0	35.0	60.0
e-travel adopters	0.0	3.8	0.0	7.7	15.4	42.3	30.8	3.8	7.7	88.5
Hard – easy to learn										
e-travel non-adopters	0.0	0.0	0.0	35.0	15.0	25.0	25.0	0.0	35.0	65.0
e-travel adopters	0.0	0.0	0.0	7.7	7.7	50.0	34.6	0.0	7.7	92.3
Hard – easy to learn by myself*										
e-travel non-adopters	5.0	0.0	5.0	30.0	20.0	15.0	25.0	10.0	30.0	60.0
e-travel adopters	0.0	0.0	7.7	7.7	11.5	46.2	26.9	7.7	7.7	84.6

Notes: Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The Mann-Whitney test (Table 10.6) indicates that the e-travel adopters and non-adopters did not differentiate regarding how complex/simple (U=201.0; Z=-1.357; p>0.05), how hard/easy to use (U=189.5; Z=-1.618; p>0.05) and how hard/easy to learn by themselves (U=192.5; Z=-1.544; p>0.05) purchasing leisure travel over the Internet was. In contrast, despite both groups regarding purchasing leisure travel over the Internet as easy to learn (as shown in Table 10.5), the e-travel adopters perceived more frequently than e-travel non-adopters that purchasing leisure travel over the Internet was easy to learn (U=176.0; Z=-1.958; p<0.05). The results also show no differences in respect of the computed complexity attribute (U=174.50; Z=-1.905; p>0.05). However, the result was very close to achieving statistical significance (p=0.057).

Table 10. 6: Complexity associated with purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Complex – simple	20.55	25.77	201.0	-1.357	0.175
Hard – easy to use	19.98	26.21	189.5	-1.618	0.106
Hard – easy to learn	19.30	26.73	176.0	-1.958	0.048
Hard – easy to learn by myself	20.13	26.10	192.5	-1.544	0.123
Complexity attribute (composite)	19.23	26.79	174.50	-1.905	0.057

10.2.1.3. Visibility

As the mean values suggest (Table 10.7), the statement regarding verbal visibility received greater agreement from both sub-groups when compared to the statement regarding sight visibility. Purchasing leisure travel over the Internet appears to encompass little sight visibility from both sub-groups.

Table 10. 7: Visibility of purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Saw others buying travel over the Internet	21	2.10	0.94	26	2.38	1.27
Talked with other people about buying travel over the Internet	21	3.00	1.26	26	3.88	0.71
Visibility attribute (composite)	21	2.55	0.93	26	3.13	0.78

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

The results indicate that the more than half of the respondents in both sub-groups had not seen others purchasing leisure travel over the Internet (Table 10.8). In contrast, the majority of the respondents in both sub-groups had talked about it. However, while more than 8 out of ten of the e-travel adopters agreed that they had done so, more than one third of the e-travel non-adopters disagreed that they had talked with other people about buying leisure travel over the Internet.

Table 10. 8: Visibility of purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Saw others buying travel over the Internet								
e-travel non-adopters	33.3	28.6	33.3	4.8	0.0	61.9	33.3	4.8
e-travel adopters	34.6	19.2	23.1	19.2	3.8	53.8	23.1	23.0
Talked with other people about buying travel over the Internet								
e-travel non-adopters	19.0	19.0	4.8	57.1	0.0	38.0	4.8	57.1
e-travel adopters	0.0	7.7	7.7	73.1	11.5	7.7	7.7	84.6

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The Mann-Whitney test (Table 10.9) indicates that no statistical difference appears to exist regarding sight visibility (U=242.0; Z=-0.690; p>0.05) but that the difference regarding verbal visibility was statistically significant (U=169; Z=-1.992; p<0.05). The mean rank values indicate that the e-travel adopters agreed more than the non-adopters that they had talked with other people about buying travel over the Internet.

Table 10. 9: Visibility of purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Saw others buying travel over the Internet	22.52	25.19	242.0	-0.690	0.490
Talked with other people about buying travel over the Internet	19.05	28.00	169.0	-2.641	0.008
Visibility attribute (composite)	19.64	27.52	181.5	-1.992	0.046

10.2.1.4. Compatibility

The mean values suggest that purchasing leisure over the Internet was regarded by both groups as easy to fit into their daily routine and as receiving approval by friends (Table 10.10). The mean values were between four and five with the exception of the fit into daily routine by e-travel adopters, which was above five (mean: 5.62).

Table 10. 10: Compatibility of purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Hard – easy to fit into daily routine	20	4.50	1.93	26	5.62	1.24
Not approved – approved by friends	20	4.45	1.28	26	4.77	1.11
Compatibility attribute (composite)	20	4.47	1.28	26	5.19	1.00

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 10.11) demonstrates that for the vast majority of the e-travel adopters purchasing leisure travel over the Internet would be easy to fit into their daily routine, while the majority of the e-travel non-adopters indicated that it would be either hard (20.0%) or neither hard nor easy (35%). As far as approval by friends, while

purchasing leisure travel over the Internet would not be disapproved of by friends, the majority of the answers of both sub-groups were at the middle point of the scale.

Table 10. 11: Compatibility of purchasing leisure travel over the Internet (mean values)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Hard – easy to fit into daily routine										
e-travel non-adopters	15.0	0.0	5.0	35.0	5.0	25.0	15.0	20.0	35.0	45.0
e-travel adopters	0.0	0.0	11.5	7.7	7.7	53.8	19.2	11.5	7.7	80.7
Not approved – approved by friends										
e-travel non-adopters	5.0	0.0	0.0	65.0	5.0	20.0	5.0	5.0	65.0	30.0
e-travel adopters	0.0	0.0	3.8	53.8	11.5	23.1	7.7	3.8	53.8	42.3

Notes: Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The Mann-Whitney test (Table 10.12) showed that there were no statistical differences regarding fit into daily routine (U=176.0; Z=-1.945; p>0.05) nor regarding approval by friends (U=229.5; Z=-0.762; p>0.05). The differences regarding the composite compatibility were also not statistically significant (U=178.0; Z=-1.855; p>0.05). However, it should be noted that both the item related to the fit into daily routine and the composite compatibility attribute were close to the threshold value of 0.05 (p of 0.052 and 0.064, respectively).

Table 10. 12: Compatibility of purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Hard – easy to fit into daily routine	19.30	26.73	176.0	-1.945	0.052
Not approved – approved by friends	21.98	24.67	229.5	-0.762	0.446
Compatibility attribute (composite)	19.40	26.55	178.0	-1.855	0.064

10.2.1.5. Perceived Risk

The mean values (Table 10.13) suggest that the e-travel adopters did not perceive purchasing leisure travel over the Internet as risky. As far as the e-travel non-adopters, the

mean values are close to the threshold value of three and hence a clear pattern cannot be ascertained.

Table 10. 13: Perceived risk of purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
The probability of not doing the best deal is high*	21	3.24	0.83	26	2.46	0.58
When buying travel over the Internet can lose money*	21	3.05	0.97	26	2.54	0.86
Perceived risk attribute (composite)	21	3.14	0.59	26	2.50	0.60

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

The proportion of the e-travel adopters agreeing with the two risk statements was low or non-existent (Table 10.14). In contrast, nearly 30 percent of the e-travel non-adopters agreed that when purchasing leisure travel over the Internet the probability of not doing the best deal was high and that they could lose money. The results also indicate that a large proportion of the respondents in both groups opted for the middle point of the scale, which suggests that they were not certain about the risks of purchasing leisure travel over the Internet.

Table 10. 14: Perceived risk of purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	**D**	**U**	**A**	**SA**	**neg**	**mdl**	**pos**
The probability of not doing the best deal is high								
e-travel non-adopters	0.0	14.3	57.1	19.0	9.5	14.3	57.1	28.5
e-travel adopters	3.8	46.2	50.0	0.0	0.0	50.0	50.0	0.0
When buying travel over the Internet can lose money								
e-travel non-adopters	9.5	9.5	52.4	23.8	4.8	19.0	52.4	28.6
e-travel adopters	7.7	42.3	42.3	3.8	3.8	50.0	42.3	7.6

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The results of the hypothesis testing (Table 10.15) show that the e-travel adopters attached a lower level of risk to purchasing leisure travel over the Internet than the non-adopters (as shown by the lower mean rank). More specifically, they perceived lower risk regarding the probability of not doing the best deal ($U=135.0$; $Z=-3.268$; $p<0.05$) and the possibility of

losing money (U=177.5; Z=-2.186; p<0.05). A statistical difference was also found for the computed perceived risk attribute (U=127.5; Z=-3.308; p<0.05).

Table 10. 15: Perceived risk of purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
The probability of not doing the best deal is high*	30.57	18.69	135.0	-3.268	0.001
When buying travel over the Internet can lose money*	28.55	20.33	177.5	-2.186	0.029
Perceived risk attribute (composite)	18.40	30.93	127.5	-3.308	0.001

10.2.1.6. Image

The means values (Table 10.16) indicate that the statements regarding image associated with purchasing leisure travel over the Internet received little support from both sub-groups. In fact, only in one case did the mean values exceeded two. The results also show that in general the mean values of both sub-groups were very similar.

Table 10. 16: Image resulting from purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Opportunity to increase prestige among friends*	21	1.62	0.80	26	1.69	0.88
A symbol of status*	21	1.67	0.91	26	1.58	0.90
A mean to build a positive self image*	21	1.76	1.00	26	2.04	1.25
Compatible with image that want to convey to others*	21	1.90	1.14	26	1.92	1.16
Image attribute (composite)	21	1.73	0.85	26	1.81	0.95

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

An analysis of the frequencies (Table 10.17) demonstrates that the vast majority of the respondents in each sub-group did not agree that purchasing leisure travel over the Internet would bring image benefits. Moreover, the disagreement answers tended to be concentrated closer to the negative end-side of the scale, with more than half of the answers at the strongly disagree level.

Table 10. 17: Image resulting from purchasing leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	D	U	A	SA	neg	mdl	pos
Opportunity to increase prestige among friends								
e-travel non-adopters	57.1	23.8	19.0	0.0	0.0	80.9	19.0	0.0
e-travel adopters	53.8	26.9	15.4	3.8	0.0	80.7	15.4	3.8
A symbol of status								
e-travel non-adopters	57.1	23.8	14.3	4.8	0.0	80.9	14.3	4.8
e-travel adopters	61.5	26.9	3.8	7.7	0.0	88.4	3.8	7.7
A mean to build a positive self image								
e-travel non-adopters	52.4	28.6	9.5	9.5	0.0	81.0	9.5	9.5
e-travel adopters	50.0	19.2	7.7	23.1	0.0	69.2	7.7	23.1
Compatible with image that want to convey to others								
e-travel non-adopters	47.6	28.6	14.3	4.8	4.8	76.2	14.3	9.6
e-travel adopters	53.8	15.4	15.4	15.4	0.0	69.2	15.4	15.4

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The Mann-Whitney results, shown in Table 10.18, indicate that the e-travel adopters were no more likely to agree that purchasing leisure travel over the Internet was an opportunity to increase prestige among friends ($U=263.5$; $Z=-0.226$; $p>0.05$), symbol of status ($U=257.0$; $Z=-0.390$; $p>0.05$), a means to build a positive self image ($U=248.5$; $Z=-0.569$; $p>0.05$) and that it was compatible with the image that they want to convey to others ($U=270.0$; $Z=-0.070$; $p>0.05$) than the e-travel non-adopters. Similarly, no differences were found regarding the computed image attribute ($U=266.0$; $Z=-0.160$; $p>0.05$)

Table 10. 18: Image resulting from purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Opportunity to increase prestige among friends*	23.55	24.37	263.5	-0.226	0.821
A symbol of status*	24.76	23.38	257.0	-0.390	0.697
A mean to build a positive self image*	22.83	24.94	248.5	-0.569	0.569
Compatible with image that want to convey to others*	24.14	23.88	270.0	-0.070	0.945
Image attribute (composite)	23.67	24.27	266.0	-0.160	0.873

10.2.2. Affective feelings

As Table 10.19 demonstrates, the e-travel adopters had positive feelings towards purchasing leisure travel over the Internet. In general, their mean values were below but close to five. The majority of the mean values of the e-travel non-adopters are positive but close the middle value of the scale and hence a clear pattern cannot be ascertained. However, two of the affective feelings were below the threshold of four: stressed and insecure. The results also show that the affective feeling of security received the highest mean value of the e-travel adopters (mean: 5.08), while receiving the lowest support from the e-travel non-adopters (mean: 3.30). The mean value of the composite affective feeling was nearly five for the e-travel adopters (mean: 4.87) and very close to four for the e-travel non-adopters (mean: 4.01)

Table 10. 19: Affective feelings regarding purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Bored – enjoyed *	20	4.50	0.89	26	4.81	1.10
Stressed – relaxed *	20	3.80	1.44	26	4.81	1.17
Not stimulated – stimulated *	20	4.25	1.12	26	4.88	1.14
Insecure – confident *	20	3.30	1.34	26	5.08	1.38
Not excited – excited *	20	4.05	1.47	26	4.88	1.03
Not entertained – entertained *	20	4.05	1.47	26	4.96	1.15
Unhappy – happy *	20	4.10	0.79	26	4.73	0.92
Frustrated – fulfilled *	20	4.05	0.94	26	4.77	0.86
Affection (composite)	20	4.01	0.94	26	4.87	0.92

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

Table 10.20 enables a more detailed analysis of the patterns of response. As the results indicate, the e-travel adopters had positive feelings towards purchasing leisure travel over the Internet as the proportion of respondents opting for the positive side of the scale exceeded the proportion opting for the negative side. The affective feeling of security received the greatest support by the e-travel adopters, with nearly 70 percent saying they would feel confident. Moreover, the proportion of the e-travel adopters opting for the negative side of the scale was small, not exceeding 12 percent and no respondents answered at the most negative point of the scale. In contrast, the e-travel non adopters had negative feelings regarding security and stress. In fact, only 10 percent of the non-adopters

of e-travel indicated that they would feel confident, with nearly half saying that they would feel insecure when purchasing leisure travel over the Internet. The results also indicate that a large proportion of the e-travel non adopters (usually more than half) opted for the middle point of the scale (e.g. happiness and fulfilment).

Table 10. 20: Affective feelings regarding purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Bored – enjoyed										
e-travel non-adopters	0.0	0.0	5.0	60.0	15.0	20.0	0.0	5.0	60.0	35.0
e-travel adopters	0.0	0.0	3.8	50.0	15.4	23.1	7.7	3.8	50.0	46.2
Stressed – relaxed										
e-travel non-adopters	10.0	5.0	20.0	40.0	10.0	15.0	0.0	35.0	40.0	25.0
e-travel adopters	0.0	3.8	3.8	34.6	30.8	19.2	7.7	7.6	34.6	57.7
Not stimulated – stimulated										
e-travel non-adopters	0.0	10.0	5.0	50.0	20.0	15.0	0.0	15.0	50.0	35.0
e-travel adopters	0.0	3.8		38.5	26.9	23.1	7.7	3.8	38.5	57.7
Insecure – confident										
e-travel non-adopters	15.0	10.0	20.0	45.0	5.0	5.0	0.0	45.0	45.0	10.0
e-travel adopters	0.0	7.7	3.8	19.2	23.1	34.6	11.5	11.5	19.2	69.2
Not excited – excited										
e-travel non-adopters	10.0	5.0	5.0	50.0	10.0	20.0	0.0	20.0	50.0	30.0
e-travel adopters	0.0	0.0	7.7	30.8	30.8	26.9	3.8	7.7	30.8	61.5
Not entertained – entertained										
e-travel non-adopters	10.0	5.0	5.0	50.0	10.0	20.0	0.0	20.0	50.0	30.0
e-travel adopters	0.0	0.0	3.8	42.3	19.2	23.1	11.5	3.8	42.3	53.8
Unhappy – happy										
e-travel non-adopters	0.0	0.0	15.0	70.0	5.0	10.0	0.0	15.0	70.0	15.0
e-travel adopters	0.0	0.0	3.8	42.3	34.6	15.4	3.8	3.8	42.3	53.8
Frustrated – fulfilled										
e-travel non-adopters	0.0	10.0	0.0	75.0	5.0	10.0	0.0	10.0	75.0	15.0
e-travel adopters	0.0	0.0	0.0	50.0	23.1	26.9	0.0	0.0	50.0	50.0

Notes: Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

The results of the Mann-Whitney test are shown in Table 10.21. With the exception of enjoyment ($U=127.5$; $Z=-3.308$; $p>0.05$), there were statistical differences between the e-travel adopters and non-adopters regarding the affective feelings towards purchasing leisure travel over the Internet. As the mean rank values demonstrate, the e-travel adopters would feel more relaxed ($U=153.0$; $Z=-2.455$; $p<0.05$), stimulated ($U=183.0$; $Z=-1.802$; $p<0.05$), confident ($U=91.0$; $Z=-3.830$; $p<0.05$), excited ($U=175.0$; $Z=-1.968$; $p<0.05$), entertained ($U=174.5$; $Z=-2.007$; $p<0.05$), happy ($U=155.0$; $Z=-2.559$; $p<0.05$) and fulfilled ($U=158.0$; $Z=-2.574$; $p<0.05$) than the e-travel non-adopters. The two sub-groups also differentiated regarding the computed affective feelings category, with the e-travel adopters

demonstrating more positive affective feelings than the e-travel non-adopters (U=175.0; Z=-1.968; p<0.05).

Table 10. 21: Affective feelings regarding purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Bored – enjoyed	21.63	24.94	222.5	-0.914	0.361
Stressed – relaxed	18.15	27.62	153.0	-2.455	0.014
Not stimulated – stimulated	19.65	26.46	183.0	-1.802	0.072
Insecure – confident	15.05	30.00	91.0	-3.830	0.000
Not excited – excited	19.25	26.77	175.0	-1.968	0.049
Not entertained – entertained	19.223	26.79	174.5	-2.007	0.045
Unhappy – happy	18.25	27.54	155.0	-2.559	0.011
Frustrated – fulfilled	18.42	27.40	158.0	-2.574	0.010
Affection (composite)	16.80	28.65	126.0	-2.980	0.003

10.2.3. Intention to use

As Table 10.22 indicates, the mean values of the e-travel non-adopters are currently around the mean value of the scale (three): in the near future slightly below and in the long future slightly above. Conversely, the mean value of the e-travel adopters is clearly positive and close to, but below, four. The mean values also suggest greater levels of intention in the longer term when compared to the near future, notably by the e-travel non-adopters.

Table 10. 22: Intention to purchase leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Intention to use in the near future*	21	2.86	1.01	26	3.81	0.69
Intention to use in the long future*	21	3.24	0.77	26	3.96	0.72

Notes: * – 5 point Likert-scale; N – Number of valid cases; SD – Standard Deviation.

Table 10.23 demonstrates that none of the e-travel adopters disagreed that they intended to purchase leisure travel over the Internet. As far as intention in the short term is concerned, one third were uncertain and two thirds agreed that they intended to. In contrast, nearly three out of ten of the e-travel non-adopters disagreed and more than forty percent were uncertain about purchasing leisure travel over the Internet in the near future. The results

also show that the proportion of respondents indicating that they intended to purchase leisure travel in the longer term increased when compared to their intentions for the near future. The results suggest that those changes in intention were greater in the case of the e-travel non-adopters. Only around 10 percent of the e-travel non-adopters disagreed that they intended to purchase leisure travel in the long term, while nearly 30 percent said they did not intend to do it in the near term.

Table 10. 23: Intention to purchase leisure travel over the Internet (frequencies)

	Scale					Summary		
	SD	**D**	**U**	**A**	**SA**	**neg**	**mdl**	**pos**
Intention to use in the near future								
e-travel non-adopters	14.3	14.3	42.9	28.6	0.0	28.6	42.9	28.6
e-travel adopters	0.0	0.0	34.6	50.0	15.4	0.0	34.6	65.4
Intention to use in the long future								
e-travel non-adopters	4.8	4.8	52.4	38.1	0.0	9.6	52.4	38.1
e-travel adopters	0.0	0.0	26.9	50.0	23.1	0.0	26.9	73.1

Notes: SD – Strongly Disagree; D – Disagree; U – Uncertain; A – Agree; SA – Strongly Agree; Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

As the Mann-Whitney test demonstrates (Table 10.24), there were statistically significant differences regarding the intention to purchase leisure travel in the near future ($U=133.5$; $Z=-3.187$; $p<0.05$) as well as in the long term ($U=146.5$; $Z=-2.931$; $p<0.05$). Not surprisingly, an analysis of the mean rank values shows that the e-travel adopters displayed a greater level of intention than the e-travel non-adopters.

Table 10. 24: Intention to purchase leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Intention to use in the near future	17.36	29.37	133.5	-3.187	0.001
Intention to use in the long future	17.98	28.87	146.5	-2.931	0.003

10.3. Involvement with purchasing leisure travel over the Internet

The mean value and standard deviation for each of the items comprising the involvement scale, as well as for the computed involvement item, are presented in Table 10.25. The majority of mean values of the e-travel non-adopters were below the threshold value of four (mean value of the scale). The mean value of the computed involvement item was also below four. This suggests that they had little or no involvement in the purchasing of leisure travel over the Internet. In contrast, the mean values of the e-travel adopters were not only above four, but the majority were above five, including the computed involvement item, which suggests that they were involved with doing it. An analysis of the ranking indicates that usefulness received the greatest support and dispensable/essential the least support from both sub-groups. The analysis of the mean values of these two items indicates that although the e-travel non-adopters regarded purchasing leisure travel over the Internet as dispensable (mean: 2.90), they also thought that it was useful (mean: 4.43).

Table 10. 25: Involvement with purchasing leisure travel over the Internet (mean values)

	e-travel non-adopters			e-travel adopters		
	N	Mean value	SD	N	Mean value	SD
Worthless – valuable *	20	3.15	1.66	26	5.19	1.10
Prejudicial – beneficial *	20	4.10	0.91	26	5.50	0.95
Irrelevant – Relevant *	20	3.70	1.89	26	5.15	1.32
Undesirable – desirable *	20	3.85	1.39	26	5.42	0.86
Not appealing – appealing *	21	3.95	1.60	26	5.58	1.17
Not important – important *	20	3.15	1.60	26	4.92	1.47
Useless – useful *	21	4.43	1.60	26	5.69	1.38
Dispensable – essential *	20	2.90	1.41	26	4.35	1.41
Involvement (composite) *	21	3.71	1.10	26	5.23	0.77

Notes: * – 7 point semantic differential scale; N – Number of valid cases; SD – Standard Deviation.

Table 10.26 gives the frequencies for each of the involvement items. As far as the e-travel adopters is concerned, with the exception of how essential purchasing leisure travel over the Internet was, the proportion opting for the positive side of the scale exceeded 70 percent. Regarding the e-travel non-adopters, the results suggest that they regarded purchasing leisure travel over the Internet as beneficial, relevant, desirable, appealing and useful. However, with the exception of usefulness, the differences between the positive and negative answers were small and hence these results should be treated with caution. The e-

travel non-adopters also regarded purchasing leisure travel over the Internet as not important, worthless and dispensable, with clear differences between the answers at the positive and negative side of the scale.

Table 10. 26: Involvement with purchasing leisure travel over the Internet (frequencies)

	Scale							Summary		
	1	2	3	4	5	6	7	neg	mdl	pos
Worthless – valuable										
e-travel non-adopters	25.0	10.0	20.0	25.0	10.0	10.0	0.0	55.0	25.0	20.0
e-travel adopters	0.0	0.0	7.7	19.2	26.9	38.5	7.7	7.7	19.2	73.1
Prejudicial – beneficial										
e-travel non-adopters	0.0	5.0	10.0	65.0	10.0	10.0	0.0	15.0	65.0	20.0
e-travel adopters	0.0	0.0	3.8	11.5	23.1	53.8	7.7	3.5	11.5	84.6
Irrelevant – Relevant										
e-travel non-adopters	15.0	20.0	0.0	40.0	5.0	10.0	10.0	15.0	40.0	25.0
e-travel adopters	0.0	7.7	0.0	19.2	26.9	34.6	11.5	7.7	19.2	73.0
Undesirable – desirable										
e-travel non-adopters	10.0	10.0	0.0	55.0	15.0	10.0	0.0	20.0	55.0	25.0
e-travel adopters	0.0	0.0	0.0	15.4	34.6	42.3	7.7	0.0	15.4	84.6
Not appealing – appealing										
e-travel non-adopters	9.5	14.3	0.0	42.9	19.0	9.5	4.8	23.8	42.9	33.3
e-travel adopters	0.0	0.0	3.8	19.2	15.4	38.5	23.1	3.8	19.2	77.0
Not important – important										
e-travel non-adopters	30.0	5.0	0.0	55.0	5.0	5.0	0.0	35.0	55.0	10.0
e-travel adopters	0.0	11.5	3.8	15.4	30.8	26.9	11.5	15.3	15.4	69.2
Useless – useful										
e-travel non-adopters	4.8	9.5	4.8	38.1	14.3	19.0	9.5	19.1	38.1	42.8
e-travel adopters	3.8	0.0	3.8	3.8	19.2	42.3	26.9	7.6	3.8	88.4
Dispensable – essential										
e-travel non-adopters	20.0	25.0	10.0	40.0	0.0	5.0	0.0	55.0	40.0	5.0
e-travel adopters	0.0	15.4	7.7	26.9	34.6	7.7	7.7	23.1	26.9	50.0

Notes: Neg – percentage of answers on the negative side of the scale; Mdl – percentage of answers on the middle point of the scale; Pos – percentage of answers on the positive side of the scale.

There were, without exception, statistical differences regarding each of the items measuring involvement (Table 10.27). As the mean rank values indicate, the e-travel adopters perceived purchasing leisure travel over the Internet as more valuable ($U=85.0$; $Z=-3.944$; $p<0.05$), more beneficial ($U=81.5$; $Z=-4.415$; $p<0.05$), more relevant ($U=136.5$; $Z=-2.800$; $p<0.05$), more desirable ($U=84.5$; $Z=-4.043$; $p<0.05$), more appealing ($U=116.5$; $Z=-3.438$; $p<0.05$), more important ($U=99.0$; $Z=-3.660$; $p<0.05$), more useful ($U=139.5$; $Z=-2.933$; $p<0.05$) and more essential ($U=119.0$; $Z=-3.207$; $p<0.05$) than the e-travel non-adopters. Not surprisingly, when the eight item were computed into a involvement item, the Mann-Whitney test also revealed a statistical significance ($U=66.0$; $Z=-4.435$; $p<0.05$)

Table 10. 27: Involvement with purchasing leisure travel over the Internet (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Worthless – valuable	14.77	30.21	85.0	-3.944	0.000
Prejudicial – beneficial	14.57	30.37	81.5	-4.415	0.000
Irrelevant – Relevant	17.33	28.25	136.5	-2.800	0.005
Undesirable – desirable	14.73	30.25	84.5	-4.043	0.000
Not appealing – appealing	16.55	30.02	116.5	-3.438	0.001
Not important – important	15.45	29.69	99.0	-3.660	0.000
Useless – useful	17.64	29.13	139.5	-2.933	0.003
Dispensable – essential	16.45	28.92	119.0	-3.207	0.001
Involvement (composite)	14.14	31.96	66.0	-4.435	0.000

10.4. Preferred payment means

Table 10.28 shows the preference for payment methods when purchasing leisure travel over the Internet. In hierarchical terms, as defined by frequency of response for each method, the preferred methods, in order of descending importance, were, for e-travel non-adopters, bank transfer (40.0%), credit card (35.0%) and debit card (25.0%). For the e-travel adopters, credit card was the most preferred method (50.0%), followed by bank transfer (30.8%) and debit card (19.2%). The Chi-Square test indicated that these differences in the frequencies were not statistically significant (χ^2=1.035; p>0.05).

Table 10. 28: Preferred payment method when purchasing leisure travel over the Internet (frequencies and Chi-Square)

	e-travel non-adopters (n=20)		e-travel adopters (n=26)		Chi-Square
	n	%	n	%	
Credit card	7	35.0	***13***	***50.0***	
Bank Transfer	***8***	***40.0***	8	30.8	χ2=1.035
Debit card	5	25.0	5	19.2	p=0.596
Total	20	100	26	100	

10.5. Travel purchasing and consumption behaviour

This section presents data regarding the purchasing and consumption behaviour of the e-travel adopters and the e-travel non-adopters. First, the travel frequency of the respondents in relation to business and leisure journeys, as well as total number of journeys, is

examined. The data regarding the three purchasing behaviours is then presented: participation in the reservation of leisure travel, preferred purchasing channel and preferred communication means.

10.5.1. Frequency of travelling

10.5.1.1. Business Journeys

On average, an e-travel non-adopter had travelled for business purposes nearly three times between January 2000 and the day of completion of the questionnaire (during 2002), while an e-travel adopter had travelled more than 10 times (Table 10.29). An analysis of the frequencies indicates that the majority of the e-travel non-adopters had not gone on a business journey, while nearly 70 percent of the e-travel adopters did. In addition, while only around one quarter of the e-travel non-adopters undertook five or more business journeys in the period, nearly half of the e-travel adopters were very frequent business travellers. As far as business journeys abroad is concerned, the majority of the individuals in both groups had not gone abroad for business purposes in the period. Moreover, the proportion of respondents having travelled five or more times abroad for business purposes was relatively low, below 20 percent.

Table 10. 29: Travelling frequency of the Internet purchasers – business journeys (frequencies)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)	
	N	%	N	%
Total of Business Journeys				
No journeys	12	52.2	8	30.8
One journey	3	13.0	2	7.7
Between 2 and 4 journeys	2	8.7	4	15.4
Five or more journeys	6	26.1	12	46.2
Total	23	100	26	100
Mean (SD) (journeys)	2.91 (5.31)		10.65 (19.15)	
Business Journeys Abroad				
No journeys	16	69.6	14	53.8
One journey	2	8.7	3	11.5
Between 2 and 4 journeys	2	8.7	4	15.4
Five or more journeys	3	13.0	5	19.2
Total	23	100	26	100
Mean (SD) (journeys)	1.00 (1.81)		5.31 (13.67)	

In order to assess whether the apparent differences in the number of business journeys taken were statistically significant, the Mann-whiney test was performed using the exact number of journeys (not the categories presented in the table). As the results indicate (Table 10.30), the e-travel adopters travelled more than the e-travel non-adopters for business purposes ($U=204.5$; $Z=-1.963$; $p<0.05$) but not in terms of business journeys abroad ($U=242.0$; $Z=-1.302$; $p<0.193$).

Table 10. 30: Travelling frequency of the Internet purchasers – business journeys (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Total of business journeys	20.89	28.63	204.5	-1.963	0.050
Total of business journeys abroad	22.52	27.19	242.0	-1.302	0.193

10.5.1.2. Leisure Journeys

All the e-travel adopters and the e-travel non-adopters had travelled for leisure purposes in the period and the vast majority had travelled five or more times (Table 10.31). The mean value indicates that on average the e-travel non-adopters travelled more than 6 times, whereas the e-travel adopters travelled nearly 10 times. The proportion of e-travel adopters who did not undertake a leisure journey abroad was small, not exceeding eight percent. In contrast, more than one quarter of the e-travel non-adopters had not gone abroad for leisure purposes. The proportion of e-travel adopters going abroad five or more times was also much higher than that of the e-travel non-adopters: 42.3 percent and 17.4 percent respectively.

Table 10. 31: Travelling frequency of the Internet purchasers – leisure journeys (frequencies)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)	
	N	%	N	%
Total of Leisure Journeys				
No journeys	0	0.0	0	0.0
One journey	2	8.7	1	3.8
Between 2 and 4 journeys	3	13.0	6	23.1
Five or more journeys	18	78.3	19	73.1
Total	23	100	26	100
Mean (SD) (journeys)	6.57 (3.75)		9.81 (7.21)	
Leisure Journeys Abroad				
No journeys	6	26.1	2	7.7
One journey	5	21.7	4	15.4
Between 2 and 4 journeys	8	34.8	9	34.6
Five or more journeys	4	17.4	11	42.3
Total	23	100	26	100
Mean (SD) (journeys)	2.13 (2.05)		4.62 (4.40)	

The results of the hypothesis testing (Table 10.32) demonstrate that the e-travel adopters travelled more for leisure purposes abroad than the e-travel non-adopters (U=183.0; Z=-2.351; $p<0.05$). However, the differences in relation to total of leisure journeys were not statistically significant (U=227.0; Z=-1.447; $p>0.05$).

Table 10. 32: Travelling frequency of the Internet purchasers – Leisure journeys (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Total of Leisure journeys	21.87	27.77	227.0	-1.447	0.148
Total of Leisure journeys abroad	19.96	29.46	183.0	-2.351	0.019

*10.5.1.3. **Total of Journeys***

The results demonstrate that both sub-groups were fairly experienced travellers as more than 80 percent had travelled five or more times between January 2000 and the day of completion of the questionnaire (Table 10.33). However, the mean value indicates that the e-travel adopters had, on average, travelled twice as much the e-travel non-adopters (around 20 and 10 journeys, respectively). As far as the total of journeys abroad is concerned, virtually all e-travel adopters had gone abroad at least once, while nearly 20

percent of the e-travel non-adopters did not. Moreover, the majority of the e-travel adopters had travelled abroad five times or more, while the proportion of e-travel non-adopters doing so was around one quarter. The mean values indicate that on average, an e-travel adopter had travelled 10 times, which is three times more than the average of an e-travel non adopter.

Table 10. 33: Travelling frequency of the Internet purchasers – total of journeys (frequencies)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)	
	N	%	N	%
Total of Journeys				
No journeys	0	0.0	0	0.0
One journey	1	4.3	1	3.8
Between 2 and 4 journeys	3	13.0	3	11.5
Five or more journeys	19	82.6	22	84.6
Total	23	100	26	100
Mean (SD) (journeys)	9.48 (6.04)		20.46 (21.31)	
Total of Journeys Abroad				
No journeys	4	17.4	1	3.8
One journey	5	21.7	3	11.5
Between 2 and 4 journeys	8	34.8	7	26.9
Five or more journeys	6	26.1	15	57.7
Total	23	100	26	100
Mean (SD) (journeys)	3.13 (3.08)		9.92 (16.18)	

The Mann-Whitney test (Table 10.34) showed that the differences in respect to total of journeys ($U=188.5$; $Z=-2.218$; $p<0.05$) and total of journeys abroad ($U=182.0$; $Z=-2.361$; $p<0.05$) were statistically significant. The mean rank values indicate that the e-travel adopters had travelled more than the e-travel non adopters.

Table 10. 34: Travelling frequency of the Internet purchasers – total of journeys (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Total of journeys	20.20	29.25	188.5	-2.218	0.027
Total of journeys abroad	19.91	29.50	182.0	-2.361	0.018

10.5.2. Participation in the reservation of leisure travel

The results regarding participation in the reservation of leisure travel (Table 10.35) indicate that the vast majority of the e-travel adopters would undertake the purchasing role when travelling for leisure purposes either always or most of the time. In contrast, nearly half of the e-travel non-adopters indicated that it would always or most of the time be others who made the reservations.

Table 10. 35: Participation in the reservation of leisure travel components (frequencies)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)	
	n	%	n	%
Always me	5	21.7	8	30.8
Most of the time me	7	30.4	16	61.5
Most of the time others	6	26.1	1	3.8
Always others	5	21.7	1	3.8
Total	23	100	26	100

The Mann-Whitney test (Table 10.36) shows that there was a statistically significant difference between the two sub-groups ($U=191.5$; $Z=-2.304$; $p<0.05$). The e-travel adopters would participate more often in the reservation of leisure travel than the e-travel non-adopters, as given by the lower mean rank of the first.

Table 10. 36: Participation in the reservation of leisure travel components (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Participation in the reservation of leisure travel components	29.67	20.87	191.5	-2.304	0.021

10.5.3. Preferred purchasing channels

As far as preferred purchasing channels are concerned, the results demonstrate that the majority of individuals in both sub-groups would purchase their leisure travel components from travel agencies (Table 10.37). Slightly more than 60 percent of the e-travel adopters

and nearly three quarters of the e-travel non-adopters indicated travel agencies as their most frequent purchasing channel.

Table 10. 37: Preferred purchasing channel (frequencies)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)	
	n	%	n	%
Always principals	1	4.3	1	3.8
Most of the times principals	5	21.7	9	34.6
Most of the times travel agencies	13	56.5	14	53.8
Always travel agencies	4	17.4	2	7.7
Total	23	100	26	100

When tested using the Mann-Whitney test (Table 10.38), the results indicate that the null hypothesis cannot be rejected ($U=249.0$; $Z=-1.114$; $p>0.05$). Consequently, any differences between the two sub-groups are likely to have arisen by chance. Therefore, it can be concluded that the e-travel adopters were as likely to use travel agencies as were the e-travel non-adopters.

Table 10. 38: Preferred purchasing channel (Mann-Whitney)

	e-travel non-adopters	e-travel adopters	U	Z	Sig.
	Mean Rank	Mean Rank			
Preferred purchasing channel	27.17	23.08	249.0	-1.114	0.265

10.5.4. Preferred communication channels

As the results indicate (Table 10.39), a Chi-Square test showed a statistically significant difference between the two-sub-groups in terms of their most preferred communication means ($\chi^2=16.262$; $p<0.001$). An analysis of the frequencies indicates that while a similar proportion of respondents in both sub-groups (slightly more than half) preferred telephone, none of the e-travel adopters indicate email as their most preferred means while nearly 40 percent of the e-travel adopters did so. The results also show that only a small minority of the e-travel adopters preferred face-to-face, which is in contrast with the nearly half of the e-travel non-adopters who indicated they preferred this means.

Table 10. 39: Most preferred communication means to contact the supplier when purchasing leisure travel (frequencies and Chi-Square)

	e-travel non-adopters (n=23)		e-travel adopters (n=26)		Chi-Square
	n	%	n	%	
Face-to-face	11	47.8	2	7.7	
Telephone	12	52.2	14	53.8	$\chi 2=16.262$
Email	0	0.0	10	38.5	p=0.000
Total	23	100	26	100	

Table 10.40 shows the least preferred communication means of the e-travel adopters and the e-travel non adopters. The results indicate that face-to-face was the least preferred communication means for two thirds of the e-travel adopters. Telephone was the second least preferred (for nearly 20 percent) and email the third least preferred (around 15 percent). In contrast, email was the least preferred for 7 out of 10 e-travel non adopters. Face-to-face was the second least preferred means (for 25 percent) and telephone the third (5 percent). One of the assumptions of the Chi-Square test (no more than 20 percent of cells with expected frequency less than 5) could not be met and hence the result of the test is not reported. However, the magnitude of the differences in the proportion of answers suggests that there is, indeed, a difference between the two sub-groups regarding the least preferred communication means.

Table 10. 40: Least preferred communication means to contact the supplier when purchasing leisure travel (frequencies)

	e-travel non-adopters (n=20)		e-travel adopters (n=26)	
	n	%	n	%
Face-to-face	5	25.0	17	65.4
Telephone	1	5.0	5	19.2
Email	14	70.0	4	15.4
Total	20	100	26	100

10.6. Summary

This chapter started by examining the attitude of the e-travel adopters and non-adopters towards purchasing leisure travel over the Internet. The results indicate that these two groups held different attitudes, with the e-travel adopters having more positive attitudes

towards purchasing leisure travel over the Internet than the e-travel non-adopters. More specifically, the e-travel adopters perceived purchasing leisure travel over the Internet as more advantageous, easier to learn, more compatible and less risky than the e-travel non-adopters. In addition, purchasing leisure travel over the Internet encompassed a higher level of visibility, notably verbal visibility, for the e-travel adopters. However, neither group differed in respect of the image benefits arising from the purchasing of leisure travel over the Internet. The results have also shown that the e-travel adopters had more positive affective feelings than the e-travel non-adopters and more of the e-travel adopters agreed that they intended to purchase leisure travel over the Internet in the future. The e-travel adopters were also found to be more involved with purchasing leisure travel over the Internet. As far as the preferred purchasing means when purchasing leisure travel over the Internet is concerned, no statistically significant differences were found: credit card and bank transfer were the two most preferred means by both groups.

The results have also shown that the e-travel adopters had differential consumption and purchasing patterns when compared to the e-travel non adopters. First, they were heavier consumers of travel, notably in relation to business journeys and leisure journeys abroad. Second, they were more likely to participate in the reservation of leisure travel. Third, while face-to-face was the most preferred communication means by both sub-groups, a greater proportion of e-travel adopters preferred email when compared to the e-travel non adopters. The results have also shown that a similar and large proportion of the respondents in both groups would purchase their travel components from travel agencies.

11. Evaluation and discussion

11.1. Introduction

The aim of this research was to determine those factors which influence the adoption of e-commerce in the purchasing of leisure travel. Consumer behaviour theory, and more specifically the adoption of innovations paradigm, formed the theoretical underpinning of the study. The research was developed from an innovations interdependence point of view, which is based on the assumption that some innovations are dependent upon other innovations and hence the adoption of certain innovations tend to be interconnected. In the case of e-commerce adoption, three innovations comprise the adoption network: computers, the Internet and purchasing over the Internet. A fourth main factor influencing the adoption of e-commerce was also included in the research model: product-category behaviour.

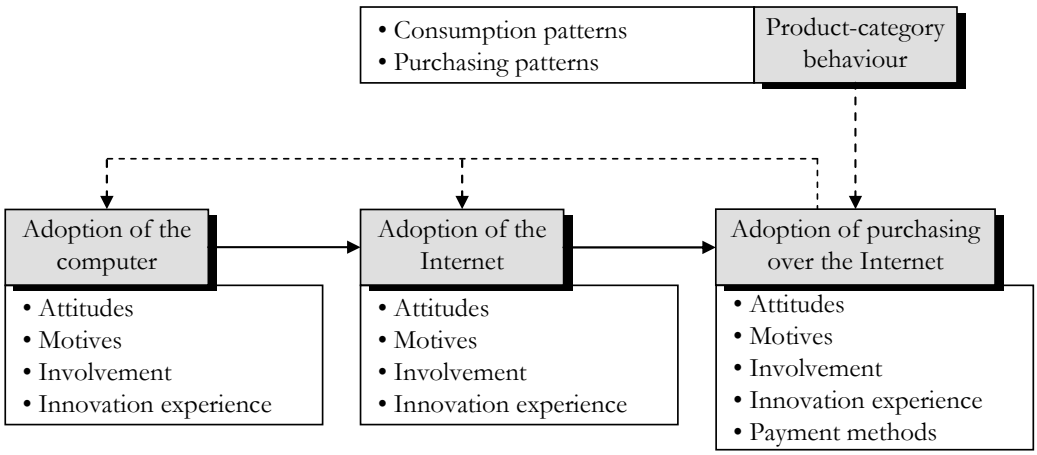
Two groups of variables were selected for inclusion in this research: the characteristics of the individual and their evaluation of the behaviour. More specifically, four variables pertaining to the characteristics of the respondents (demographics, experience, motives and involvement) and one about the evaluation of their behaviour (attitude) were included in the study. A review of the literature was also carried out in order to identify which variables related to this product-category behaviour could explain the adoption of e-commerce in the purchasing of leisure travel. Only those variables pertaining to the characteristics of the individual were selected. More specifically, the travel purchasing patterns and preferences and the respondents' consumption of travel were selected as these may be regarded as characteristics of each individual. A diagram showing the research model is provided in Figure 11.1.

To test the model, a questionnaire was developed and implemented among residents of the borough of Cascais (Portugal). The analysis consisted of assessing whether each of the behaviours comprising the conceptual framework (adoption of computers, the Internet and purchasing over the Internet and the travel purchasing and consumption patterns) was related to the stage of the e-commerce adoption path. Three stages in the e-commerce adoption path were defined. The first stage comprised the 98 respondents who had never

used the Internet (the 'non-Internet users'). The second stage consisted of the 132 respondents who had used the Internet at least once but had never purchased any products or services by the means of e-commerce (the 'Internet users'). The third and last stage included the 49 respondents who had purchased a product or service over the Internet (the 'Internet purchasers'). In addition, the last stage (i.e. the Internet purchasers) was further divided into two sub-stages, based on whether they had purchased leisure travel over the Internet or not. Bivariate statistical techniques were used to identify differences in experience, attitude, involvement, motives, travelling experience and travel purchasing patterns and preferences between the stages in the e-commerce adoption path.

Figure 11. 1: Conceptual framework of the research

Source: Author



With this as the background, this chapter has one overall aim: to evaluate the research undertaken and discuss its results. This chapter starts by undertaking the evaluation of the theoretical, methodological and analytical approaches (section 11.2). Section 11.3 is devoted to the discussion of the results regarding the stage in the e-commerce adoption path, as well as of the results emerging from the analysis of the Internet purchasers.

11.2. Evaluation of the theoretical, methodological and analytical approaches

This section seeks to evaluate the theoretical, methodological and analytical approaches used in this research. Evaluation refers to assessing the value (or worth, or merit) of something (Robson, 2000). Hence, the primary purpose of the evaluation in the context of this research is to demonstrate the worth and validity of the reported research. Before evaluation can take place, it is important to identify the criteria to use as the reference in the evaluation process. A criterion is a standard by which something can be judged or evaluated (Collins English Dictionary, 2002). These criteria or standards can be internal or external to the research. Internal criteria refer to the standards emerging from inside the research, notably whether it meets the objectives of the research. External criteria refer to the standards emerging from outside the research. Examples of these external criteria are the guidelines regarded as acceptable research practice and the usefulness of the results to those with a potential interest in the research.

11.2.1. Evaluation of the theoretical approaches

The theoretical approach adopted was that of consumer behaviour and its application to the selection of purchasing channels. Evaluating a theoretical approach is not a straightforward task. As Gilbert (1992) noted, in discussing consumer buying behaviour *"theories can only be assessed on the contribution they make to the process involved in particular forms of purchase"* (p. 129). This research focused on the individual acceptance of e-commerce, used a cognitivist approach and was developed using the adoption of innovations model. In this section each of these theoretical choices are evaluated in light of their contribution to the adoption of e-commerce in the purchasing of leisure travel.

11.2.1.1. Individual versus joint decision-making

The individual consumer was the unit of analysis in this research. While consumption decisions, such as the purchasing of leisure travel, can be joint decisions, group decision-making is often more complicated than individual decision-making (Kang and Hsu, 2005). In the case of leisure travel this complexity is enhanced due to the fact that the travel party frequently comprises individuals beyond the boundaries of the family/household. Moreover, at the time this research began there was very limited knowledge on the adoption of e-commerce. Hence, it would have made little sense to study the more complex phenomena when the simpler ones were only poorly understood. In fact, the development of consumer behaviour models has generally followed a process in which the study of the group processes takes place only after the individual processes are understood (Martinez and Polo, 1999). Perhaps a more important reason for this atomistic approach to the study of consumer adoption of e-commerce is that the adoption of e-commerce of each of the individuals comprising the travel party influences the dynamics of their decision as a group. Hence, it can be argued that the study of the individual processes should precede the understanding of the group processes.

Nonetheless, the decisions related to undertaking a leisure journey, including the selection of purchasing channel, are often joint decisions by the travel party. Thus, an understanding of the extent to which the dynamics of the travel party are related to the choice of the Internet as a purchasing channel would be an interesting research avenue. Researchers attempting to do so are increasingly able to build on much more solid ground, due to the increasing numbers of publications that have appeared in the last 3-5 years.

11.2.1.2. Cognitive versus behaviourist approach

In searching for an appropriate framework within consumer behaviour theory, two main approaches emerged: the behaviourist and the cognitive (Chapter Two, section 2.4). Broadly speaking, the behaviourist approach focuses on the influences of environmental variables upon actual behaviour, whereas the cognitive approach, adopted in this research, explains behaviour by the means of the intra-personal variables.

Due to its long tradition in consumer behaviour research (and in other fields of human behaviour research), by opting for a cognitive approach this research could build on a well established theoretical ground. The richness of the cognitive approach provided multiple perspectives (i.e. variables) from which the adoption of e-commerce could be analysed. Moreover, it can be argued that the cognitive approach is more suited for cross-sectional research as the researcher can study the outputs and outcomes of the decision process.

Given the heterogeneity of the population being studied (notably regarding educational level, knowledge about the topic and interest in the topic), it was important that the data was collected in a way that was meaningful for all respondents. The cognitive approach fulfilled this criterion because one of the strengths of cognitivism is its closeness with the common-sense explanations of everyday discourse (Foxall, 1990). The variables forming the basis of cognitive models, such as attitudes, needs and motives, are often used by consumers to describe and explain their behaviours.

In addition, the results obtained appear to support the contention that the adoption of e-commerce is influenced by a wide range of factors. The adoption of computers and the Internet, the purchasing of leisure travel over the Internet and the purchasing of travel were all found to be associated with the stages in the e-ecommerce adoption path. Hence, based on the conceptual framework of this research, in order to have a broad account of the environmental influences on the adoption of e-commerce, it would be necessary to test the influence of the stimuli associated with using the three innovations as well as purchasing travel. Methodologically speaking, this would have been difficult from a behavioural perspective and certainly impossible within the scope of a PhD. The principal difficulties associated with a behaviourist approach are briefly summarised below.

In order to evaluate influences upon behaviour, behavioural research resorts to two research methods: observation and experimentation (Eysenck and Keane, 1990; DiClemente and Hantula, 2003). Experiments are useful when the researcher wants to understand whether a specific variable, or a small group of variables, is likely to produce changes in behaviour. Hence, it would have been difficult to arrive at a comprehensive account of the factors influencing the adoption of e-commerce by the means of behavioural principles due to the large number of potential variables involved. Observation is also difficult for two reasons. First, purchasing over the Internet is likely to be carried out in the confinement of the home or the office. Second, the process of adoption of e-

commerce seems to be a long one and hence the impact of some stimuli is only likely to produce consequences upon behaviour in the long term. While longitudinal research could have been employed to track changes over time, the time needed to record changes would have been beyond the time available for this research. Thus, the initial contention that the behaviourist approach had severe limitations in the research of complex phenomena such as the adoption of e-commerce seems to be supported.

11.2.1.3. The adoption of innovations theory

This research attempted to provide an analytical model for investigating the adoption of e-commerce in the purchasing of leisure travel. The main characteristic of analytical models is that they provide a framework for identifying the elements that might explain/provide an understanding of a given consumption behaviour. Hence, an analytical model had to be selected in order to provide the underlying theoretical framework of the research. Three such models were identified in the literature review (Chapter 2, Section 2.7): the Theory of Buyer Behaviour (Howard and Sheth, 1969), the Consumer Decision Model (Engel et al., 1995) and the Adoption of Innovations (Rogers, 1995).

After consideration, the adoption of innovations model was used as a basis for studying consumer adoption of e-commerce in the purchasing of leisure travel. The initial literature review revealed that that model had a long history in the study of adoption of both consumption and non-consumption innovations. However, while e-commerce should be regarded as an innovation, with few exceptions (e.g. Eastlick and Lotz, 1999; Citrin et al., 2000; Verhoef and Langerak, 2001; Vrechopoulos et al, 2001) Roger's model had not been applied to the study of the adoption of e-commerce by consumers. Hence, there was a clear opportunity to test and adapt the model in the context of the adoption of a novel purchasing channel.

Each of the innovations comprising the conceptual framework were at different stages of their diffusion and adoption process. Hence, the question remains as to whether using the same model for explaining each of the behaviours was appropriate. The adoption of innovations model has been applied in the study of innovations with different levels of adoption. Some studies used the model to test innovative concepts prior to their

introduction in the market (e.g, Eastlick and Lotz, 1999), others to study innovations after the diffusion process has begun (e.g. Verhoef and Langerak, 2001; Pechtl, 2003). Consequently, previous research has demonstrated the versatility of the model not only regarding the time elapsed since the introduction of the innovation in the market, but also versatility regarding the level of previous acceptance of the innovation by the individuals in the social system.

However, it became apparent during the research that the adoption of innovations model had several limitations in the study of adoption of e-commerce. Hence, the research developed the adoption model not only by refining some of its variables but also by incorporating other additional variables that do not appear in the original model but can have an important role in explaining the adoption of innovations. Ultimately, the aim of these changes, discussed below, was to make the original adoption model more sensitive to the study of adoption of e-commerce.

11.2.1.4. Innovation interdependence

Any theory must reflect the fundamental elements of the behaviour being researched. The behaviour under research is the adoption of e-commerce in the purchasing of various components of leisure travel, a type of commerce that requires using computers and the Internet. Therefore, the recognition that the adoption of e-commerce is not determined solely by the intrinsic factors associated with purchasing over the Internet implies that an examination of the adoption of e-commerce must take into account a broad set of factors, including, but not limited to, the adoption of purchasing over the Internet, notably the adoption of computers and the Internet.

Consumer behaviour models have failed to take into account interdependence between behaviours. Despite previous recognition that the adoption of innovations can be related (Rogers, 1995; Gatignon and Robertson, 1985), the adoption of innovations model also fails to recognise this potential interdependence. Hence, it is not surprising that research on consumer adoption of e-commerce has focused on the component related to purchasing over the Internet, with little attention been paid to the variables pertaining to the adoption of computers and the Internet.

Instead of a unidimensional phenomenon, this research took a step forward by viewing the adoption of e-commerce as a linear phenomenon, comprising the adoption of three different concepts: the computer, the Internet and purchasing over the Internet. The unidimensional approach produces only a partial picture of the adoption process as key components are not investigated. In contrast, by viewing the adoption of e-commerce as a multidimensional phenomenon the research is able to obtain a fuller picture of the process. A more complete picture of the process, in turn, provides a better ground on which to identify the opportunities and barriers to the adoption of e-commerce. Such an appreciation will help those attempting to influence the adoption of e-commerce to define more adequate strategies and consequently be in a better position to influence the adoption process.

11.2.1.5. Application of a common conceptual framework

In this research four main types of variables were posited to influence adoption: three variables pertaining to individual characteristics (experience, motives and involvement) and one to the evaluation of the behaviour (attitude). The selection of these variables followed a thorough review of the literature on consumer behaviour (Chapters 2 to 5), which ensured the applicability and relevance of each of the variables to each of the behaviours. Some of these variables had been used by prior research on the study of the adoption of computers, the Internet and purchasing over the Internet. For example, the concept of innovation experience was incorporated in this research because previous research had demonstrated that it was related with the adoption of innovations (Chapter 3), notably computer-based innovations (Chapter 4). Other concepts had never been used before in the context of the adoption of e-commerce, such as involvement with purchasing over the Internet. However, the nature and characteristics of the involvement concept suggest that it can be extended to the study of adoption of e-commerce. In addition, the four variables used in this research were all well established within consumer behaviour literature.

While the range of constructs was not exhaustive, it can be argued that they provide a broad account of e-commerce adoption. One of the advantages of this diversified perspective is to offer multiple angles from which to observe the phenomenon and hence to provide a kind of 'triangulation' regarding the adoption of each of the three innovations

comprising the conceptual framework. This, in turn, places the researcher in a better position to have a richer understanding of the process of adoption of e-commerce. However, future research could incorporate other variables such as psychographics and culture (Choi and Geistfeld, 2004).

11.2.1.6. Attitude

In this research a multicomponent model (or CAC – Cognitive, Affective and Conative model) was used to measure attitude towards using the innovations. The CAC model assumes a process in which one proceeds from awareness (cognition) to feelings (affect) to action (conation). The perceived innovation attributes comprised the cognitive component, the affective feelings comprised the affective component and the conative component was measured by the concept of intention to use.

The use of the CAC model of attitude could be criticised on the grounds that Rogers (1995) elaborated the model based upon a composite model of attitude and not based upon a multicomponent model of attitude. However, this research studied the e-commerce adoption process, which consists of a series of processes related to the adoption of computers, the Internet and purchasing over the Internet. Therefore, it can be argued that a process model of attitude is more appropriate than a content model to study the process of adoption of e-commerce.

In addition, there are limitations of the composite model put forward by Rogers that can be overcome by using a CAC model of attitude. If the original model was used, only a cognitive evaluation of the behaviour would have been gauged. However, research on affect has shown that affective feelings can have an important role in explaining consumer behaviour (Hirschman and Holbrook, 1982; Cohen and Areni, 1991; Malhotra, 2005), the adoption of computers/Internet (Selwyn, 1997; Venkatesh, 2000; Bozionelos, 2001; Teo, 2001; Tsai et al., 2001; Anandarajan et al., 2002; Liaw, 2002; Wilfong, 2006) and the adoption of purchasing over the Internet (Childers et al., 2001). Hence, due to its comprehensiveness the incorporation of the multicompoment model enhances the ability of the model to explain the adoption of innovations.

The decision stage of Rogers's adoption model consists of a verdict about adopting, rejecting or postponing adoption, which according to Rogers is translated into an intention to try the innovation (Rogers, 1995). Thus, the introduction of a behavioural component into attitude (intention), located at the persuation stage, overlaps with the decision stage of the adoption process, therefore making it redundant. However, intention and decision are conceptually distinct concepts. Intention is likely to reflect a desire to perform the behaviour: that is, the question addressed by intention is 'do I want to do it or not'. Decision involves reaching a resolution regarding action: in other words, the question is 'do I do it or not'. As Tabak and Barr (1998) argued, while intention can be regarded as an indicator of what might be the actual decision, *"there are a number of intervening factors that might influence the relationship between intentions and actual decisions"* (p.29), such as whether the necessary resources are available and whether there is an opportunity to use the innovation on a limited basis (trial).

The CAC model has received many criticisms, notably the fact that the *"link between attitude as a predisposition to act into behaviour"* is extended *"without specifying the catalyst which makes action necessary"* (Baker, 1972; p. 78). In this research this criticism was partially addressed by regarding behavioural intention to perform the behaviour, not actual behaviour, as a component of attitude.

Whilst the CAC model was used, the research could have adopted one of the other three attitude models presented in Chapter Three: expectancy-value, composite or two-component models. One common characteristic of these models is that they separate the behavioural manifestations from attitude. If one of these models had been used, instead of a measure of persuasion, the intention to perform the behaviour had to be viewed as comprising the decision stage. The option of a non-CAC model has the benefit of avoiding possible discussions regarding whether behavioural intentions should be viewed as attitude. However, including behavioural intentions in the decision stage would initiate the discussion of whether intention should be regarded as comprising the decision stage. As demonstrated earlier in this section, intention and decision are not similar concepts.

11.2.1.7. Motives and Involvement

Over the years a number of psychological constructs have been added to the adoption of innovations model in an attempt to refine the model. These include the concepts of innovativeness (Hirschman, 1980; Ridgway and Price, 1994), consumer creativity (Hirschman, 1980), role accumulation (Hirschman, 1980), culture (Lunsford and Burnett, 1992; Daghfours et al., 1999), social class (Graham, 1956) and social context (Fisher and Price, 1992). This research extends this psychological set of variables by adding to the model the concepts of motive and involvement.

As shown earlier, one of the criticisms of the CAC model is the deficiencies in the link between attitude and behaviour. Hence, the explanatory power of CAC models can be enhanced by identifying 'precipitating circumstances' (Baker, 1972), that is, the factors that can move an individual from a predisposition to act into actual behaviour. Motives and the level of involvement are two of the variables that can potentially explain the outcome of the decision stage, that is, whether to reject/postpone the innovation or implement it. An individual may have developed a positive attitude towards using the innovation, however if he/she has no motives for using the innovation and does not find the innovation relevant, the decision is likely to be that of rejection and consequently the innovation will not be implemented.

Motives

Generally speaking, motives are the reasons that induce a person to action. In the context of this research, motives are the reasons that lead people to adopt (or reject) an innovation (see Chapter 3 for an examination of the concept). While an individual may have developed a positive attitude towards using an innovation, he/she may not have motives for using that innovation. Hence, the decision to use an innovation is highly influenced by the extent to which the individual has developed motives for using the innovation. In addition, as computer-based technologies, such as computers and the Internet, can be used for different purposes, implementation may be (and usually is) related to some of the uses the innovation provides. For example, an individual may use computers and the Internet but only use (i.e. implement) them for purposes little related to e-commerce (e.g. games,

communication with friends). Hence, understanding whether an individual uses computers and the Internet is important, but it is also important to understand the specific reasons for using these technologies.

The essence of the confirmation stage of the adoption model is that the individual seeks reinforcement of the decision already made, that is, the adopter is likely to confront the experience of using the innovation with the motives that initially led to the decision of adopting the innovation. For example, if one of the motives for using e-commerce was to save time, continued adoption is likely to take place if, in fact, the individual perceives that by purchasing over the Internet he/she can save time. Discontinuance can happen if the individual finds that doing it over the Internet is more time consuming. Hence, understanding motives not only contributes to an understanding of the factors influencing initial decision, but also of the factors that are likely to be used by adopters for evaluation of the actual experience.

While understanding the motives for using an innovation might explain the decision to adopt, the motives for not using an innovation can contribute to an understanding of discontinuance or rejection. It can be argued that when a large proportion of the members in the social system are not current users of the innovation, such as in this study, the understanding of the factors for not using the innovation are as important as the factors for using the innovation.

Involvement with using an innovation

Involvement is a psychological concept that examines the extent to which an innovation is regarded as relevant by the individual. The cognitive-based approach to involvement adopted in this research postulates that personal relevance is a function of the degree to which the object's characteristics are associated with the needs, values and interests of the individual. Assuming that individuals only adopt innovations if they are related to their needs, values and interests, an understanding of the level of involvement can explain why some individuals go further in the adoption process and implement the innovation while others decide not to adopt the innovation. For example, an individual may have developed a positive attitude towards using the innovation. However if he/she does not find the

innovation relevant, the decision is likely to be that of rejection and consequently the innovation will not be implemented.

The incorporation of the concept of involvement into the adoption of innovations model has several additional contributions for an understanding of the adoption process. First, involved individuals are likely to pay more attention to the messages about the behaviours they deem relevant to them (Laaksonen, 1994). Hence, by influencing the first stage of the adoption process – knowledge –, the level of involvement can influence the whole process. Second, as a measure of personal relevance the level of involvement with using an innovation can be used to assess the level of desirability of the innovation by the individuals in a given social system. In other words, the level of involvement can be viewed as a proxy for the ability of the innovation to satisfy the needs of the individual. Hence, understanding involvement helps marketers of the innovation to gauge the readiness of the market for the innovation. Finally, if there is evidence that as individuals move along the adoption path they become more involved with using the innovations, then those responsible for promoting e-commerce need to make the innovations more relevant for those earlier in the adoption path if they are to be moved further along the path.

11.2.1.8. Innovation experience

Rogers (1995) suggests a number of conditions that are likely to influence the innovation-decision process. One such condition is previous practice as this may be an indication of the amount of learning and skills the individual brings to the adoption process. In addition, in the case of innovation interdependence current practice is also likely to exert a strong influence upon the innovation decision-process. In this research previous and current practice were included within the concept of innovation experience (Jones and Clarke, 1995; Smith et al., 1999; Garland and Noyes, 2004).

As a prior condition, innovation experience influences knowledge and consequently the whole innovation-decision process. However, innovation experience can contribute to an understanding of the specific stages of the adoption process beyond knowledge. Experience can be used as a proxy for the degree of implementation of an innovation, both past and current. In the case of necessary interdependence, the extent of implementation of

a satellite innovation is expected to influence the decision regarding the primary innovation (see Chapter 2, section 2.9.1 for an explanation of innovation interdependence). In the case of e-commerce, the extent of the implementation of computers and the Internet (the satellite innovations) can influence an individual's decision regarding whether to purchase a product over the Internet (the primary innovation).

As shown in the literature (Section 4.3.3.), the concept of innovation experience encompasses access to the innovation, that is, access to computers and the Internet. While an individual may have developed a positive attitude towards adopting e-commerce, his/her decision is likely to be influenced by the extent to which computers and the Internet can be accessed. Hence, innovation experience can also explain the move from persuasion to decision and to implementation.

11.2.2. Evaluation of methodological approaches

This section seeks to evaluate the methodological approaches adopted in this research. The process of evaluating a paradigm and methodology is not an easy one. There is no 'better" paradigm or methodology as each encompasses many advantages but also several disadvantages. The research process of this study adopted a positivistic paradigm, which is grounded on employing quantitative methodology. Positivistic research is based upon the deduction of a theory which is then tested in the empirical world (Jennings, 2001). Consumer behaviour theory and its analytical tools provided an objective approach on which the primary research and the choice of research methods and questions were grounded.

E-commerce is a recent phenomenon and hence research about its adoption by consumers is in its early stages of development. Consequently, not much is known about what factors influence the adoption of e-commerce and the relative importance of those factors. However, the state of development of consumer behaviour theory in general, and the adoption of innovations theory in particular, was deemed sufficient for providing a sound theoretical basis that could inform the study of a specific component of the consumption process: the adoption of novel purchasing channels. The option was for testing existing theories on a novel topic of research rather than attempting to build a new theory. One of

the main advantages of this strategy is the economy of effort: existing theoretical frameworks should be tested and only if they are found to be inappropriate should new theoretical frameworks be developed (Otley and Berry, 1994). Nonetheless, future research could be undertaken using qualitative methodologies in order that the conceptual model of this research can be further validated.

The questionnaire used in this research included a series of open-ended questions. Hence, one may argue that this refers to an interpretive paradigm that adopts an inductive approach to construct knowledge about the phenomenon (Jennings, 2001). However, the open-ended questions were employed in order to inform the objective framework adopted regarding the motivation of the residents (e.g. motives to use computers for leisure purposes). This was undertaken with the aim of ensuring a greater comprehensiveness of the information pertaining to the adoption of e-commerce in the purchasing of leisure travel. In addition, the interpretation and analysis of the qualitative data collected was based upon quantitative procedures. Therefore, the epistemological roots did not change during the research process.

The choice of the positivist paradigm has affected this investigation in many ways. One of the most important effects of using the positivistic paradigm was a simplification of the process of adoption of e-commerce. Three stages in the e-commerce adoption path were defined and the differences between the individuals in each stage assessed. While it is reasonable to assume that there is a general process when adopting e-commerce, the analysis of the Internet purchasers showed that the process is more complex than the first analysis showed, with apparent sub-processes within the main process. Hence, the option for a positivistic approach resulted in a broader analysis of the process of adoption of the e-commerce in detriment to the more specific processes.

The employment of a quantitative methodology can be regarded as appropriate because by defining and operationalising concepts using explicit, exact and formal procedures, other researchers can reassess the results of this investigation (Sarantakos, 1998). The use of quantitative methodology facilitates the replication of the study in different contexts and this is of paramount importance in a research field where the singularities of the social system (a region, a country) are likely to play an important role in shaping the adoption of e-commerce.

11.2.2.1. Review of related research

The main objective underlying the literature review was demonstrating a clear understanding of the consumer behaviour field and its application in the study of consumer acceptance of e-commerce. Three reviews of the literature were carried out in this research: a theoretical research review, an integrative research review and methodological research review. The theoretical research review was divided in two chapters, one presenting and comparing the approach and models (Chapter Two) and one analysing the content of the models, that is, the variables posited to influence consumer behaviour (Chapter Three). The integrative review (Chapter Four) provided a synthesis about how the adoption of e-commerce has been investigated in previous research. Finally, the methodological review (Chapter Five) discussed the different research methods and identified the most appropriate course of action given the aims of the research and the resources available.

The literature review was carried out in a way to provide analysis, rather than description, so that clear conclusions about previous research using appropriate evidence could be drawn (Hart, 1998). This synthesis was achieved by grouping studies in order to show clusters of research. This grouping served as a basis for drawing conclusions not only regarding what had been done in previous studies but also about the gaps in knowledge that the research could explore. Throughout the literature review many gaps were identified and this research built upon some of these gaps such as:

- A lack of studies from an innovation interdependence point of view;
- The non-existence of studies applying the multi-attribute model of attitude in the study of the adoption of e-commerce;
- The limitations of the adoption model as to the factors that might explain the link between attitude and behaviour;
- An over concentration of research on experienced computer and Internet users as the subjects of research.

Throughout the theoretical literature review it was a concern that the variety of definitions and approaches to consumer behaviour were discussed (Hart, 1998). For example, two

approaches to consumer behaviour research (behaviourist and cognitivist) and four different conceptualisations of attitude were presented. In addition, the literature review was structured in a way that the broader issues relating to consumer behaviour research (the approaches and models) preceded the more specific ones, notably the conceptualisation and operationalisation of the variables posited to influence consumer behaviour. The synthesis about the approaches, models and content of the models provided a basis that informed how they have been applied in the study of adoption of e-commerce.

11.2.2.2. Data collection techniques

The **secondary data** provided a valuable contribution to achieving the objectives of the research. For example, prior to data collection an analysis of the statistics regarding computer and Internet usage demonstrated that the majority of the Portuguese were neither computer nor Internet users. This analysis, in turn, supported the appropriateness of developing the research based on the concept of innovation interdependence.

However, the use of secondary data was limited due to availability, format and quality of data. There is virtually no data regarding the usage of computers, Internet and e-commerce in Portugal prior to 2000. As a result, there were instances where a more accurate definition of the context of research and a more complete interpretation of the results was not possible. However, the research has benefited significantly from the information regarding computers and the Internet use by the Portuguese population that has more recently become available. Data related to the adoption of e-commerce collected by means of academic research was limited and business reports were scarce. Moreover, existing data related to purchasing over the Internet was usually general (irrespective of the product-category) and data specific to the purchasing of leisure travel was not available. At times this research adopted different definitions than those of the secondary source. For example, the definition of e-commerce adopted in this research (the purchase had to involve an electronic financial transaction) was different to that of UMIC (ordering online and paying offline is regarded as an e-commerce purchase).

Because secondary data could not provide the answers for the research questions, most of the data was collected from **primary sources**. The choice of method (i.e. interviews or questionnaires) was not a straightforward one as each method encompasses many benefits as well as limitations. The rationale for employing questionnaires was explained in detail in section 5.4.5. The initial expectations that the convenience offered by questionnaires would make them the most suitable for this study were confirmed during data collection. Pre-arranging personal interviews would have been difficult as people had very busy personal and professional lives. In most cases cooperation from the respondents was only guaranteed after the household member was assured that the time of personal contact was restricted to a few minutes.

Due to the diversity of the sample regarding their previous experience with the three innovations comprising the conceptual framework, many respondents were asked about behaviours that they had not performed before (e.g. using the Internet). Given the pervasive nature of computers, the Internet and e-commerce in society and the level of coverage the topic has had in the media, it can be expected that individuals were aware of these innovations and had developed attitudes towards using them. Moreover, one does not need to have experience with a behaviour to form attitudes towarding performing that behaviour.

11.2.2.3. Sampling

The social system selected for this research was the Borough of Cascais, a Lisbon district (Portugal). Although a greater geographical coverage would have been desirable, its extension would have been too costly for the (time and money) resources available. Nonetheless, this study provides a valuable contribution to e-commerce adoption research by using a random sample of the general population, which brings to the research arena a large part of the population that have been systematically negleted by previous research. This is in contrast with most previous studies which tended to use convenience samples with little variability regarding demographics or computer/Internet/e-commerce experience. The option of a representative sample of the residents in Cascais is also in line with the frequent calls for researchers studying the adoption of e-commerce to use samples closer to the characteristics of the general population (e.g. Katz and Aspden, 1997; George,

2002; Nicholas et al., 2003; Pavlou, 2003). One advantage of using random samples drawn from the general population is that generalisability of the results is enhanced. In addition, as Vijayasarathy (2004) argued, *"data collected from the general population of consumers can better inform practitioners about the issues that are relevant to consumers in their decision to use the Internet for shopping, and also contribute to the cumulative knowledge about IT adoption"* (p. 748).

One of the characteristics of quantitative studies is their attempt to reproduce the attributes of the target population (Sarantakos, 1998: Fawcett and Downs, 1992). As shown in Chapter 5 (section 5.5.4), the differences between the demographic characteristics of the residents and the actual sample (i.e. those who returned an usable questionnaire) were not statistically significant. Hence, there is strong evidence that as far as demographic characteristics is concerned the actual sample is representative of the residents is Cascais.

As far as the stage in the e-commerce adoption path is concerned, the analysis of the potential (i.e, those who accepted the questionnaire) and actual (i.e. those who returned an usable questionnaire) samples revealed that the actual sample was biased towards those further in the e-commerce adoption path. This was not unexpected as those further along the adoption path were likely to be more motivated to fill-in the questionnaire. However, the analysis never used the sample as a whole and hence the proportion of respondents in each of the stages is not important.

However, claims of representativeness are made solely regarding the Cascais social system and at a given point in time. Therefore, caution should be taken when transferring the results to other social systems, notably to the Portuguese context. In fact, there is some evidence that Cascais is different from other boroughs not only in Portugal but in the Lisbon region. For example, residents in Cascais are younger and have more formal education than the national average (INE, 2001).

11.2.2.4. Questionnaire design

One challenge when designing a questionnaire is the balance between the information needs and the length of the questionnaire. The questionnaire used to collect primary data ranged from 9 to 12 pages and took around 45 minutes to complete. However, several

respondents commented that the questionnaire was long, which could have affected the quality of the answers, notably those towards the end of the questionnaire, due to respondent fatigue (Shaft et al., 2004). This potential effect was mitigated by leaving the questionnaire with the respondent for up to two weeks and hence enabling the respondents to answer at their own pace.

Preparing a data collection instrument that would suit a highly heterogeneous population, with different levels of experience with, and knowledge about, the innovations, different levels of interest in the topic and different literacy levels was challenging as well. On the one hand, it was necessary to make a questionnaire as simple as possible for those with less knowledge or ability to answer; on the other, to make a questionnaire that was not too simple for the knowledgeable and interested. Using short sentences in questions and answers, avoiding using jargon and providing clear explanations about what was being questioned were instrumental in making the questionnaire suitable to all respondents.

Although the conceptual framework postulated that the adoption of e-commerce is influenced by the adoption of both computers and the Internet, due to limitations of questionnaire length some data regarding the adoption of the Internet, notably the cognitive and affective components of attitude and involvement, could not be included in the questionnaire. Future replications of this research could concentrate on both innovations, perhaps by reducing the scope of the variables postulated to influence the adoption of computers. However, caution should be exercised as this is likely to lead to respondent boredom. Although the focus of the question would be different, the respondents would have to answer the same type of question three times (about the computer, the Internet and the purchasing over the Internet).

Question content

The scale regarding the perceived innovation characteristics was fairly comprehensive as it included six innovation characteristics and more than 15 specific attributes. Nonetheless, some changes might contribute to an even more comprehensive and balanced scale. The following changes are recommended:

- Visibility – Use the two items measuring the visibility of purchasing leisure travel over the Internet (verbal and sight visibility) to measure the visibility of using computers for leisure purposes. This would have the benefit of providing a similar framework for both innovations and reduce the scale in one item.

- Compatibility – The item pertaining to compatibility with daily routine should be kept for the compatibility with using computers for leisure purposes. However, it should be adapted to the purchasing of leisure travel over the Internet as this is not a daily task (using computers may, or may not, be). Perhaps the compatibility with the purchasing routine would be more appropriate. A second suggestion regarding the compatibility scale is the substitution of the item related to the approval by friends with an item related to the compatibility with personal liking. For example, the compatibility with the way the respondent likes to spend leisure time (in the case of using computers) and with the way the respondent likes to buy leisure travel (in the case of purchasing leisure travel over the Internet).

- Relative Advantage – one item should be added and another item should be refined. A sentence regarding the saving of cost should be added. For example, this could take the form of "a cheap way to use leisure time" (using computers) and "a way to buy more cheaply" (purchasing leisure travel). The item related to the quality of purchase should be refined in order to eliminate potential doubts regarding whether it is the process or the outcome that it is being assessed. One possible sentence may be "a way to buy more quality products".

- Image – The item regarding compatibility with the image it is wanted to convey to others should be removed as this may overlap with the image attributes.

- Risk – a greater comprehensiveness of the risk attributes is recommended as previous research has consistently shown that this factor is a major influence upon the adoption of e-commerce. The work by Lim (2003) provides an excellent basis on which to develop further items. For example, items pertaining to performance risk and privacy risk could be added to the scale.

These recommendations aim at improving what is already a robust scale by incorporating the experience gained from undertaking the survey and the recent advances in research on the adoption of e-commerce.

Question wording and response format

Wording of a questionnaire is always very important, but more so when conducting research in a country with a different language from that of the published material. The whole set of measures used in the questionnaire had never been translated into Portuguese and translation was problematic at times because in some cases it was difficult to find adequate words in Portuguese. The pre-testing of the questionnaire played an important role in overcoming this difficulty as one of the academics who reviewed the questionnaire had an excellent knowledge of both the English and Portuguese languages.

The questions regarding the reasons for using an innovation could benefit from a change in wording. Reasons may, or may not, be related to benefits. In fact, several reasons for using the innovations were not related to benefits (e.g. curiosity, influence from others, exceptional circumstances). Consequently, Eason's (1988) benefit framework could not be used as a coding matrix. Instead of asking the respondents about the reasons/motives for using the innovations, the question could specifically concentrate on the benefits of using the innovation.

This research questionnaire used a range of response formats, including both open-ended and closed answer questions. Generally speaking, the response formats used throughout the questionnaire were appropriate and provided the opportunity to collect different types of data. However, the data collection and analyses suggests that a few improvements in the response formats are desirable. The questions regarding diversity of innovation experience could not be analysed due to an inadequate response format. Perhaps a response format that included three levels (no experience, little experience, a lot of experience) would be an appropriate one to serve the purposes of the question. Open answer questions were used for the questions regarding using the innovations, while a series of reasons were given as possible justifications for not using the innovations. However, future research could use open-ended questions for gauging the reasons for not using the innovations. This would enable the collection of more detailed information than that offered by pre-coded

questions and would facilitate a better understanding of the relationship between the reasons for using and the reasons for not using.

Question sequence

The questionnaire was divided in four parts, each comprising the questions regarding one of the main variables of the conceptual framework. In this sense, the questionnaire was successful as the questionnaire moved from theme to theme in a logical manner. As far as the specific questions in each of the parts in concerned, the questionnaire began by asking respondents about their experience with using the innovation as these were the simpler and objective. In addition, the motive questions preceded the attitude questions so that a frame of reference was not provided to the respondent.

Pre-test

The pre-test of the questionnaire was made at two stages. First, five Portuguese academics reviewed the questionnaire. Second, the questionnaires received during the first three weeks of implementation of the questionnaire were carefully observed to check whether the expected pattern of answering was being provided. The input of both stages were critical in improving the quality of the questionnaire.

11.2.2.5. Administration of the questionnaire

The administration of the questionnaire was centred on facilitating the collection of a sufficient number of questionnaires in the shortest period of time, while ensuring the implementation of the sampling rules that were defined. For this purpose, it was important to create the confidence that the questionnaire served the purpose it was designed for (academic research). While many respondents were naturally motivated to participate, the vast majority had to be persuaded to do so. This is even more true when the topic of research has little relevance for the respondent. Hence, in order to obtain the necessary

number of questionnaire, it was critical to motivate the respondents to accept, fill-in and return the questionnaire. Two aspects were instrumental in motivating participation:

- Leaving an introductory letter in the dwelling's mailbox before any further contact was made and writing the letters on paper with the logo of the local Tourism and Hospitality Institute;

- The personal visit to the dwelling, which enabled the household members to see the 'face' of the researcher.

One of the biggest challenges related to the administration of the questionnaire was to collect the necessary number of questionnaire in a reasonable time. However, due to the short open-window, the researcher could only deliver questionnaires during two hours every day. For this reason, an interviewer was employed during four months. Limitations of time and money prevented the employment of more interviewers and the collection of a larger number of questionnaires. The questionnaire was administered from the end of January to early December. Given its dynamic nature, it is possible that some changes in the process of adoption of e-commerce occurred during the period of data collection. As the national data shows (UMIC, 2002), there were virtually no changes in relation to the number of computer, Internet and e-commerce users and in their patterns of usage of these during 2002 (the year of the primary data collection). Consequently, no impacts upon the results of the research are anticipated.

Generally speaking, it can be argued that the strategy developed to administer the questionnaire was successful as the proportion of respondents refusing to participate (i.e. not accepting to provide at least the personal details) was low (less than one third).

11.2.3. Evaluation of the analytical approaches

This research employed quantitative analytical approaches. Univariate statistics (mean, median and frequency) were employed to describe the data. Bivariate statistics (Chi-Square, Mann-Whitney and Kruskal-Wallis) were employed for testing the null hypothesis that there were no differences between the sub-groups of the independent variable. When the variable was categorical, Chi-Square analysis was performed. However, in some cases the

data did not meet the statistical validity/reliability criteria for Chi-square analysis due to expected cell constraints. Two options were available. First, the number categories (dependent variable answers) could have been shortened in order to reduce the number of cells. While this would have resulted in the expected cell criterium being met, the detail of answers would be reduced to an extent that the logical interpretation of the data would have been affected. A second alternative, adopted in this research, was not to use the results of the test and employ subjective analysis rather than objective (based on statistical tests) interpretation.

When the variables were ordinal or interval/ratio, both parametric (t-test and ANOVA) and non-parametric (Mann-Whitney and Kruskal-Wallis) were performed to test for differences between groups. The significance values were very similar and only in the very few cases where the significance value was very close to the 0.05 level might there be some differences in rejecting or accepting the null hypothesis. While using both tests could have resulted in similar conclusions, non-parametric tests were regarded as more appropriate as (1) they are less sensitive to the number of cases in each of the sub-groups of the independent variable, (2) in virtually all the variables the data was not normally distributed and (3) in essence Likert and semantic differential scales are ordinal variables.

There are two possible types of error associated with employing bivariate tests. Type I error occurs when the null hypothesis is rejected when it should have not, whereas Type II error occurs when the null hypothesis is not rejected when, in fact, should have been. While a significance value of, for example, 0.1 would have reduced the probability of making a Type II error, a lower significance value (for example the 0.05 adopted in this research) provided a stronger evidence for rejecting the null hypothesis and hence reduced the probability of making a Type I error.

From a more practical perspective, because the significance value adopted has an impact on the number of statistical differences, the choice of significance value can influence the interpretation of results. For example, one significant difference emerged in the affective feelings regarding the purchasing of leisure travel using the 0.05 significance level; if a less conservative approach had been adopted (for example, 0.1), there would have been two additional statistical differences. From the two types of error a Type I error is a more serious failure (Diamantopoulos and Schelelmilch, 2000) and hence, the significance value

of 0.05 was employed in this study. In addition, this is the significance value used by the vast majority of the researchers in consumer behaviour.

Partial response is common in self-administered questionnaires (Sarantakos, 1998). Despite during the personal contact, as well as in the questionnaire instructions, the need to answer to all the questions was highlighted, partial response was evident notably by the non-Internet users. Three scenarios are possible:

- Those who did not fill-in the whole questionnaire had a more positive perception than those who did. If this was to be the case, then the number of statistical differences between the non-Internet users and the other two subgroups would have been reduced.

- The perceptions of those who fully answered the questionnaires were similar to those of the respondents who returned an incomplete questionnaire. If this was the case, the results would remain the same.

- The non-Internet users who did not fill-in the whole questionnaire had more negative perceptions that those who did. The likely result would be a larger magnitude of the statistical differences between the non-Internet users and the Internet users/purchasers and hence the interpretation of the results would not change much. However, there were not many statistical differences between the non-Internet users and the Internet users regarding purchasing leisure travel over the Internet. In this case, a greater number of differences could appear and this could change some of the interpretation and conclusions.

Finally, in some of the open answer questions (notably related to the travel purchasing patterns and payment of purchases) the sub-groups of the independent variable very few respondents. Nonetheless, the frequency of each answer is provided in the table with the aim of illustrating the types of answers the respondents gave. However, caution should be taken when using the data to make generalisations to the population.

In summary, this chapter has demonstrated the overall validity, comprehensiveness and representativeness of the research. As in any study, the research has many strengths and weaknesses. However, the strengths outweigh by far the weaknesses and these, it is argued, do not affect the overall merits of the research. The study has also identified many

opportunities for further research using the findings of the research reported in this thesis as a departure point. A summary of the main strengths, weaknesses, threats and opportunities is provided in Table 11.1.

Table 11. 1: SWOT analysis of the study

	Theoretical Approach	Methodological Approach	Analytical Approach
Strenghts	• Greater comprehensiveness of the adoption process by studying the entire e-commerce adoption network • Integrating constructs from several models provides a broader perspective of the adoption of an innovation as well as greater explanatory ability of the model	• Use of a representative sample of residents (demographically speaking), enhancing the generalisability of the results • Collection of a large amount of data from each of the respondents	• Use of well established statistical tests for hypothesis testing • Use of tests appropriate to the type of data non-parametric tests – ordinal data) • Using a level of significance accepted as standard in consumer behaviour research
Weaknesses	• Assuming that every individual had developed attitudes • Other constructs that past research has suggested as being related to the adoption of innovations not included (e.g. psychographics) • Little consideration given to the dynamics of the family/travel party as an influence on the choice of purchasing channel	• Use of only quantitative data • Specific geographical scope (data from one borough in one country) and focus on one sub-sector of one industry (leisure travel) • Questionnaire pre-tested on experts, not on the general population	• Only univariate and bivariate statistics were used • Subjective analysis rather than objective (i.e. based on hypothesis testing) was undertaken because in some cases the Chi-Square test could not be performed
Oportunities	• Testing the model using other theories (e.g. service quality, transaction cost analysis) • Opportunity to test the model using the adoption theory but adding other constructs (e.g. trust, personality)	• Using a mixed methodology by including both quantitative and qualitative methods • Testing the model using other countries and/or product-categories	• Larger sample could facilitate the use of multivariate statistics
Threats	• Application of a common conceptual framework for the adoption of each of the innovations	• Partial response, notably by the non-Internet users, could hinder the results • Long questionnaire could have caused respondent fatigue • Non-Internet users underrepresented in the actual sample with potential consequences for the representativeness of the sample	• The results could have been different if a different conceptualisation of stages in the e-commerce adoption path (e.g. current usage, intention to use e-commerce) has been used • Using hypothesis testing could have resulted in commiting Type I and Type II errors

11.3. Discussion of the results

Having discussed the main theoretical, methodological and analytical issues affecting this research, this section attempts to draw together and discuss the results presented in Chapters 6 to 10. The discussion will be carried out in relation to previously published results and theoretical expectations. Due to the innovative character of this research, the task of comparing the results was a challenging one as in some cases there was no previous research that could be used for comparison. This was particularly evident in respect of the relationship between the adoption of computers and the adoption of e-commerce.

The discussion is centred on the practical significance of the descriptive data and on the results of the hypothesis testing, based on the following definition of three stages in the e-commerce adoption path:

- Stage 1 – Individuals who had never used the Internet (non-Internet users)
- Stage 2 – Individuals who used the Internet but had never purchasing by the means of e-commerce (Internet users)
- Stage 3 – Individuals who purchased a product/service over the Internet (Internet purchasers)

11.3.1. Demographic characteristics

One of the personal characteristics that the literature review indicated as related to the adoption of innovations were the demographic characteristics (see Sections 3.4.4., 4.3.5 and 4.4.6 for review). The results of this investigation indicated that there are demographic differences between the stages in the e-commerce adoption path. This is consistent with previous assertions suggesting demographic differences between users and non-users of such innovations (Rogers, 1995; Ram, 1987). Research undertaken in the field of e-commerce in general (Bellman et al., 1999; Li et al., 1999; Vrechopoulos et al., 2001; Burroughs and Sabherwal, 2002; Shiu and Dawson, 2002; Slyke et al., 2002; Worthy et al.,

2004) and in the adoption of e-commerce in the purchasing of travel (Morrison et al., 2001) has also highlighted such differences.

However, the results also indicated that the demographic differences vary according to the stage in the e-commerce adoption path. Generally speaking, demographic differences were more accentuated in the early stages of the adoption path than in later stages. Hence, while understanding demographic patterns remains important within the context of e-commerce, its importance appears to decrease as people proceed along the e-commerce adoption path.

The demographic characteristics of the Internet purchasers match those of previous studies (Vrechopoulos et al., 2001; Shiu and Dawson, 2002). These individuals tend to be young, well educated and students or economically active. Moreover, this study also confirmed previous reports that early adopters of e-commerce are mainly males (Shiu and Dawson, 2002; Slyke et al., 2002; Yang and Lester, 2005).

Contrary to expectations, the Internet users did not differentiate from the Internet purchasers in respect to age, education and economic status. Previous research has suggested that demographic differences exist between the Internet users and the Internet purchasers in the early stages of e-commerce development (Burroughs and Sabherwal, 2002). However, there have been suggestions that these differences tend to disappear with the increase in the market penetration of e-commerce (Lohse et al., 2000). Hence, one plausible explanation is that at the time of data collection (data was collected in 2002) e-commerce was already at a level of development which had overcome the initial differences in these three demographic indicators. Another possible explanation is related to the specific characteristics of the sample (representative sample of an affluent borough of a southern European country) as there have been suggestions that demographic differences could also be related to the sample being used (Shiu and Dawson, 2002; Yang and Lester, 2005).

Clearly, the non-Internet users appeared to have different demographic characteristics to those in the other two stages. The demographic profile of the non-Internet users resemble those who have been excluded from the world of information technology as they tended to be older females, have low levels of formal education and be economically inactive. This is consistent with previous studies (Selwyn et al., 2005) reporting a relationship between use of the Internet and demography. Given their age (mean 50 years) the non-Internet users

had not had the opportunity to learn how to use the Internet in school as it was not available when they were younger. Not only were almost half of the non-Internet users economically inactive, but because their education level was quite low (nearly half had less than 4 years of formal education) it is unlikely that those who were employed, or had been employed until recently, ever had jobs which required the use of computers and the Internet. In addition, while they might have had the opportunity to use computers and the Internet in contexts other than education or work, it is also possible that these individuals had developed the perception that computer-based technologies are for the young and educated, not for the old and illiterate. Thus, the opportunities, lived experiences, needs and motivations of these individuals did not facilitate their usage of the Internet (Selwyn et al., 2005).

11.3.2. The adoption of computers and the Internet for leisure purposes

One of the innovative features of this investigation was the emphasis placed on the adoption of computers and the Internet in relation to the adoption of e-commerce (see Section 4.3 for a review of previous research on the adoption of computers and the Internet). This section discusses the findings related to the adoption of these two innovations and assesses their significance to the study of the adoption of e-commerce. According to the conceptual framework of this research, the adoption of computers and the Internet are postulated to be different (but interrelated) phenomena. However, they are discussed together due to a matter of logic and due to the fact that a joint discussion makes it easier to gauge the relevance of the specific variables across the two innovations.

11.3.2.1. Innovation experience

A review of the literature suggested a relationship between experience with using computers and the Internet and the adoption of e-commerce (see Section 4.3.3 for a review of the concept of innovation experience). The findings of this research agree with these discussions that claim that consumers who are more familiar with computers and the Internet have moved further along the e-commerce adoption path (Bellman et al., 1999;

Liao and Cheung, 2001; Aldreck and Settle, 2002; Slyke et al., 2002; Pechtl, 2003). The findings also support previous assertions regarding the relationship between familiarity with technology and the adoption of information technology innovations (Agarwal and Prasad, 1999). However, when compared to the experience with the Internet, the differences regarding experience with using computers were not as important in explaining being an Internet purchaser. Thus, the importance of familiarity with the Internet appears to be more critical than the familiarity with using the computers at later stages in e-commerce adoption path.

Amount of use

The survey showed that the Internet purchasers had not only used computers for the first time at an earlier stage of computer development, but they also had used the Internet for the first time earlier in the Internet development when compared to the Internet users. Consequently, it can be argued that the early adopters of e-commerce were drawn from the early adopters of computers and the Internet. Perhaps these individuals hold the characteristics of innovators as described by Rogers (1995) and Goldsmith and Hofacker (1991), such as a latent interest in new ideas, and hence adopting e-commerce was a natural step.

The Internet purchasers consisted of individuals for whom using computers and the Internet were an integral part of their life, or as Slyke et al. (2002) put forward, appeared to hold a 'wired lifestyle'. Perhaps because they tend to be more familiar with using computers and the Internet, what apparently distinguishes the Internet purchasers is that they felt more comfortable with using these technologies for a new purpose – purchasing.

While past research has usually failed to differentiate between place of usage and purpose of usage (e.g. Alreck and Settle, 2002), the results of this study suggest that these are associated with the stage in the e-commerce adoption path. When differences were found, it was not leisure use that explained differences in the stage, but business usage. It can be argued that there is only a certain amount of time individuals can allocate to using these technologies for leisure purposes. In contrast, a job may, to a greater or less extent, require the use of computers and the Internet.

Despite being generally experienced users of the both technologies, the Internet users had less experience with using computers and the Internet when compared to the Internet purchasers. When compared to the Internet purchasers, the Internet users were later adopters of computers and the Internet and were less likely to be current users of these technologies, as around 30 percent of the Internet users did not use computers and the Internet for leisure purposes on a regular basis. Since most of these non-current users had used computers and the Internet for leisure purposes in the past, Rogers' (1995) proposition that later adopters are more likely to discontinue innovations than earlier adopters is supported by the findings of this research.

A proportion of the non-Internet users (55 out of the 98 respondents) had previous experience with using computers (but not with the Internet). However, contrary to the expectations, no differences were found between the non-Internet users and the Internet users regarding the stage of computer development when they first used computers. Despite both groups having used computers for the first time at the same stage of computer development, the question remains as to why some used the Internet in the past (the Internet users) while others did not (the non-Internet users). An analysis of the motives for not using computers and the Internet for leisure indicates that not only was a lack of access to computers the most frequent motive for not being a current user of computers for leisure purposes, but the results also suggest that the non-Internet users had less access to computers and the Internet than those further in the e-commerce adoption path. Thus, it appears that the non-Internet users' lack of progress to becoming an Internet user was apparently related to both a lack of opportunity and a lack of interest.

Opportunity to use

The findings related to access to computers and the Internet support the contention that the greater the opportunity to use, the further along the e-commerce adoption path. This provides further evidence of a positive relationship between the adoption of computers and the Internet and the adoption of e-commerce.

Not only did all the Internet purchasers have access to computers and the Internet, but they enjoyed greater choice of place from where to use the Internet, a result that is consistent with other studies (Wigand, 1997; Shim et al., 2001; Efendioglu and Yip, 2004;

Worthy et al., 2004). This supports the contention that the Internet purchasers tend to be individuals whose personal and professional lives are, to a greater extent, surrounded by the Internet.

Generally speaking, lack of access was not an issue for the Internet users. All had access to computers and virtually all had access to the Internet either at home or at their work/college. However, the Internet users appeared to have less opportunity to use the Internet at such an important place as the home. As Dickey et al. (2000) noted, the home provides more privacy in using the Internet and influences the amount of time individuals can spend using it. It is possible that by not having access to the Internet at home some individuals do not enjoy the time and tranquillity necessary to carry out their first purchase over the Internet.

Unlike the Internet users and purchasers, usage of computers and the Internet by the non-Internet users was significantly hampered by the opportunity to use these technologies. Based on their economic status and education, it can be suggested that many of the non-Internet users were unlikely to need computers and the Internet for working or studying. Hence, it is possible that they viewed the outlay associated with purchasing a computer and subscribing to the Internet to use simply for leisure purposes as not worthwhile. In addition, they tended to be older and hence they were not likely to have children living at home. Yet, past research has shown that children are a very important factor in the acquisition and use of computer-based technologies at home (Van Rompaey et al., 2002). It is also possible that many of the non-Internet users did not have the necessary financial resources for acquiring the technology. The non-Internet users had lower levels of formal education and low education attainment is usually associated with low income. Although computer prices have dropped in the past years, spending in excess of 500 euros in such technology in a country where the minimum salary is less than 450 euros per month, and where many state pensions are below this amount, is likely to be an expense that many could not afford.

11.3.2.2. Attitude

Previous studies (Li et al., 1999) have suggested that attitudes towards using the Internet influence the adoption of e-commerce (see Sections 3.3. and 4.3.2 for a review of research on attitude). The results of this research support and extend previous findings by suggesting that both the attitudes towards using computers and towards using the Internet are related to the adoption of e-commerce. In broad terms the results conformed with the theoretical expectation that the further along the e-commerce adoption path, the more positive was the attitude. However, the importance of the attitude components appear to vary across the stages. As far as using computers for leisure purposes is concerned, while the cognitive component appears to be important irrespective of the stage, its importance decreases as one progresses along the path. The affective component appears to be not relevant early in the e-commerce adoption path, but its relevance grows as one progresses further along the path. Finally, the results regarding the conative component demonstrate that intention to use computers and the Internet play a significant role in explaining the stage in the path. A discussion regarding of each of the components of attitude is set out below.

Cognitive component of attitude

The results have shown that the individuals in the three stages of the e-commerce adoption path had different beliefs about using computers for leisure purposes. However, those differences were less accentuated as one progressed along the path. For the Internet users and purchasers, using computers for leisure purposes was a matter of continuing use or re-starting use (those who were not current users), while for the majority of the non-Internet users it was a matter of initial use. Thus, the results support previous investigations (Agarwal and Prasad, 1997) that found that fewer perceived innovation attributes are relevant in explaining continuing usage when compared to initial usage. In addition, the results are also consistent with previous assertions that different characteristics are relevant for continuing and initial usage (Agarwal and Prasad, 1997). Initial usage was explained by complexity, compatibility, image and perceived risk, while continuing usage was explained by complexity and visibility. With the exception of visibility, the relationships between the

perceived innovation characteristics and the stage in the e-commerce adoption path were in the direction predicted by prior research on the adoption of innovations (Rogers, 1995).

Complexity

The inverse relationship between complexity of using computers for leisure purposes and the stage in the e-commerce adoption path does not come as a surprise. Based on the findings regarding computer experience, it appears that the more experienced the individuals, the lower the perceived complexity. The adoption of innovations theory (Rogers, 1995) provides a possible explanation for this relationship. According to the theory, experience is one of the main sources of learning and greater experience with using an innovation is expected to lead to greater knowledge about that innovation. If an individual has greater knowledge about using an innovation then he/she is likely to regard its use as less complex as the person knows what to do in order to make the innovation perform in the way he/she wants to.

The Internet users and the Internet purchasers' perception that computers are simple to use and easy to learn was not unexpected, as was the perception of the non-Internet users that computers are complex to use and hard to learn. Both the Internet users and purchasers were quite familiar with using the technology. In contrast, the non-Internet users had little or no knowledge about using computers. Additionally, given their demographic characteristics it is also likely that they had little or no knowledge about using technologies in general. Hence, they could not use the knowledge obtained with using other technological innovations to the use of computer-based technologies. Moreover, the non-Internet users tended to be older and less educated and these are usually related with the ability to learn, notably about how to use innovations (Rogers, 1995).

Visibility

Although the relationship found between visibility and the stage in the e-commerce adoption path was not surprising, the direction of the relationship was unexpected. The general contention is that the higher the visibility of the innovation, the greater the likelihood of an innovation to be adopted (Moore and Benbasat, 1991). However, contrary

to the expectations, using computers for leisure purposes was more visible for the non-Internet users and the Internet users when compared to the Internet purchasers. Two explanations for this finding are possible. First, the Internet purchasers, being the innovators of computer technologies, did not need to rely on watching others using computers as a source of information. Their expertise gave them the ability to explore computers without the need to learn from others. The other potential explanation is that as computers become an essential part of life, the interest and attention of the individual towards seeing others using computers decreases. Consequently, the Internet purchasers neither had the need, nor the habit, of looking at what others do when using computers. In light of this reasoning, the lack of difference between the non-Internet users and the Internet users regarding visibility was surprising. Perhaps only when computers become an integral part of their lives (as was the case of the Internet purchasers), does the perception of visibility decrease.

Compatibility

The findings of this research revealed that using computers for leisure purposes was less compatible for the non-Internet users than the Internet users and purchasers. More specifically, the non-Internet users were less likely to regard using computers for leisure purposes as compatible with their daily routine. These results were not unexpected since an overwhelming majority of the non-Internet users were not current users of computers for leisure purposes. In addition, given their age, these individuals were likely to have had developed over time patterns for using their leisure time which did not involve using computers. The lack of difference between the Internet users and the Internet purchasers regarding compatibility with daily routine can also be interpreted in the light of the current usage of computers for leisure purposes. Most were current users of computers for leisure purposes and for those who were not the main reason for not using computers was a lack of need. Hence, they did not use computers because they did not want to, not because they could not fit it into their daily routine. The absence of differences in the level of approval by friends, coupled by a large concentration of answers at the positive side of the scale, suggests that computers had become socially acceptable by the majority of the people, irrespective of the stage in the e-commerce adoption path they were in.

Relative advantage

One underlying assumption behind the adoption of innovations model and other models (e.g. TAM) is that the extent to which people perceive benefits influences their performance of the behaviour (Davis, 1989; Rogers, 1995). Hence, a relationship between the benefits of using computers for leisure purposes and the stage in the e-commerce adoption path was anticipated. However, this study found no such relationship. A large proportion of the respondents in each of the stages agreed that computers were a way to execute tasks faster and with less effort and a way to improve the quality of the tasks. Therefore, it seems that the benefits of using computers for leisure purposes were widely recognised among the residents of Cascais, irrespective of their previous experience with computer-based innovations. However, there was less agreement that using computers was a way to enhance quality of life. This suggests that respondents recognised the more tangible benefits of using computers for leisure purposes, but had more difficulty in perceiving the more intangible benefits such as the contribution for improving their quality of life.

Image

In general the statement regarding the image associated with using computers for leisure purposes received very little support. This is not surprising since at the time of the research using computers had reached mass use and hence using computers was likely to be more or less common within the social system of the individual. However, the non-Internet users agreed more than the Internet users and purchasers that using computers for leisure purposes was an opportunity to increase prestige among friends and a means to build a positive self image. Maybe because they belong to social groups where using computers was less common, they would feel more 'updated' or 'sophisticated' if they were able to use them. In contrast, the social context of the Internet users and purchasers was likely to be characterised by the widespread use of computers and other technologies and hence using computers would not differentiate them from their friends in order to enhance their image.

Perceived Risk

As expected, using computers for leisure purposes was not perceived as risky by the individuals in the three sub-groups. However, the non-Internet users attached a higher level of time risk than the Internet users and purchasers to using computers. One possible explanation is the non-Internet users' lower level of involvement with using computers for leisure purposes when compared to the Internet users and purchasers. Performing a behaviour that is not regarded as relevant is likely to be perceived as a waste of time as it is not fulfilling the individual's needs. Given that the Internet users were also less involved with using computers for leisure purposes than the Internet purchasers, one would expect also a difference between them regarding time risk. However, this expectation was not confirmed. Perhaps both groups had reached a positive level of involvement that led them to regarding using computers as not a waste of time.

Affective component of attitude

Given the number of differences regarding beliefs, one would expect that these differences would translate into differential affective feelings towards using computers for leisure purposes. However, in broad terms the respondents had similar positive affective feelings towards using computers for leisure purposes. Thus, when compared to the beliefs, the affective feelings about using computers for leisure purposes appear to be less relevant in explaining the stage in the e-commerce adoption path. The exception was the Internet purchasers indicating that they would feel more confident than the non-Internet users and the Internet users when using computers for leisure purposes. This is probably better explained by their greater level of familiarity with using computers for leisure purposes. The lack of differences in affective feelings between the non-Internet users and the Internet users was a surprising result. Perhaps due to their greater degree of innovativeness only the innovators develop different levels of affective feelings towards using the computers.

Conative component of attitude

The conative component of attitude was studied using the concept of intention to use. The results have shown that the further the stage in the e-commerce adoption path, the greater the intention to use computers and the Internet for leisure purposes both in the near and long term future. This finding suggests that once an individual progresses along the e-commerce adoption path the willingness to use computers increases. However, an analysis of the frequencies showed that the differences in intention were greater earlier in the adoption path. This further supports the contention that as one advances along the e-commerce adoption path the differences regarding the adoption of computers for leisure purposes, even if existing, lessen.

11.3.2.3. Motives

The factors influencing the use of computers and the Internet were also found to be related to the stage in the e-commerce adoption path (see Sections 3.4.1. and 4.3.4 for a review of research on motives). However, the results suggest that the differences exist early in the e-commerce adoption path but not in the later stages. As far as using computers for leisure purposes is concerned, the non-Internet users appeared to be driven by the entertainment opportunities, such as playing games, with little importance being given to using the Internet. In contrast, the Internet played a significant role in leading the Internet users and purchasers to use computers for leisure purposes. For a proportion of the individuals in these two-sub-groups, using computers equals using the Internet. This suggests that the non-Internet users' lack of progress to the next stage in the e-commerce adoption path is probably related to their little motivation for using computers for performing Internet-related tasks.

Browsing was the most frequent reason for using the Internet for the individuals in each of the three stages of the e-commerce adoption path. However, the motives for initial use of the Internet for leisure purposes appear to be different to those for continuing use. The differential importance of communication as a motive to use the Internet has been noted before (Weber and Roehl, 1999). However, contrary to Weber and Roehl's study, differences were not found between online and offline purchasers but between the non-

Internet users and the Internet users/purchasers. Given that they are equally young and educated, perhaps the Internet users and purchasers had a greater number of social networks and hence they regarded the Internet as very useful in maintaining contact with friends and relatives.

11.3.2.4. Involvement

Another important characteristic that differentiated each of the stages in the e-commerce adoption path was the level of involvement with using computers for leisure purposes see Sections 3.4.2 and 4.3.4 for a review of research on involvement). The direction of this relationship supported the theoretical expectation that the further along the e-commerce adoption path, the greater the involvement with using computers for leisure purposes. This result also supports previous results on the relationship between involvement with the e-commerce satellite innovations and the adoption of e-commerce (Goldsmith, 2002). However, it was evident that once an individual progressed to the second stage of the path the differences in involvement with using computers were less evident. For example, the Internet users and purchasers differentiated only in respect of how important using computers for leisure purposes was, while the non-Internet users regarded using computers as less valuable, less important, more useless and more dispensable than those further along the path.

11.3.2.5. Summary of the section

In summary, the results of this study support the assertion that the adoption of computers and the Internet are closely related to the adoption of e-commerce. Overall, the results suggest that many of the propositions regarding the relationship between the adoption of the Internet and the adoption of e-commerce can be extrapolated to the adoption of computers. However, the relevance of variables related to the adoption of computers appears to decrease along the e-commerce adoption path. It is more difficult to ascertain a clear pattern regarding the relationship between the adoption of e-commerce and the adoption of the Internet as the number and variety of variables related to the adoption of

this innovation was more restricted. While it appears that the variables related to the Internet are important at every stage in the e-commerce adoption path, more research is needed in order to confirm this preliminary conclusion.

11.3.3. Product category behaviour

According to the conceptual framework of this investigation, travel purchasing and consumption behaviours influence the adoption of e-commerce in the purchasing of leisure travel. Four factors were examined: the travel frequency, the participation in the purchasing process, the preference for purchasing channels and the preference for communication means (see Section 4.4.5 for a review of research on the product category behaviour).

11.3.3.1. Travelling frequency

According to previous research, the more frequent the purchasing of the product category the greater the likelihood of using e-commerce in the purchasing of that product-category (Goldsmith and Goldsmith, 2002; Girard et al., 2003). An examination of the travelling frequency of the respondents indicated that the further along the path the greater the travel frequency of the respondents. As a consequence, the further along the e-commerce adoption path, the greater the probability of becoming a user of e-commerce in the purchasing of leisure travel. In addition, Rogers' (1995) assertion that early adopters of innovations are more cosmopolitan that later adopters is also supported within the context of adoption of e-commerce.

11.3.3.2. Participation in the reservation of leisure travel

While the majority of the individuals in each of the three sub-groups would perform the purchaser role either always or most of the time, the results indicate that the Internet purchasers were more likely to delegate the task to others. One plausible explanation for

the Internet purchasers' differential participation in the reservation of leisure travel may be a greater flexibility of roles within their social network. It is also possible that as they travel more frequently, they are not so keen on performing the travel reservation task all the time and tend to share that task with others.

11.3.3.3. Preferred purchasing channel

According to official data (DGT, 2004) only around 20 percent of the Portuguese use travel agencies. However, as explained in Chapter One (Section 1.1.5.2), this percentage is based on the total number of individuals going on a holiday, irrespective of whether that holiday actually involves purchasing travel components. Thus, it can be argued that the approach used in this research, which is based on the number of journeys encompassing the purchasing of a travel component, is more appropriate for calculating the importance of travel agencies as a purchasing channel. This perspective is closer to the notion of market share, defined in the context of this research as the ratio of purchases from travel agencies to the total of purchases. The results indicated that around 70 percent of the leisure journeys that involve the purchase of travel would be purchased always or most of the time from travel agencies. Thus, it can be concluded that the importance of travel agencies as a purchasing channel has been under estimated and that travel agencies play a much more important role within the marketing of leisure travel in Portugal than expected.

At the time of the research Portuguese travel agencies had little participation in e-commerce (see section 1.1.5.2). For example, none of the three main travel agencies (Abreu, Top Tours and Space Travel) provided online booking facilities. As a consequence, for the majority of the respondents, buying leisure travel over the Internet would require not only changing their behaviour towards using an online provider, but probably selecting a new provider.

11.3.3.4. Preferred communication means

Media-choice theory postulates that media are selected according to the characteristics of the media and the task. Any task involves a particular degree of uncertainty and equivocallity (Daft and Lengel, 1986; Daft et al., 1997; Heeren and Lewis, 1997). Uncertainty refers to whether information is missing and hence the information task focuses on the transmission of a sufficient amount of information. Equivocallity arises when the information may be interpreted in different ways and hence the information task is focused on developing shared understandings and frameworks of reference. Based on four dimensions (interactivity, multiple cues, language variety, social-emotional cues), media can be placed across a continuum from rich to lean. The general contention is that rich media are suitable for dealing with equivocal situations and lean media are more appropriate for reducing uncertainty.

A final behaviour that was postulated as influencing the adoption of e-commerce in the purchasing of leisure travel was the preferred communication means when the respondents contacted a travel supplier (the task). Three communication media were selected: face-to-face, telephone and e-mail. Based on the media-richness theory principles, face-to-face is the most rich medium and e-mail the most lean medium. The richness of the telephone lies between face-to-face and email (Heeren and Lewis, 1997).

The results demonstrate that as one progresses further along the e-commerce adoption path, the preference for lean communication media when contacting leisure travel providers increases. In addition, it seems that the Internet purchasers were markedly different regarding their preference for communication means, while the difference between non-Internet users and the Internet users was not so evident.

For the Internet purchasers the telephone was the preferred, and face-to-face the least preferred, communication means. Given that the Internet users preferred more lean means than the remaining two sub-groups, it seems that they are more concerned with uncertainty than with equivocallity. Bearing in mind their greater experience with travelling, and presumably with purchasing travel, they are likely to have a greater familiarity with the process of travelling, its intricacies and terminology. Thus, they are more concerned with

whether they have all the information they want rather than whether they correctly interpreted the information.

In contrast, the preference of the non-Internet users was clearly for a richer media. Therefore, the non-Internet users were more concerned with equivocallity than with uncertainty. Perhaps due to their lower level of experience with the consumption and purchasing of travel, they are likely to have little knowledge about the process of purchasing travel. Hence, they prefer a medium which has the ability of reducing communication ambiguity to a minimum. The Internet users tend to have similar preferences to those of the non-Internet users. However, the results suggest that some had moved towards preferring more lean media as more than 20 percent indicated face-to-face as the least preferred communication means.

11.3.3.5. Summary of the section

In summary, an examination of the product category behaviour suggests that the Internet purchasers are the group with the highest likelihood of being the users of e-commerce in the purchasing of leisure travel. In contrast, the travel purchasing and consumption behaviour of the non-Internet users appeared not to facilitate the adoption of e-commerce. The Internet users showed a greater degree of preparation for e-commerce than the non-Internet users and one encouraging factor was their greater frequency of travelling. However, the preference for more personal communication means was a factor discouraging their adoption of e-commerce in the purchasing of purchasing leisure travel.

11.3.4. The adoption of purchasing leisure travel over the Internet

This section focuses on discussing the results regarding the adoption of purchasing leisure travel over the Internet. The structure followed is similar to that used for computers and the Internet, with a section related to the payment for purchases added.

11.3.4.1. E-commerce experience

Not all the Internet purchasers had purchased travel over the Internet. While slightly more than half had hands-on experience with purchasing travel over the Internet, nearly half had never used the Internet for purchasing travel. Thus, the results suggest that the adoption of e-commerce is product specific. Books and CD's were the most purchased products, a finding that is similar to that found for national samples (UMIC, 2002). However, the travel components ranked higher than national samples. This might be related to the greater travel purchasing frequency of the residents of Cascais when compared to the average of the country. It is also possible that the list of products/services given influenced this result as 6 of the 12 products were related to travel.

11.3.4.2. Attitude

The results of this study clearly indicate that the attitude towards purchasing leisure travel over the Internet is related to the stage in the e-commerce adoption path (See Sections 3.3. and 4.4.2. for a review of attitudes). Without exception, the differences that were found followed the expected pattern that the further along the path the more positive the attitude. However, those differences were not uniform across the stages in the adoption path. The Internet purchasers clearly had a more positive attitude when compared to those in the two earlier stages. Thus, previous assertions that e-commerce users have more favourable attitudes towards purchasing over the Internet (Goldsmith and Goldsmith, 2002; Pechtl, 2003; Chen and Tan, 2004; Vijayasarathy, 2004) remain valid for leisure travel. The differences between the non-Internet users and the Internet users were less apparent. Although the two sub-groups had different levels of familiarity with computers and the Internet and different levels of consumption of travel, these appear to have little effect upon the attitude towards using e-commerce in the purchasing of leisure travel. One plausible explanation for the near similar attitude of the non-Internet users and the Internet users regarding purchasing leisure travel over the Internet is their equally strong preference for personalised purchasing channels.

Cognitive component of attitude

While there were many differences regarding the beliefs about purchasing leisure travel over the Internet, these were more evident at later stages in the e-commerce adoption path. Complexity and compatibility were found to differentiate the non-Internet users from the Internet users and the Internet purchasers, while complexity, visibility, compatibility, relative advantage and perceived risk were found to differentiate the Internet purchasers from the other two groups. Thus, results of this research support the claim that initial use of an innovation is influenced by a richer set of characteristics (Agarwal and Prasad, 1997) and those differential levels of non-use of that innovation are influenced by fewer characteristics.

Complexity

The perception of complexity associated with purchasing leisure travel over the Internet was inversely related to the stage in the e-commerce adoption path. This is consistent with previous research on the adoption of innovations in general (Rogers, 1995) and in the adoption of purchasing over the Internet (Gefen and Straub, 2000; Childers et al., 2001; Verhoef and Langerak, 2001; Chen et al., 2002; Vijayasarathy, 2004). The results are also consistent with previous assertions that in the services context, particular emphasis must be placed on the complexity of purchasing over the Internet (Liu and Wei, 2003) if the adopter base is to be extended. The differential perceptions regarding complexity can perhaps be better explained by their differential familiarity with the behaviours postulated to influence e-commerce adoption: using computers and the Internet, purchasing over the Internet and the consumption of travel.

Visibility

The relationship between the visibility of purchasing leisure travel over the Internet and the stage in the e-commerce adoption path was not a surprise. However, while there was a difference regarding verbal visibility, no differences emerged in terms of sight visibility. The fact that an equal and large proportion of the respondents disagreed that they had seen others purchasing leisure travel over the Internet is perhaps explained by the private nature

of the behaviour. The number of individuals in the social system (Cascais) who had purchased leisure travel over the Internet tended to be small (around 10 percent of the total sample of this study) and in the national context was much smaller. Hence there were not many opportunities available for watching someone purchasing leisure travel over the Internet.

The higher level of verbal visibility of the Internet purchasers when compared to the non-Internet users and the Internet users also conforms with the theoretical expectations. Previous research has shown that the innovators tend to be opinion leaders and communicators regarding the innovation (Rogers, 1995). In addition, the results of this study have shown that the Internet purchasers were more involved with purchasing leisure travel over the Internet than the remaining two sub-groups. Involvement research has demonstrated that one of the likely consequences of high involvement towards performing a behaviour is a greater propensity to discuss with others about that behaviour (e.g. Dholakia, 2001). Thus, the higher level of verbal visibility of the Internet purchasers can be explained in the light of the innovativeness and involvement concepts.

The absence of differences between the non-Internet users and the Internet users in the level of verbal visibility can be partially explained by their similar level of involvement. From the eight items comprising the involvement scale these two sub-groups only differentiated in respect of how important purchasing leisure travel over the Internet was. Moreover, there was no statistical difference between them in the aggregated involvement category.

Compatibility

The results indicated that purchasing leisure travel would not be disapproved by friends, irrespective of the stage in the e-commerce adoption path. This suggests that the use of e-commerce in the purchasing of leisure travel appears to be a socially accepted behaviour within the borough of Cascais.

Relative advantage

Consistent with previous research on the adoption of e-commerce (Strader and Shaw, 2000; Eastin, 2002; Chang et al., 2005; Efendioglu and Yip, 2004), the Internet purchasers perceived greater benefits when compared to the non-Internet users and the Internet users. However, while the Internet purchasers agreed more than the remaining groups that purchasing leisure travel over the Internet was a way to buy faster, no differences were found regarding the saving of effort. Thus the results partially support previous studies that found an inverse relationship between online experience and the perception of transaction costs (Liang and Huang, 1998; Teo and Yu, 2005).

The non-Internet users and the Internet users had similar perceptions regarding the advantages of purchasing leisure travel over the Internet. Both agreed to a large extent that purchasing leisure travel over the Internet was a way to buy faster and a way to buy with less effort. While the agreement of the Internet users is perhaps not surprising given their experience with computers and the Internet and with travel purchasing, the large frequency of agreement of the non-Internet users was not expected. These are individuals who had travelled little and hence had little experience with purchasing leisure travel. In addition, many had no experience with computers and none had experienced the Internet. Moreover, they perceived purchasing leisure travel as more complex than the Internet users and hence they were likely to need more time to complete a purchase over the Internet if they were to do it themselves. One possible explanation may be that the non-Internet users have assimilated the information that is conveyed by mass media channels pointing out the tangible benefits of purchasing over the Internet. Or perhaps they think that the offline purchasing channels they usually resort to are so time consuming that regardless of your level of expertise with the Internet and e-commerce they are likely to save time by purchasing over the Internet.

Image

Not only did the sentences pertaining to the image resulting from purchasing leisure travel over the Internet receive very little support, but there were no differences between the stages in the e-commerce adoption path. This indicates that purchasing leisure travel over the Internet does not significantly enhance the respondent's image and bears little relevance

within the adoption of purchasing leisure travel over the Internet. In broad terms, a behaviour high in visibility is more likely to enhance an individual's image, notably their status and prestige. This is because in order to enhance an individual's image among peers these should take notice that the individual has performed, or is performing, that behaviour. However, earlier it was demonstrated that purchasing over the Internet was not regarded as encompassing high visibility. Hence, it would be difficult for the social group to know that they had purchased leisure travel over the Internet.

Perceived risk

Consistent with previous research (Liao and Cheung, 2001), the Internet purchasers perceived purchasing leisure travel over the Internet as less risky than the remaining sub-groups. The Internet purchasers disagreed more than those who had never purchased over the Internet that by purchasing leisure travel by the means of e-commerce the probability of not doing the best deal was higher. Perhaps because their greater familiarity with purchasing over the Internet, they felt they were more prepared to maximise the potential of the Internet as a purchasing medium. For example, the Internet purchasers may be aware of a greater number of Internet sites from where they can purchase their travel components and hence are able not only to find a greater range of suppliers but also carry out more comparison between the different offers available. The Internet purchasers also perceived a lower level of risk when compared to the non-Internet users and the Internet users regarding the likelihood of losing money. One plausible explanation is also related to their own experience of using e-commerce. Perhaps they had no negative experiences when they used e-commerce and this led them to recognise that, unlike what seems to be the general feeling of non-users of e-commerce, the likelihood of losing money was not large. In addition, because they had more experience with using the technology and with purchasing over the Internet, they may be more knowledgeable about Internet security. This greater knowledge enables them to be more conscious about the actions required to ensure that the risk of losing money is reduced to a minimum. For example, they may be more aware of the need to pay over secure systems and hence only those suppliers who offer such service are selected. They might also have developed greater skills regarding the ability to evaluate the reliability of the vendor.

The non-Internet users and the Internet users did not differentiate regarding the perceived risk associated with purchasing leisure travel over the Internet. These individuals had never purchased over the Internet and hence one of the main sources of information regarding the risk of purchasing over the Internet were the media. However, media reports tend to convey the image that purchasing over the Internet encompasses many risks. Perhaps these reports have a similar effect upon the perceptions of risk regardless of familiarity with using computers and the Internet and with purchasing and consuming leisure travel.

Affective feelings

The results of this research showed that the Internet purchasers had more positive affective feelings towards purchasing leisure travel over the Internet. Thus, previous findings indicating that those who have purchased over the Internet before have more positive feelings about using e-commerce can be extended to the context of leisure travel. An analysis of the individual items comprising the affective feelings scale reveals that the Internet purchasers only differentiated in terms of the level of insecurity they would feel. Past studies have highlighted a relationship between security and the adoption of e-commerce (Vijayasarathy, 2004; Walczuch and Lundgren, 2004) and thus this finding was not unexpected. Previous findings (Childers et al.; 2001) have also documented a positive relationship between hedonic aspects (e.g. enjoyment, entertainment) and the adoption of e-commerce. However, this relationship was not supported by the results of this research.

Intention

The Internet purchasers had the greatest level of intention to purchase leisure travel over the Internet, which supports the contention that the users of e-commerce in the purchasing of leisure travel are likely to be drawn from those who have purchased over the Internet in the past. The lack of differences between the non-Internet users and the Internet users regarding intention in the near future, when analysed in light of conative and affective components of attitude, as well as the travel purchasing patterns, do not come as a surprise. It appears that earlier in the adoption path a greater travel frequency has little influence upon the intention to use e-commerce in the near future.

The results also indicate that the levels of intention to purchase leisure travel over the Internet in the near future tended to be low, not exceeding half of the respondents in each of the sub-groups. However, one encouraging factor was that many more respondents appeared to be willing do it in the long future. There is a group of individuals who appear to be waiting for the right circumstances to be in place before they buy travel over the Internet. Thus, the number of individuals using the Internet for purchasing leisure travel is likely to grow in the future. The results suggest that in the long run the Internet users appear to be the best candidates for becoming purchasers as they demonstrated a greater level of intention than the non-Internet users.

11.3.4.3. Motives

Not surprisingly, the factors influencing the adoption of e-commerce in the purchasing of leisure travel were mainly related to the benefits of using this new purchasing channel (see sections 3.4.1 and 4.4.4 for a review on the concept of motive). These benefits were diverse but in broad terms were either related to the actual process of purchasing (practicality/convenience, ease/simplicity, time, journey) or to the outcomes of the buying process (product/information, price). These factors are similar to those reported for e-commerce in Portugal (Corfu, 2002; UMIC, 2004) and elsewhere (Vrechopoulos et al., 2001).

While it was not possible to perform a Chi-Square test to check for statistical differences, a subjective analysis of the factors influencing the purchasing of leisure travel over the Internet suggested some interesting patterns. The Internet purchasers identified benefits related to price and to product/information as the main reason and hence were mainly driven by the outcomes of the purchasing process. The greater importance of price for the e-commerce users supports previous findings (Elliot and Fowell, 2000; Liao and Cheung, 2001). Perhaps due to their hands-on experience with e-commerce, the Internet purchasers take the benefits related to the process for granted and consequently their goals are directed towards maximising the outcomes of the purchasing process. In contrast, the non-Internet users and the Internet users identified the benefits related to the process as the main reason for purchasing leisure travel over the Internet. However, the time and journey issues appeared to be more important for the Internet users than for the non-Internet

users. As they were mainly economically active/students, the Internet users were likely to have busier lives. Being under greater time pressure and having to purchase leisure travel with more frequency than the non-Internet users, they may feel a greater need to reduce the time involved in purchasing. This interpretation is consistent with previous discussions which suggest that the reasons for using e-commerce could be related to personal characteristics such as employment status (Efendioglu and Yip, 2004).

Further to the reasons for purchasing leisure travel over the Internet, this research also studied the factors influencing against doing it. The results suggested that as one progresses along the path, the factors influencing against the purchasing of leisure travel change. However, these changes were more evident between the first and second stages than between the second and third stages. Lack of trust constituted the main reason influencing against purchasing for the Internet users and purchasers, a finding that is consistent with previous reports (Chen and Tan, 2002; George, 2002; Grabner-Krauter and Kaluscha, 2003). For the non-Internet users the technological issues (computers and the Internet) constituted a more important factor influencing against the purchase, while the factors related to the purchasing itself (trust and liking) were not as important. This finding provides further evidence for the importance of the adoption of computers and the Internet early in the e-ecommerce adoption path in facilitating the adopting e-commerce.

11.3.4.4. Involvement

The Internet purchasers were not only involved with purchasing leisure travel over the Internet, but they also displayed the greatest level of involvement among the three sub-groups (see sections 3.4.2 and 4.4.4 for a review on involvement). Thus, the results provide support for the assertion that the best potential market for e-commerce and leisure travel are the individuals who have purchased over the Internet before. In contrast, the non-Internet users and the Internet users were little involved with using the Internet for purchasing leisure travel. Therefore, if being involved is a pre-requisite for becoming an adopter of e-commerce in the purchasing of leisure travel, the level of involvement of these individuals needs to be raised before they start using e-commerce when buying travel.

One of the innovative methodological features of this research was the use of the individual items of the Zaichowsky's Personal Involvement Inventory (Zaickowsky, 1985) as dependent variables. The use of the individual items enables the discovery of which specific items are relevant in explaining the stage in the e-commerce adoption path. For example, the results indicate that the three sub-groups did not differentiate regarding the extent to which purchasing leisure travel over the Internet was dispensable/essential. The results of the individual items also demonstrated that the non-Internet users regarded purchasing leisure travel over the Internet as less important than the Internet users and purchasers, but no differences were found between the latter. Thus, while in broad terms the non-Internet users and the Internet users did not differentiate regarding their level of involvement, the Internet users were closer to the Internet purchasers than were the non-Internet users.

The findings of this research suggest that the relationship between involvement and perceived risk is more complex than anticipated (Laurent and Kapferer, 1985; Dholakia, 1997) and it is dependent on the stage in the e-commerce adoption path. Based on the perceived risk and involvement results, there appears to be an inverse relationship between perceived risk and involvement among the individuals in the last stage of the adoption path, while a positive relationship between the two appears to prevail in the early stages of the e-commerce adoption path.

11.3.4.5. Payment for purchases

The definition of electronic commerce adopted in this research involves a financial transaction between the consumer and the seller. Thus, it was imperative to evaluate whether the factors related to the payment for purchases were related to the adoption of commerce (see section 4.4.6 for a review of payment for purchases). Two factors were studied: one not directly related the product category being investigated (ownership of credit cards) and one specifically related to the purchasing of leisure travel over the Internet (preferred payment method).

Consistent with previous findings (Slyke et al., 2002; Efendioglu and Yip, 2004), credit card ownership was a factor influencing the stage in the e-commerce adoption path. The

direction of the relationship was also similar to previous results, with those further along the path having the greatest level of credit card ownership. However, irrespective of the stage in the e-commerce path, those who owned credit cards had the same ability to pay for a purchase with a credit card as no differences were found regarding the credit limit of the card with the highest credit limit.

While bank transfer was evaluated as the most preferred payment method by both the non-Internet users and the Internet users, the most preferred payment method by the Internet purchasers was credit card. Virtually all online merchants are thought to accept credit cards as payment method but bank transfer and debit card are not so common. In addition, while credit cards can be used for transnational purchases, it is more difficult to use bank transfer and debit card when cross-border purchases are made. Moreover, since confirmation of purchase and delivery usually take place at the same time, payment of the travel components must be usually made at the time of purchase. Thus, the Internet purchasers display preference for a payment method that is more susceptible to e-commerce use in general and specifically in the case of purchasing leisure travel.

Given that the Internet users were more likely to own credit cards than the non-Internet users, the lack of difference regarding the preferred payment methods was surprising. Previous research has shown that in addition to credit card ownership, the frequency of their use as a payment method on a day-to-day basis is also an important influence on the adoption of e-commerce. Maybe the Internet users own credit cards but do not use them more than the non-Internet users.

The large preference of the respondents for typically non-credit payment methods is perhaps related not only to the fact that many did not own credit cards, but also to a lack of habit regarding payment of leisure travel using credit in general. Although data is not available, the belief that one should go on holiday only if one has the ability to pay the journey costs before departure seems to prevail, notably among older generations. If this was to be confirmed, it would be consistent with previous reports about the influence of the belief that 'debt is not good' upon the adoption of e-commerce (Efendioglu and Yip, 2004).

An examination of the main factor influencing the preference for a payment method (irrespective of method) indicates that security was the most important consumer

requirement when selecting a method for paying the purchase of leisure travel over the Internet. This is consistent with previous studies on the adoption of e-commerce (Sim and Koi, 2002; Walczuch and Duppen, 2002) and hence the result was not surprising. The results also provide some support to previous findings indicating that security is more important for the Internet buyers than for the non-Internet buyers (Walczuch and Duppen, 2002).

The disaggregation of the responses across payment methods further supports the importance of security as the main requirement, as this factor ranked one in all circumstances. However, there were some apparent differences both across groups and payment methods. Security seems to be more important for the Internet purchasers that preferred bank transfer and debit card but those who preferred credit card pointed out other advantages such as the practicality/convenience, speed and ease of use. The preference of the non-Internet users for debit card was also related to personal factors (in contrast with attributes of the method), such as habit & experience and personal financial management.

In summary, not only did the Internet purchasers have greater levels of ownership of credit cards, but they were also more likely to prefer payment by credit card. Thus, the payment related behaviour of the Internet purchasers seems to be more appropriate for the adoption of e-commerce in the purchasing of leisure travel. In contrast, the characteristics of the non-Internet users and the Internet users regarding payment for purchases were less suitable for the adoption of e-commerce. They were less likely to own credit cards and preferred payment that did not involve the use of credit cards. However, one encouraging factor was the greater likelihood of the Internet users owning credit cards when compared to the non-Internet users.

11.3.5. The Internet purchasers

Having discussed the results regarding the main adoption path in the previous section, this section focuses the discussion of the specific sub-group of the Internet purchasers. The results were presented in Chapter 10. As a reminder, this group was divided into two sub-groups:

- the e-travel non-adopters – those who had never purchased leisure travel over the Internet
- the e-travel adopters – those who had previously purchased leisure travel over the Internet

The analysis of the Internet purchasers was only carried out in relation to the adoption of purchasing leisure travel over the Internet and the purchasing and consumption of travel.

11.3.5.1. Product category behaviour

The analysis of the Internet purchasers showed that this group is not homogeneous as far as the purchasing and consumption patterns is concerned (See Section 4.4.5 for a review of research on the product category behaviour). The e-travel adopters were more likely to travel in general and abroad. Moreover, they travelled more frequently for leisure purposes abroad, a finding that is consistent with previous findings documenting a positive relationship between the number of international journeys and the adoption of e-commerce in the purchasing of travel (Morrison et al., 2001). The e-travel adopters were also more likely to have the responsibility for doing the reservations themselves when compared to the e-travel non-adopters. This suggests that some of the e-travel non-adopters might not have purchased leisure travel over the Internet before because they do not usually do the reservations themselves. Finally, the e-travel adopters preferred more lean means while the e-travel non-adopters preferred more rich means. Thus, the e-travel non-adopters might not have become adopters due to the fact that they still preferred rich media.

11.3.5.2. Attitude towards purchasing leisure travel over the Internet

The results have shown that the e-travel adopters had a more positive attitude towards purchasing leisure travel over the Internet (See Sections 3.3. and 4.4.3 for a review of attitudes and Section 10.2 for the results).

As far as **complexity** is concerned, there were few differences regarding complexity, perhaps because both groups were experienced with purchasing over the Internet. Thus, it appears that once an individual becomes an Internet purchaser, complexity becomes less influential in explaining the adoption of e-commerce. Nonetheless, the results suggest that once an individual purchases leisure travel over the Internet, the perception of ease of learning becomes more positive, perhaps because the individual has borne in the majority of the investment required to learn how to do it.

The results regarding **visibility** support earlier conclusions that purchasing leisure travel over the Internet had little sight visibility, even for the e-travel adopters. However, the results support the conclusion that verbal visibility is related to the adoption of e-commerce. Given that the e-travel adopters were more involved with purchasing leisure travel over the Internet, the apparent positive relationship between verbal visibility and involvement is further supported.

The e-travel adopters also perceived greater **benefits** and fewer risks in purchasing leisure travel over the Internet than the e-travel non-adopters. Thus, the contention that the perceptions of positive and negative outcomes are related to the adoption of e-commerce is further supported. However, saving of effort and the outcomes associated to **image** appear to have little relevance in explaining the use of the Internet in the purchasing of leisure travel, which is in agreement with other findings of this research.

The **affective feelings** were also shown to be related to the adoption of e-commerce in the purchasing of leisure travel. The e-travel adopters clearly had more positive affective feelings when compared to the e-travel non-adopters. The findings support previous findings (Childers et al. 2001) that have shown a relationship between hedonic aspects (e.g. entertainment) and the adoption of e-commerce.

The e-travel purchasers also displayed greater levels of **intention** to purchase leisure travel over the Internet, both in the near and long future. This provides further evidence that within the Internet purchasers the best potential market for purchasing leisure travel over the Internet are the individuals who had done it before. None of the e-travel adopters did not intend to purchase leisure travel over the Internet, perhaps an indication that they were satisfied with doing it.

11.3.5.3. Involvement with purchasing leisure travel over the Internet

The results have shown that the e-travel adopters were more involved with purchasing leisure travel over the Internet than the e-travel non-adopters (see sections 3.4.2 and 4.4.4 for a review on involvement). In fact, while the e-travel adopters were clearly involved, the e-travel non-adopters were little or not involved. Thus, one plausible explanation for the lack of progress of the e-travel non-adopters to becoming adopters of e-commerce in the purchasing of leisure travel may be their level of involvement with purchasing leisure travel over the Internet. Their little involvement may be related to the fact that they still prefer using rich media when contacting their travel suppliers.

Overall, these results further support the contention that the product category behaviour and the adoption of purchasing leisure travel over the Internet are important factors influencing the adoption of e-commerce. In addition, it can be argued that, when compared to the non-adopters, the e-travel adopters' characteristics facilitate to a greater extent the use of e-commerce in the purchasing of leisure travel.

11.4. Barriers and opportunities for the adoption of the e-commerce in the purchasing of leisure travel

In the context of this research, a barrier is any condition that makes it difficult to purchase leisure travel on the Internet and an opportunity is any condition that makes it possible to purchase leisure travel on the Internet. The various variables comprising the conceptual framework are grouped into a more practical/manageable set of factors. This simplified view encompasses four categories of factors: systemic, structural, psychological and behavioural. Table 11.2 shows the relationship between each of the variables comprising the conceptual framework and the type of barrier/opportunity.

Table 11. 2: Relationship between each of the variables comprising the conceptual framework and the type of barriers/opportunities

Variable	Type of barrier/opportunity			
	Systemic	Structural	Psychological	Behavioural
Complexity	X			
Possession of credit cards		X		
Access to computers/Internet		X		
Relative advantage			X	
Image			X	
Perceived risk			X	
Compatibility			X	
Visibility			X	
Affective feelings			X	
Involvement			X	
Current use				X
Amount of use				X
First experience				X
Travel frequency				X
Preferred payment means				X
Participation in the reservation of leisure journeys				X
Marketing channel				X
Communication channels				X
Intention to use				X
Motives	X	X	X	X

The **systemic factors** refer to the extent to which the characteristics of the system facilitate the individual's use of the innovation. In this research systemic factors were studied using the concept of perceived complexity. The results have shown that the systemic barriers are more prevalent in the first stage of the e-commerce adoption path (the non-Internet users). While there were differences in respect to complexity in the latter stages in the e-commerce adoption path, the results have shown that both the Internet users and purchasers perceived using computers for leisure purposes and purchasing leisure travel over the Internet as simple and easy. As such, these results encompass a clear opportunity for the adoption of e-commerce in the purchasing of leisure travel.

The **structural factors** refer to the extent to which the structures that prevent/enable the individual to use the innovation are in place. Access to computers and the Internet and possession of credit cards were the three structural factors studied by the research. Similar to the systemic factors, the results of the present research suggest that structural barriers mainly exist earlier in the e-commerce adoption path, notably at the non-Internet user level. A large proportion of those at the first stage of the e-commerce adoption path had no

access to the technologies that enabled them to purchase over the Internet. Moreover, the adoption of e-commerce in the purchasing of leisure travel by the non-Internet users was hampered by the fact that the majority of them did not possess credit cards.

However, one clear structural opportunity for the adoption of e-commerce in the purchasing of leisure travel was access to computers and the Internet by the Internet users and purchasers. One other structural opportunity identified by this research was the possession of credit card by a large proportion of the Internet users and purchasers, but more so the latter.

The **psychological factors** refer to the extent to which the use of the innovation is perceived as associated to potentially valued outcomes. Examples of psychological variables include the advantages, risks, involvement, compatibility and the affective feelings. The present research has demonstrated the existence of a series of psychological barriers for the adoption of e-commerce in the purchasing of leisure travel throughout the e-commerce adoption path. However, these barriers are greater in the early stages in the e-commerce adoption path and tend to decrease in the later stages. Earlier in the e-commerce adoption path the barriers are related to each of the innovations comprising the innovation adoption path, while further along the path they tend to be related to the adoption of purchasing leisure travel over the Internet.

Many psychological factors prevented the non-Internet users from adopting computers for leisure purposes, including a lack of knowledge, low perceived compatibility and a perception that using computers for leisure purposes is a waste of time. Moreover, the non-Internet users were found to regard using computers for leisure purposes as of little relevance. Several psychological factors related to purchasing leisure travel over the Internet also prevented the non-Internet users from adopting e-commerce in the purchasing of leisure travel. This group regarded purchasing leisure travel over the Internet as of little advantage, little visible and risky. Moreover, they had lower affective feelings towards using computers for leisure purposes and purchasing leisure travel over the Internet, notably in terms of confidence.

However, the results of the research have also demonstrated that that there were some psychological opportunities for the non-Internet users' adoption of e-commerce in the purchasing of leisure travel. These were mainly related to the adoption of computers. Not

only did the non-Internet users recognise that using computers for leisure purposes was beneficial but they also thought that using computers for leisure purposes would bestow them with a more positive image.

At the second stage of the e-commerce adoption path (the Internet users) the psychological barriers are mainly related to the adoption of purchasing leisure travel over the Internet. The Internet users failed to recognise the benefits of purchasing leisure travel over the Internet. In addition, a high perceived risk, presumably caused by a lack of trust, appears to keep the Internet users away from adopting e-commerce in the purchasing of leisure travel. Moreover, the Internet users failed to clearly perceive purchasing leisure travel over the Internet as encompassing positive affective feelings. The results have also indicated an additional psychological barrier for the Internet users' adoption of e-commerce in the purchasing of leisure travel – a lower (but still positive) level of involvement with using computers for leisure purposes. This is perhaps related to the fact that a large proportion of the Internet users who were not current users of computers for leisure purposes indicated that they did not use them because they did not need to do so.

The psychological opportunities for the Internet users' adoption of e-commerce in the purchasing of leisure travel pertain to the adoption of computers and the Internet for leisure purposes. For example, the Internet users perceived using computers for leisure purposes as encompassing advantages, as compatible and as not risky. Moreover, using the Internet was found to be an important motive for using computers for leisure purposes.

Once an individual becomes an Internet purchaser, the main psychological factors preventing the adoption of e-commerce in the purchasing of leisure travel are solely related to the adoption of purchasing leisure travel over the Internet. More specifically, the e-travel non-adopters had yet to fully recognise the benefits of purchasing leisure travel over the Internet, notably in respect to the quality of the purchase and quality of life. Moreover, they perceived purchasing leisure travel over the Internet is risky as they thought that they could lose money and not do the best deal. Their perception of risk is likely to be a consequence of their lack of trust in the purchasing of leisure travel over the Internet. They were also little involved with purchasing leisure travel over the Internet and had little positive or even negative affective feelings towards purchasing leisure travel over the Internet.

The psychological opportunities for the e-travel non-adopters' adoption of e-commerce in the purchasing of leisure travel over the Internet are mainly related to the adoption of computers and the Internet. This includes a high level of involvement with, and a positive attitude towards, using computers for leisure purposes. There were also psychological opportunities in relation to the adoption of purchasing leisure travel over the Internet, notably the positive perceptions regarding the possibility of saving time and a high level of perceived compatibility.

The **behavioural factors** refer to the extent to which past or current actions, as well as behavioural preferences and manifestations, prevent or facilitate the use of the innovation. The behavioural factors studied in this research include the variables related to innovation experience, the product-category behaviour, the preferred payment methods and intention to use.

The results have demonstrated that several behavioural factors were preventing the non-Internet users from adopting e-commerce in the purchasing of leisure travel. As far as innovation experience is concerned, the non-Internet users had little or no experience of using computers and no prior experience of the Internet. Their adoption of e-commerce in the purchasing of leisure travel was also hindered by their lower levels of intention to use computers, use the Internet and purchase leisure travel over the Internet when compared to the individuals in the other stages in the e-commerce adoption path. The study has also demonstrated that two barriers related to the travel behaviour prevented the non-Internet users from adopting e-commerce in the purchasing of leisure travel: their little consumption of travel and their preference for communication channels that involve human interaction. Their preference for payment methods was little adapted to e-commerce transactions as it did not involve the use of credit cards.

There were not many behavioural opportunities for the non-Internet users' adoption of e-commerce in the purchasing of leisure travel. Despite their little experience with computers, there was a sub-group of the non-Internet users who had used computers in the past, some of which remained as current users. The fact that nearly half of the respondents in this sub-group intended to use computers and the Internet in the future can also be regarded as a behavioural opportunity.

The present study has demonstrated the existence of a series of behavioural barriers for the Internet users' adoption of e-commerce in the purchasing of leisure travel. These behavioural barriers take the form of discontinuance in the use of computers and the Internet, as three out of ten Internet users did not use these technologies for leisure purposes on an ongoing basis. Moreover, the Internet users used the Internet less time in a normal week when compared to those who had gone to the last stage of the e-commerce adoption path. An additional behavioural barrier pertained to a lower level of intention to use computers, use the Internet and purchase leisure travel over the Internet when compared to the Internet purchasers. The adoption of e-commerce in the purchasing of leisure travel by the Internet users was also hindered by two factors related to their travel behaviour, notably their lower frequency of travelling and their preference for communication channels that involve human interaction.

Nonetheless, the study also identified some behavioural opportunities for the Internet users' adoption of e-commerce in the purchasing of leisure travel. For example, a large proportion were current users of computers and the Internet for leisure purposes. Moreover, those who were current users of computers used them as much time as the Internet purchasers.

The present research has also demonstrated that there are several behavioural factors preventing the e-travel non-adopters' adoption of e-commerce in the purchasing of leisure travel. Two behavioural barriers related to the purchasing and consumption patterns appeared to exist. One was a lower level of participation in the purchasing of leisure travel and the other a greater preference for personalised communication channels when buying leisure travel. Another behavioural barrier was the e-travel non-adopters little intention to purchase leisure travel over the Internet, both in the near and the long future.

Nonetheless, the present research has also demonstrated the existence of a series of opportunities for the adoption of e-commerce in the purchasing of leisure travel by the e-travel non-adopters. One such opportunity is their adoption of computers and the Internet as they were heavy and ongoing users of computers and the Internet for leisure purposes. It was also evident that the e-travel non-adopters were frequent consumers of travel, notably to Portuguese destinations.

The results regarding the e-travel adopters indicate that there are no factors preventing their adoption of e-commerce in the purchasing of leisure travel and as a consequence this group is likely to continue purchasing leisure travel over the Internet. They were technology enthusiasts, they travelled very frequently and their purchasing behaviours were more adapted to purchasing over the Internet. More importantly, they all intended to use the Internet as a purchasing channel of their leisure travel components in the future. Thus, it appears that these individuals were satisfied with their past experience and hence were committed to continue purchasing leisure travel over the Internet.

Figures 11.2 to 11.4 provide a summary of the barriers and opportunities for adoption of e-commerce in the purchasing of leisure travel by the the non-Internet users, the Internet users and the Internet purchasers (e-travel non-adopters).

Figure 11. 2: Barriers and opportunities for the non-Internet users' adoption of e-commerce in the purchasing of leisure travel

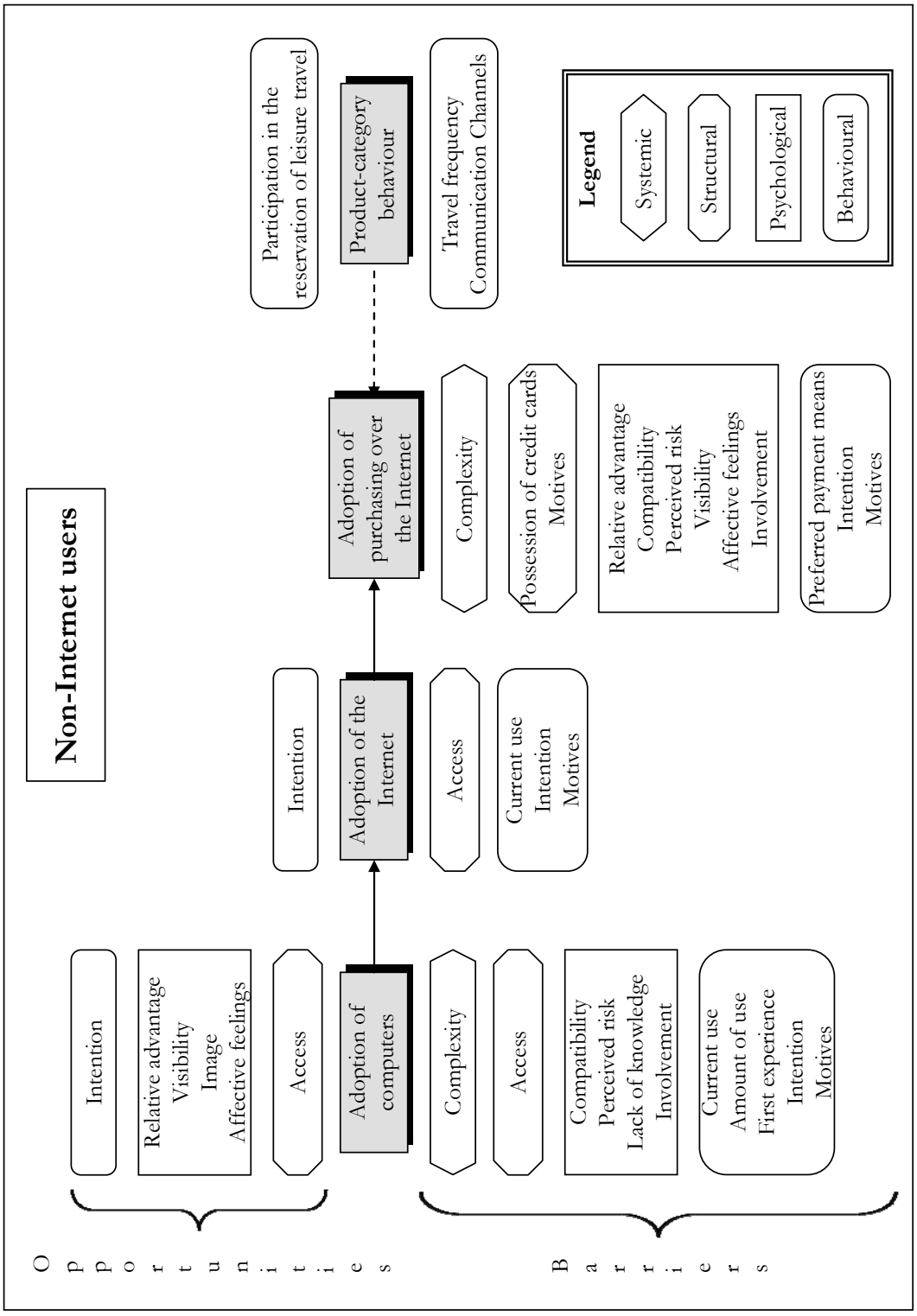


Figure 11. 3: Barriers and opportunities for the Internet users' adoption of e-commerce in the purchasing of leisure travel

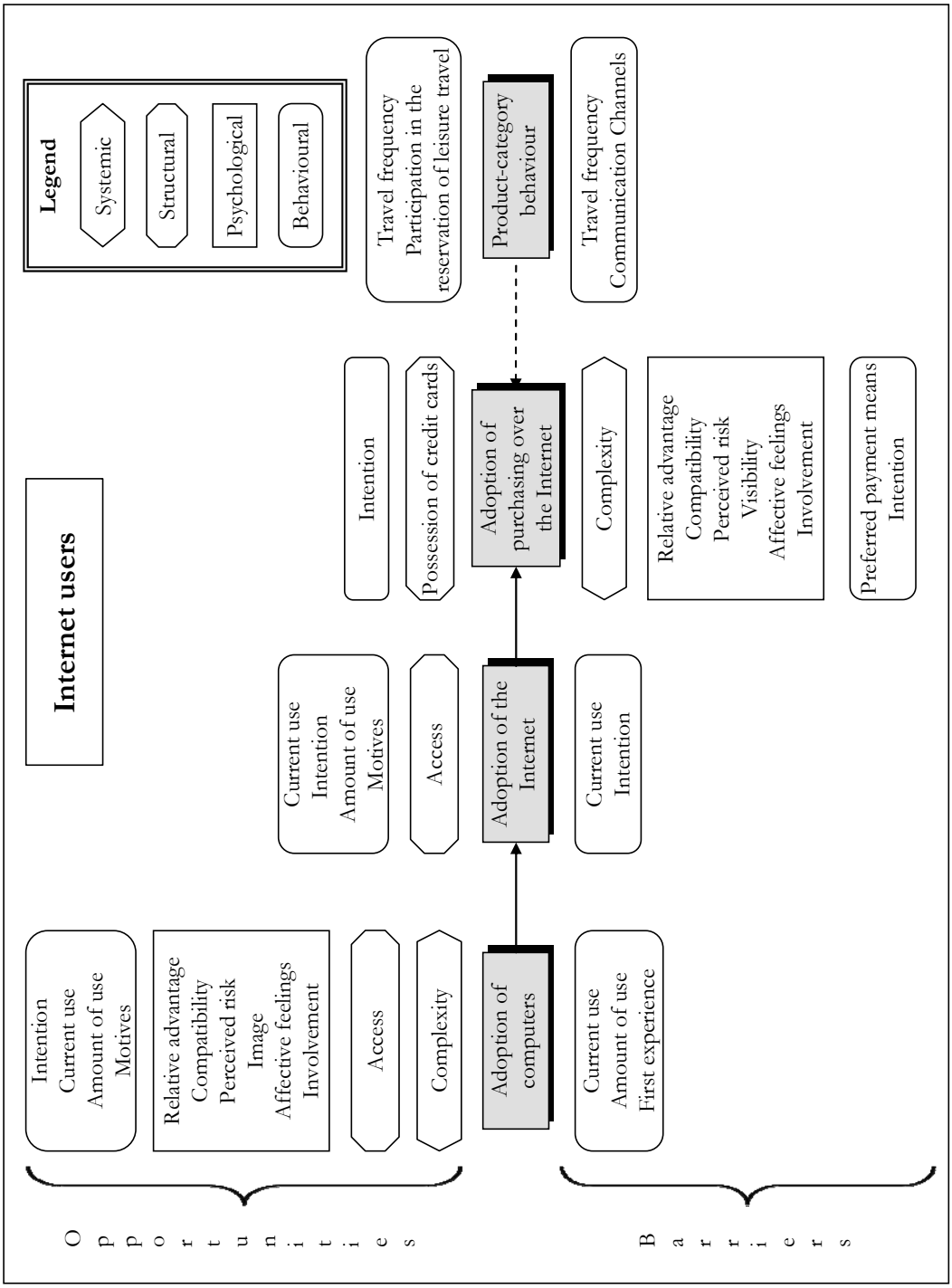
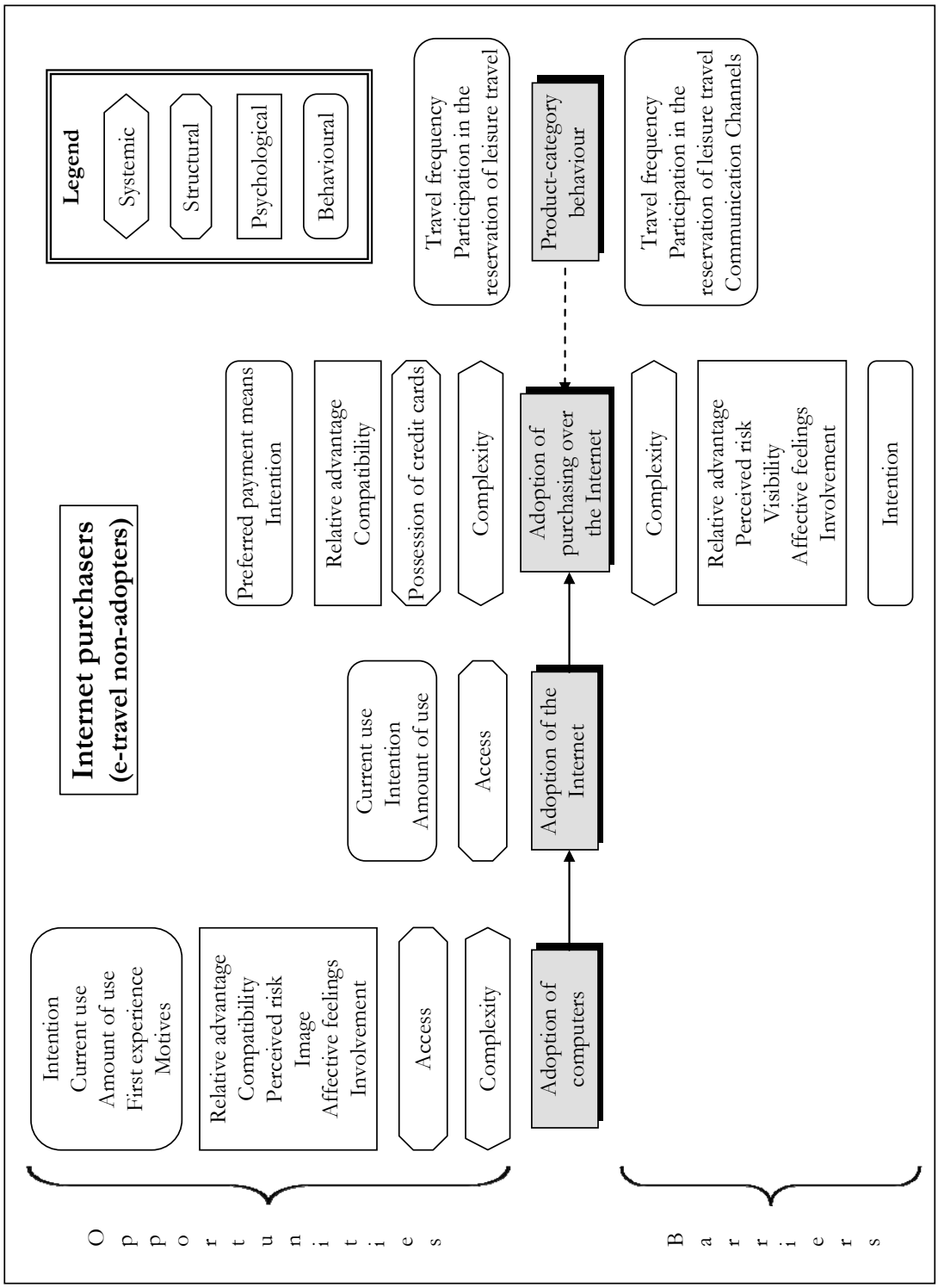


Figure 11. 4: Barriers and opportunities for the Internet purchasers' (e-travel non-adopters) adoption of e-commerce in the purchasing of leisure travel



11.5. Summary

This chapter has provided an evaluation of the research. In Section 11.2 the theoretical, methodological and analytical approaches of the research were evaluated. As far as theoretical approaches in concerned, using the individual consumer as the unit of analysis and approaching the adoption of e-commerce from a cognitive perspective were evaluated. In terms of the specific theoretical models used, the option for the adoption of innovations model was discussed, as well as the incorporation of additional variables (motives and involvement) into the model.

Next, the chapter evaluated the methodological approaches. It was argued that the review of the literature achieved its objectives, such as by demonstrating a critical understanding of consumer behaviour theories and their application by other researchers, as well as by identyfing gaps in the literature, some of which served as a basis for developing the research. The issues related to data collection were also assessed, including the techniques used: secondary and primary. The evaluation of the primary data collection included assessing sampling, the option for questionnaires and the administration of the questionnaire. Finally, Section 11.2 also evaluated the analytical approaches of the research, notably the statistical tests used. The section finished by providing a SWOT analysis of the research as a way of summarising the main strengths, weaknesses, opportunities and threats.

This chapter has also evaluated the results of the research (section 11.3). The results described in Chapters 6 to 10 were interpreted in light of theoretical expectations, of other results of this study as well as of the findings of previous research. The next chapter provides an overall conclusion regarding the results by examining the extent to which the objectives of the research were met.

12. Conclusions and implications

12.1. Introduction

This chapter seeks to provide the main conclusions and implications of the research. The main purpose of this study was to increase understanding of consumer adoption of electronic commerce in the purchasing of leisure travel. The development of the conceptual framework identified those factors that could influence the adoption of e-commerce. In order to ascertain the extent to which these factors were relevant in explaining adoption, the conceptual framework was tested by the means of a survey. A series of perceptual and usage outcomes of the adoption process (dependent variables) were analysed in terms of the output of that process (independent variable). The outputs were identified as three points along the e-commerce adoption path. These were: never used the Internet, used the Internet but never purchased and purchased over the Internet. Further analysis was also carried out to study the specific group of the Internet purchasers, by dividing this group according to whether they had purchased travel over the Internet before or not. The analysis of the data collected in the Borough of Cascais, Portugal (presented in chapters 6 to 10) has yielded many interesting results which were discussed in detail in the previous chapter. An overall conclusion regarding these results is provide here and the discussion will follow the themes set out in the overall aims and objectives proposed in section 1.2 of the thesis.

This chapter also discusses the main implications arising from this research, both for theory and practice (section 12.3). Several years have passed since the primary data was collected. Given than e-commerce adoption is a volatile phenomenon, section 12.4 outlines the main changes that have taken place in Portugal subsequently. This will serve as a basis for suggesting how the adoption of e-commerce in the purchasingof leisure travel by the residents of Cascais may evolve. This chapter concludes with some final remarks regarding the research.

12.2. The objectives of the research

The main aim of this research was to **evaluate the influences on the adoption of e-commerce in the purchasing of leisure travel**. Following from this aim, the following research objectives were formulated:

- To develop a conceptual framework for researching the adoption of e-commerce in the purchasing of leisure travel;
- To examine the extent to which the factors influencing the adoption of e-commerce change along the ladder of adoption;
- To investigate the relationship between the adoption of computers and the Internet and the adoption of e-commerce in the purchasing of leisure travel;
- To determine the relationship between the travel purchasing and consumption behaviour and the adoption of e-commerce in the purchasing of leisure travel;
- To evaluate the barriers and opportunities for the adoption of e-commerce in the purchasing of leisure travel.

The remainder of this section will focus on providing conclusions regarding these objectives.

12.2.1. To develop a conceptual framework for researching the adoption of the e-commerce in the purchasing of leisure travel

This study developed and adapted the Adoption of Innovations Model (Rogers, 1995) to a study of consumer adoption of e-commerce in the purchasing of leisure travel. The adoption paradigm provided a suitable theoretical framework for studying the adoption of e-commerce because this can be regarded as an innovative practice. In addition, the theory offers a concept – innovation interdependence – that can be useful in understanding the adoption of innovations such as e-commerce but which has been largely ignored by adoption research (see section 2.9.1 for a description of the concept). The assumption

underlying innovation interdependence is that some innovations are developed upon other innovations and hence the adoption of certain innovations tend to be connected.

Following on from this rationale, an innovation path for the adoption of e-commerce was established, comprising three technological innovations: computers, the Internet and purchasing over (the computers and) the Internet. Nonetheless, in Section 4.2 it was shown that the technology dimension was largely missing in existing conceptual frameworks. As a consequence, despite some empirical research efforts indicating the link between the adoption of computers and the Internet to the adoption of e-commerce, little was known regarding the adoption of these technologies in the context of adoption of e-commerce in general and specifically in the purchasing of leisure travel.

Therefore, besides the factors related to the adoption of purchasing leisure travel over the Internet, factors related to the adoption of computers and of the Internet were also included as component parts of the framework (a more detailed description of the conceptual framework is presented in section 5.2). In addition, the framework also outlined product-category behaviour as an important factor influencing the adoption of e-commerce in the purchase of that product-category. Thus, this research provides an important contribution to our understanding of the adoption of e-commerce by putting forward a conceptual framework that encompasses, rather than restricts, the multiple concepts that need to be examined. This research is also one of the the first attempts to explicitly develop and test the concept of innovation interdependence.

Furthermore, the conceptual framework provides a meaningful framework to structure the analysis of the current adoption of e-commerce as well as providing a basis as to how adoption could evolve. By identifying and linking the key behaviours, the framework greatly contributes to an understanding of the dynamics of the adoption of e-commerce in the purchasing of leisure travel. The holistic approach in which the conceptual framework is embedded may also be viewed as a means of placing the issues related to the adoption of computers and the Internet higher on the agenda of the stakeholders involved in the adoption of e-commerce, including researchers.

Subsequently, the research identified the variables that were likely to influence the adoption of each of the innovations comprising the conceptual framework. A review of consumer behaviour models revealed that the components of the models could be separated into four

groups: (1) society and circulation of knowledge, (2) the characteristics of the individual, (3) the evaluation of the behaviour and (4) the characteristics of the behaviour (section 2.9.2). Two of these groups of variables were selected for inclusion in this research: individual characteristics and evaluation of the behaviour. More specifically, four variables pertaining to the characteristics of the individual (demographics, experience, motives and involvement) and one about their evaluation of the behaviour (attitude) were included in the framework. In addition, a review of the literature was also carried out in order to identify what variables related to the product-category behaviour could explain the adoption of e-commerce in the purchasing of leisure travel. Two broad groups of variables, both related to the characteristics of the individual, were selected: travelling frequency and purchasing patterns and preferences.

As mentioned earlier, the adoption of innovations model provided a sound and flexible background through which to investigate the adoption of e-commerce. Although Rogers (1995) model was used as the departure point, the study incorporated a multitude of other theoretical concepts including the adoption of technology, media choice and other consumer behaviour research. As a consequence, several concepts from different sources were integrated into the conceptual framework, including the concepts of motive (Engel et al., 1995) and involvement (Laaksonen, 1994; Howard and Sheth, 1969). Moreover, some of the concepts comprising the conceptual framework had never been applied in the study of purchasing over the Internet, such as the multicomponent model of attitude and involvement. The use of such a comprehensive range of concepts from different theories provides a richer perspective on the adoption of e-commerce that has not been achieved before.

Overall the conceptual framework used in the research provides a valuable addition for those attempting to understand consumer behaviour in relation to the adoption of innovative purchasing channels, notably e-commerce. The framework is sufficiently generalisable to the study of different types of electronic commerce, people and product-categories and hence can be used a departure point from which researchers and practitioners can develop future research on the adoption of e-commerce. Future research could apply and refine this conceptual framework to emerging forms of electronic commerce, such as those who use mobile devices (m-commerce) and the television (tv-commerce). In the first case, the interface would be a mobile phone and the communication technology network the UMTS; in the second, the television set and

Interactive TV, respectively. Future research can also replicate this study either to investigate the adoption of e-commerce in general or in the purchasing of other product-categories. This study can also be replicated in different social systems, either extending it to regional or national representative samples or restricting the analysis to specific demographic segments. Additionally, it can be applied to other sub-samples of the general population, such as the consumers of the product category being analysed.

The conceptual framework is intended to guide research on consumer adoption of e-commerce by enabling a clear identification of the factors influencing the phenomenon. A more comprehensive conceptual framework, such as the one put forward in this investigation (see Section 5.2 for a description), is particularly useful when the studying heterogeneous social systems regarding the previous usage of computers, the Internet and purchasing over the Internet.

12.2.2. To examine the extent to which the factors influencing the adoption of e-commerce change along the ladder of adoption.

The findings of this research indicate that the factors influencing the adoption of e-commerce in the purchasing of leisure travel vary according to the stage in the e-commerce adoption path. The adoption of e-commerce in the purchasing of leisure travel by the *non-Internet users* was shown to be influenced by factors associated with the adoption of computers, the use of the Internet and purchasing leisure travel over the Internet, as well as other travel-related behaviours. The factors related to the adoption of computers and the Internet were also an important influence upon the *Internet users'* adoption of e-commerce in the purchasing of leisure travel. However, the factors related to the adoption of computers appeared to be less influential when compared to the factors related to the adoption of the Internet. The results have also shown that the factors related to the adoption of purchasing leisure travel over the Internet, as well as their travel purchasing and consumption behaviour, were important factors. Finally, the adoption of e-commerce in the purchasing of leisure travel by the *Internet purchasers* appeared to be influenced by a combination of the factors related to the adoption of purchasing leisure travel over the Internet and the travel consumption and purchasing behaviour as given by the differences between the *e-travel adopters* and the *e-travel non-adopters*.

Based on these results, a continuum of the adoption of e-commerce in the purchasing of leisure travel can be defined, with the Internet purchasers at one end, the non-Internet users at the other, and the Internet users between them. The position of the Internet users in the continuum, however, is dependent on the place in the innovation adoption path being studied. As far as using computers for leisure purposes is concerned, the Internet users were closer to the Internet purchasers. In contrast, the Internet users were closer to the non-Internet users regarding the purchasing of leisure travel over the Internet and regarding the purchasing and consumption of travel. This has important implications for both theory and practice, which are addressed later in this chapter.

12.2.3. To investigate the relationship between the adoption of computers and the Internet and the adoption of e-commerce in the purchasing of leisure travel

As mentioned earlier, one of the main contributions of the conceptual framework of this research is to enable a greater understanding of the adoption of e-commerce by looking at the adoption of the innovations comprising the innovation path. The findings of this research demonstrate that there is, indeed, a positive relationship between the adoption of computers and the Internet and the adoption of e-commerce. The Internet purchasers (those who had bought a product/service over the Internet) were found to be the individuals with the most positive attitudes towards using computers and the Internet, were more involved with using computers and were the heavier users of both technologies.

However, the relationship between the adoption of technology and the adoption of e-commerce appears to be more complex than had been anticipated. While the two sub-groups of the Internet purchasers did not differentiate regarding their adoption of computers and the Internet for leisure purposes, it was shown that some had purchased travel over the Internet (the e-travel adopters) and others had not (the e-travel non-adopters). Moreover, as shown in Chapter 10, there were many differences in respect to the factors postulated to influence the adoption of purchasing leisure travel over the Internet. The analysis of the data regarding the adoption of computers and the Internet revealed that the Internet users had adopted these technologies to a greater extent than the non-Internet

users. Interestingly, however, these two sub-groups were little different in respect to the adoption of purchasing leisure travel over the Internet.

Both findings raise questions regarding the role of technology in the adoption of e-commerce in the purchasing of leisure travel. It appears that the adoption of technology plays a secondary role and might serve as a facilitator rather than motivator. In other words, the adoption of technology has to be there in order to enable them to buy travel over the Internet, but factors beyond the adoption of technology are a stronger influence on the adoption of e-commerce in the purchasing of leisure travel.

Notwithstanding this apparent support role, the results of this investigation provide preliminary empirical support for Rogers (1995) and Gatignon and Robertson (1991) contention that the adoption of some innovations is connected. Thus, the results suggests that a premise underlying most research on the adoption of e-commerce – e-commerce adoption is mainly explained through variables pertaining to the purchasing over the Internet – may need to be re-examined. An examination of the factors influencing the adoption of e-commerce requires the analysis of the entire adoption process, otherwise only a partial picture will be obtained.

12.2.4. To determine the relationship between the travel purchasing and consumption behaviour and the adoption of e-commerce in the purchasing of leisure travel

As discussed in the previous section, the adoption of computers and the Internet failed to unequivocally explain the adoption of e-commerce in the purchasing of leisure travel. In the case of the Internet purchasers, similar levels of adoption of computers and the Internet did not correspond to similar levels of adoption of purchasing leisure travel over the Internet. In the case of the non-Internet users and the Internet users, differential levels of adoption of computers and the Internet did not result in differential levels of adoption of purchasing leisure travel over the Internet. Therefore, the likelihood of e-commerce being adopted in the purchasing of leisure travel may rest with other more important factors beyond the adoption of computers and the Internet. The findings of this research suggest that the product category-behaviour may be the more important influence in the adoption of e-commerce.

The results of the travel purchasing and consumption patterns (presented in Chapter 7 and discussed in section 11.3.3) have shown that the non-Internet users and the Internet users had similar travel purchasing patterns, notably a high preference for face-to-face as a communication means. In addition, it was also shown (Section 10.5) that the e-travel non-adopters preferred to a greater extent personal communication means for contacting their travel suppliers when compared to the e-travel adopters. Hence, it appears that the extent to which individuals value personal contact is a crucial factor influencing their adoption of e-commerce in the purchasing of leisure travel.

However, the influence of other factors related to travel purchasing and consumption behaviour was not as clear as the influence of the preferred communication channel. The e-travel adopters were shown to travel more frequently (notably abroad) than the e-travel non-adopters. In contrast, the results have also shown that the Internet users' greater travel frequency when compared to the non-Internet users appeared to have little or no influence on their adoption of purchasing leisure travel over the Internet. This last result is intriguing as previous research has highlighted a positive relationship between the frequency of purchasing and the adoption of e-commerce in the purchasing of the product-category (e.g. Goldsmith and Goldsmith, 2002). While this relationship may be true in respect to the analysis of adopter/non-adopter of e-commerce in the purchase of the product category, frequency of consumption appears to have little influence on differential levels of non-adoption. These findings further indicate that the relationship between the adoption of e-commerce in the purchasing of travel and travel frequency consumption is not a monotonic one (i.e., if one increases in value, the other also increases). Instead, there appears to be a threshold number of journeys from which individuals begin to develop the predisposition to use the Internet for purchasing their travel components.

The findings have also demonstrated that the e-travel adopters' adoption of e-commerce in the purchasing of leisure travel was related to differential levels of the participation in the travel reservation tasks. Virtually all e-travel adopters would participate in the process while nearly half of the e-travel non-adopters would not do so in the majority of cases. In contrast, there was no such relationship regarding the stages in the e-commerce adoption path, with the majority of the individuals in each of the three stages participating in the process. Hence, it appears that a richer set of factors related to the product-category behaviour influence the e-travel adopters' adoption of e-commerce in the purchasing of leisure travel when compared to earlier stages in the e-commerce adoption path.

Given the apparent importance of the product-category behaviours, additional research addressing in more detail the influence of the travel purchasing and consumption upon the adoption of e-commerce in the purchasing of leisure travel is required.

12.2.5. To evaluate the barriers and opportunities for the adoption of the e-commerce in the purchasing of leisure travel

Another objective of this research was to evaluate the barriers and opportunities for the adoption of e-commerce in the purchasing of leisure travel (see Section 11.4 for a discussion). Evaluation refers to the systematic determination of the relevance of the factors influencing the adoption of e-commerce in the purchasing of leisure travel by establishing whether they are barriers and opportunities. For the purposes of evaluating the barriers and opportunities, the various variables comprising the conceptual framework are grouped into a more practical/manageable set of factors. This simplified view encompasses four categories of factors: systemic, structural, psychological and behavioural.

The results suggest that as one progresses along the e-commerce adoption path the range and number of barriers decreases. Earlier in the path multiple structural, systemic, psychological and behavioural obstacles stand in the way of the adoption of e-commerce in the purchasing of leisure travel. These barriers are related to each innovation in the innovation adoption path as well as to the product-category behaviour. The range and number of barriers decreases along the path to the extent that there appears to be no barriers preventing the e-travel adopters' use of e-commerce in the purchasing of leisure travel. Structural and systemic barriers are relevant earlier in the e-commerce adoption path, but little relevant from the Internet users stage onwards. In contrast, psychological and behavioural barriers are important at every stage in the e-commerce adoption path. While the four groups of factors are interlinked, they have different characteristics. Both the systemic and structural factors describe the system, while the psychological and behavioural factors describe the person. As such, it can be argued that early in the e-commerce adoption path the factors related to the system and to the person are an important influence on the adoption of e-commerce in the purchasing of leisure travel, while at the latter stages the factors describing the system appear to be little or not important.

Greater levels of adoption of e-commerce in the purchasing of leisure travel require not only the attenuation of the barriers but also seizing the opportunities that exist and were presented in section 11.4.

12.3. Implications

Implicit in the objectives of this research was the purpose of developing a model that could provide useful information to academics and practitioners involved both directly and indirectly in the adoption of e-commerce in general and specifically in the purchasing of leisure travel. This section seeks to discuss the main theoretical and practical implications emerging from this study.

12.3.1. Implications for theory

From the perspective of theory development, several implications follow from the results of this investigation. Any theory should aim to fulfil the parsimony criterion, which involves using fewer concepts and propositions to explain the phenomenon as possible (Fawcett and Downs, 1992). The results of this research suggest an inverse relationship between the adoption continuum and the innovation continuum regarding the importance of the variables. Thus, in innovation interdependence research such as the adoption of e-commerce, parsimony is dependent on the area of the adoption continuum that the researcher wishes to investigate:

- If the research focuses on the whole spectrum of the adoption continuum, the ability of the model to explain the adoption of e-commerce requires the use of a wide range of concepts related to the adoption of each of the innovations in the innovation path. This research fits into this category and hence emphasis was placed on the adoption of the three innovations (computers, the Internet and purchasing over the Internet, although less the Internet due to questionnaire length restrictions).

- If the research focuses on the earlier stages in the adoption continuum (e.g. the non-Internet users), the model should concentrate more on the innovations earlier in the path and less on the innovations later in the path.

- If the research focuses on the latter stages in the e-commerce adoption path and still includes non adopters of e-commerce, the model should be more concerned with addressing the issues related to the adoption of the Internet and mainly to the adoption of purchasing over the Internet as these are likely to provide greater explanation of the e-commerce adoption process.

- When the focus of the research is the Internet purchasers, there appears to be no value in including in the conceptual model the adoption of computers and the Internet. Instead, research should concentrate on the adoption of purchasing over the Internet.

One of the criticisms made of previous research on the adoption of e-commerce by this study was the overemphasis given to the adoption of purchasing over the Internet, with little consideration being given to the adoption of computers and the Internet (Section 4.3). However, it was also noted that previous research had focused on the individuals in the latter stages of the adoption continuum (Section 4.2). The results of this investigation partially support the emphasis placed on studying the adoption of purchasing over the Internet when the focus were the Internet users and/or purchasers. Nonetheless, part of the criticism remains valid as the adoption of computers and the Internet were found, although to a lesser extent than the adoption of purchasing leisure travel over the Internet, to be related to the adoption of e-commerce even further along the e-commerce adoption path, and most of previous research has failed to acknowledge this.

The results indicated that the relevance of the perceived innovation attributes varies across innovations and across the place in the continuum in the adoption path. This finding has two important theoretical implications. First, previous claims that the development of a unified model of adoption of innovations remains difficult are further supported (Agarwal and Prasad, 1997). Thus, different conceptual frameworks may be necessary according to the location on the adoption continuum as well as to the innovation the researcher wishes to investigate. However, while it remains difficult to identify, a priori, which perceived innovation characteristics are likely to influence adoption, it appears that some factors such

as complexity, at least in the context of computer-based innovations, play an important role irrespective of innovation and stage in the e-commerce adoption path. Second, previous research has suggested that initial usage is influenced by a greater set of perceived innovation characteristics than continuous usage. This research supports this claim and extends it to differential levels of non-usage as there were few differences regarding purchasing leisure travel over the Internet between the two groups who had not used e-commerce before.

Finally, the results of this investigation highlighted the importance of the product-category behaviours in explaining the adoption of e-commerce in the purchasing of leisure travel. Moreover, it appears that product-category behaviours play an important role irrespective of the stage in the e-commerce adoption path. Therefore, anyone attempting to develop models of e-commerce adoption by consumers should include the product-category behaviour as one central component of the model.

12.3.2. Implications for practice

The findings of this research have important implications for practitioners involved in the adoption of e-commerce in the purchasing of leisure travel. This research has demonstrated that the adoption of e-commerce in the purchasing of leisure travel is related to the adoption of computers and the Internet. Therefore, the market for e-commerce in the purchasing of leisure travel will be constrained by the adoption of computers and the Internet. Moreover, this study has provided evidence that the adoption of e-commerce in the purchasing of leisure travel is conditioned by purchasing and consumption patterns developed over the years. Thus, while the results indicate that there is scope for growth, significantly higher levels of adoption of e-commerce will require changes in peoples' purchasing and travelling habits. Increasing travel consumption levels will not happen overnight as the speed at which the forces that affect this behaviour change (e.g. economic and social factors) is relatively slow. Modification of purchasing habits of a lifetime within a social system which appears to value the social side of purchasing will be a difficult and long journey as well. As a consequence, the pace of adoption of e-commerce in the purchasing of leisure travel is likely to be slow but steady. Changes will happen along the way but ultimately they will be dependent on the extent to which greater levels of adoption

of computers and the Internet takes place, as well as the *tempo* of change in peoples' purchasing and consumption habits.

This interdependent nature of the adoption of e-commerce suggest that travel suppliers need to have a positive but cautious approach to the adoption of e-commerce. For example, careful consideration should be given to the levels and timing of their investment in e-commerce initiatives, as consumers may not be ready to adopt e-commerce.

One important factor influencing the adoption of e-commerce in the purchasing of leisure travel was a large preference for personal purchasing methods. This suggests that if e-commerce is to grow it will be necessary to foster higher levels of personalisation between purchasers and travel providers.

Contrary to the traditional assumption that in Portugal travel agencies have little importance as a purchasing channel, this research has demonstrated the critical role of travel agencies within the Portuguese outbound tourism system. Despite this strong market position, at the time of the research (2002) Portuguese travel agencies had little participation in e-commerce (see section 1.1.5.2). For example, none of the three main travel agency chains (Abreu, Top Tours and Space Travel) provided online booking facilities. However, by not adopting e-commerce they are jeopardising the capital gained over the years and risk loosing their current customers. More importantly, they risk losing their most valuable customers as the e-travel adopters displayed the greatest travel frequency. Hence, travel agencies need to engage in e-commerce and develop channel migration strategies in order to avoid alienating their best customers.

This research has facilitated a better understanding of which factors they may act upon, and of which factors need cross-sectorial collaboration (e.g. with governments, technology developers), so that the adoption levels are improved. While they can do little in respect to the adoption of computers and the Internet, travel providers play a vital role in the adoption of purchasing leisure travel over the Internet. Travel providers need to communicate more (and deliver) the benefits of purchasing leisure travel over the Internet. According to the results of this investigation, these benefits differentiate according to the stage in the e-commerce adoption path. It appears that further along the e-commerce adoption path the benefits associated with the outcomes (e.g. price, product/information)

are more important while earlier in the path the benefits related to the process (e.g. ease/simplicity) are more influential.

Several other implications for travel providers arise from the results of this research. One of these implications is the need to actively seek ways of mitigating risk concerns of the potential adopters of e-commerce. They need to understand the reasons (i.e. the sources) for such a high level of perceived risk and then behave accordingly. Another implication of this research is the need to make the purchasing process simpler. The tourism product can be complex, with many variations, rules and restrictions involved. Perhaps one way of reducing the complexity of purchasing leisure travel over the Internet is by simplifying the travel product (as the low cost airlines did with air travel). Similarly, design and technical issues influencing the usability of the Internet site may need to be carefully considered. The results of this research further suggest that travel providers need to address the payment issues if grater levels of adoption are to be achieved. The vast majority of the respondents preferred debit payment systems and hence developing non-credit systems appears to be an urgent task. Whatever the specific characteristics of payment means, travel providers need to ensure they are secured and effectively communicate their security.

12.4. Further research

It is hoped that this research will help to stimulate further research into the area of consumer adoption of e-commerce, in particular when purchasing leisure travel. Throughout the evaluation of the theoretical, methodological and analytical approaches (Section 11.2) many research directions arising from the limitations of this research were highlighted. However, some additional research opportunities are presented here.

In this research, the respondents were asked to indicate their motives for using, and for not using, the innovations. Future research could study the structure of motives related to the adoption of each of the innovations comprising the conceptual framework. One possible approach that could be used is the Means-End Chain (MEC, see Section 3.4.1.2 for a review). The MEC provides an understanding of the 'surface' motives (those initially described by an individual, usually attributes or consequences) as three to five more important motives are probed. More importantly, the use of the MEC technique could

facilitate the identification of how those 'surface' motives are linked to the values of the individual. While most previous investigations using the MEC have studied the motivation chain, the study of the de-motivation chain could also be an interesting research avenue.

One of the important features of this investigation was the focus on a specific product-category: leisure travel. This research confirmed the central role of the product-category behaviour in influencing the adoption of e-commerce in the purchasing of that product-category. Hence, future research could give greater consideration to their relationship. Research could gauge, for example, how the extent of knowledge held by the individual regarding the rules and procedures involved in completing a purchase is related to the adoption of e-commerce.

The analysis of the data regarding the non-Internet users and the Internet users suggests that these sub-groups, like the Internet purchasers, are not homogeneous. For example, when analysing the intention to use e-commerce in the purchasing of leisure travel, it is visible that there were individuals who rejected it, others who were uncertain and others who intended to do it. Hence, a more complete understanding of the process will benefit from a more in-depth understanding of each of the stages in the e-commerce adoption path. For example, the non-Internet users could be divided into computers users (those who had used computers in the past) and non-computers users (those who had never used computers).

12.5. Recent developments and the future

The primary data collection for this research was undertaken in 2002. Since then, many changes that are relevant for understanding the adoption of e-commerce by consumers in the purchasing of leisure travel have occurred. This section describes some of these developments and together with the findings of this research will attempt to anticipate what the future holds in respect to the adoption of e-commerce in general and more specifically in the purchasing of leisure travel.

One important result of this investigation was the apparent relationship between the adoption of e-commerce and the adoption of computers and the Internet. Therefore, the

market for e-commerce will be constrained by the adoption of these technologies. There is some evidence that major positive changes occurred since 2002 in relation to the adoption of computers, the Internet and e-commerce.

Recent data by UMIC (2003, 2004) regarding the adoption of computers and the Internet indicates that between 2002 and 2004 the proportion of residents in mainland Portugal with access to computers and the Internet at home grew. In 2004 nearly half had computers (37% in 2002) and 31 percent had access to the Internet (17 percent in 2002). In a similar vein, the number of computer and Internet users increased at a good pace. By 2004 more than half of the residents in mainland Portugal (54%) were users of computers and 43 percent were users of the Internet (when compared to 45 and 30 percent in 2002, respectively). Moreover, more than 80 percent of these users were frequent users. During this period there was also a clear shift from narrowband to broadband connection. In 2002, only 23 percent of the residents with access to the Internet at home had broadband. In 2004, six out of ten had access to broadband. The number of e-commerce users has also been growing and by 2004 seven percent of the Portuguese used e-commerce. However, the proportion using e-commerce in the purchasing of travel did not increase, remaining at 11 percent of the e-commerce users.

One contribution to these developments was the importance that has been given by the government and local authorities to the adoption of technology in Portuguese society. The Government plans for the future indicate that the country will continue its way towards a greater involvement in the use of technologies. In 2006 a major initiative was launched in cooperation with Microsoft (LUSA, 2006a) and one of the main objectives of this partnership is to educate one million Portuguese (around 10 percent of the population) in using these technologies. In addition, many local authorities, notably Municipalities and Parishes, are setting up rooms with free access to the Internet. Together with free access, courses are being organised specifically for older generations so that those traditionally excluded from the information society have an opportunity to learn how to use them. The introduction of computers and the Internet in education has also progressed at a good pace in recent years. By January 2006, all schools in Portugal were not only connected to the Internet, but they all had broadband access (LUSA, 2006b). The use of computers and the Internet in college and at university was also encouraged if not enforced by teachers and lecturers, to the extent they are becoming an essential tool for studying. All these initiatives are likely to result in more people moving forward in the ladder of adoption, which it is

expected will facilitate the adoption of e-commerce in general and specifically in the purchasing of leisure travel.

At the time that primary data collection was carried out (2002) the opportunities to buy travel over the Internet were scarce. For example, the main travel agencies had not adopted e-commerce and there were few low cost airlines flying to Lisbon. However, at present the reality is much different. Top Atlantico, the leading travel retailer resulting from the merger in 2003 between the second and third travel retail chains (Space Travel and Top Tours), now has an online presence. However, Viagens Abreu, the second largest chain and the oldest travel retailer in Portugal, has an Internet presence but does not offer online transaction capabilities. The opportunities to buy air travel over the Internet has also changed dramatically. For example, in November 2003 SATA – Air Açores made available online bookings for travellers (Publituris, 2003a). Perhaps more importantly, a brief search on the Internet revealed that since 2002 the number of low cost airlines operating at Lisbon Airport has grown significantly. The airlines beginning their operation in Lisbon after 2002 include some of the main European players: Germanwings in 2003, Maersk-Sterling, SAS Braathens, Air Berlin, Monarch e Vueling in 2004 and Centralwings and Easyjet in 2005. Ryanair, however, still does not fly to Lisbon. Overall, it can be argued these changes in the supply of travel provide the Portuguese (including Cascais) residents with additional opportunities to use e-commerce in the purchasing of travel.

On the travel demand side, the economic slowdown in the country since 2002 has certainly affected people's spending ability and, with travel being a discretionary expense, this may have prevented many from travelling, notably abroad. However, if the country is able to successfully overcome this recession it can be expected that the number of people travelling as well as the frequency with which they travel will increase. In line with the results of this investigation, this is likely to contribute to an increase in the number of e-travel adopters. Further to economic factors, the extent to which travelling is regarded as a priority within an individual's leisure time will influence the number of travellers as well as the frequency with which they travel. It can be argued that younger generations tend to be more cosmopolitan than older ones. If this trend is to be confirmed in the future, the prospects for e-commerce to be used as a purchasing channel are positive.

Recent statistics by VISA (2005) suggest that as far as payment for purchases is concerned the trend is also one that is likely to promote e-commerce adoption. In 2005 there were

12.1 million VISA cards in Portugal, from which slightly less than 30 percent (29.2%) were credit cards. While debit cards still comprise the majority of cards, the number of credit cards is growing fast. Between 2004 and 2005 the number of VISA credit cards in Portugal grew nearly 20 percent, with the number of transactions rising in the same proportion. At the same time, alternative Internet payment methods have been developed specifically for the Portuguese consumers by bank operators. One of such initiatives is MB NET, a virtual card that any consumer with a credit or debit card can use as a payment method for Internet purchases. According to SIBS (2006), at the end of 2005 there were 154.000 of such cards and during the year 230.000 payments were undertaken using this type of card.

Nonetheless, many important barriers will remain for many years to come. The 2001 Census revealed that more than half of the Portuguese over 15 had no formal education or had not gone further than the primary school. Bearing in mind the size of this group this may well represent a major constraint to the greater adoption of computers and the Internet, and consequently, to the adoption of e-commerce. The question remains as to whether these individuals with very low formal education will ever progress along the adoption ladder, and if they do so if they will ever develop a level of knowledge and confidence that will enable them to reach the final stage of the ladder.

12.6. Final remarks

When this study began, very little was known about the factors influencing the adoption of e-commerce, not only in general but specifically in the purchasing of leisure travel. Since then, the number of publications on the topic has soared. Despite the growing body of research on the topic, e-commerce is in its early stages of development and knowledge about the adoption of e-commerce by consumers is still scarce. This research contributes to this growing body of empirical work on the adoption of e-commerce and is a reply to the frequent calls for more research regarding the adoption of e-commerce by consumers (Hoffman and Novak, 1997; Lohse and Spliller, 1998; Chau et al., 2002; Elliot, 2002; Pavlou, 2003; Teo and Yeong, 2003; Chang et al., 2005).

The study of the relationship between ICT and tourism has received significant attention by both the industry and academics. However, this study is one of the few in the field of

tourism specifically designed to understand the adoption of e-commerce by consumers. Because little empirical research has been undertaken, little is known about the process through which consumers adopt e-commerce to purchase this product category. Hence, this research extends the understanding of the factors influencing the adoption of e-commerce in the purchasing of travel.

The study reported in this thesis was one of the first in Portugal to document the adoption of e-commerce by consumers. Several researchers (e.g. Anandarajan et al., 2002; Eastin, 2002; Pavlou, 2003) have pointed out the need to study e-commerce adoption in countries where computer and Internet adoption rates are not as high as in the most developed countries. Hence, this research contributes to a greater understanding of the adoption of e-commerce in a different technological context than that provided by most previous research.

While many other factors will contribute to the growth of e-commerce, the extent to which consumers adopt it will be the single most important determinant to achieving the success of this novel purchasing method. As Chang et al. (2005) stated:

> *"a better understanding of the dynamics of the adoption decision of online shopping of the customer will greatly benefit its promotion and help in the transition to a society more heavily involved in electronic commerce" (p. 556).*

It is hoped that the present study is one step further towards achieving these objectives. It is also expected that this study and its findings will stimulate further work examining the consumer adoption of e-commerce in general and in particular in the purchasing of leisure travel.

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Appendices

Content of the Appendices

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Appendix A1: Version 1 of the questionnaire

QUESTIONNAIRE

(Version 1: respondents who never used computers)

Please, READ ALL THE INSTRUCTIONS before you answer.

All answers will be treated in the strictest confidence.

This questionnaire aim at assessing peoples' perceptions and experience of and attitudes towards the purchasing of tourism related products over the Internet.
One of the problems in this is that tourism-related products need to be defined so that all those answering the questionnaire answer from the same understanding of what constitutes a tourism-related product. Therefore, to help you complete this questionnaire, we have given below examples of types of tourism related products.

Tourism related products – any product that will be consumed when travelling. Examples:

- Commercial transportation (Flight - domestic or international, bus, train or boat)
- Accommodation (Hotels, self-catering, hostels, *pousadas*)
- Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.
- Packages (journey bought from a brochure/journey organised by tour operators that includes at least accommodation and transport and is sold by a single price)
- Rent-a-car
- Cruises

PART A – TRAVELLING: EXPERIENCE AND PREFERENCES

In this first part of the questionnaire we would like you to answer questions about your travelling experience and preferences and how you would buy and organise your leisure journeys.

For our purposes, a **journey** is *any taken journey outside your usual residence staying away at least one night, in Portugal or abroad, having used commercial transport (plane, bus, train, boat) and/or tourist accommodation*. In some questions we would like you to divide your answers between business and leisure.

For the purposes of the study, a **Business journey** is a journey of at least one night whose main purpose is to go away in representation of some organisation or company; a **Leisure journey** is a journey of al least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.). If you have had a journey as part of your studies, that is considered a business journey

1. How many journeys (see definition above) have you had since 1st January 2000?

(write the number in the Appropriate box. Divide your answer by main purpose of travel (business or leisure) and by main visited country

	Business Journeys	Leisure Journeys
In Portugal		
In Spain		
In other European Union (EU) countries		
Other European (non-EU) countries		
Other countries		

The REMAINING QUESTIONS are related to leisure journeys. **We would like you to answer the remaining questions of this part 1 even if you have never gone on a leisure journey (of at least one night), or never booked one, or event if you think you are not sure about the answer.**

2. SUPPOSE that in the near future you will do LEISURE JOURNEYS:

a) The TRAVEL RESERVATIONS, directly to suppliers (airlines, hotels, etc.) or through a travel agent, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer)r

Always by me	
Most of the times by me	
Most of the times by others	
Always by others	

Explain why: _____

_____

b) The RESERVATIONS, according to your personal opinions, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer.

Always directly to suppliers (airlines, hotels, etc.)	
Most of the times directly to suppliers	
Most of the times to the travel agency	
Always to the travel agency	

Explain why: _____

_____

c) What would be the PREFERRED COMMUNICATION MEANS to CONTACT with the selling company(ies)?

Please rank your answer by order of preference – 1 to the most preferred mean and 3 for the less preferred. Write in the one reason for preferring your answer 1 and one reasons for not preferring your answer 3.

	rank
By telephone	
By email	
Personally (face to face)	

Reason for preferring your answer 1: _____

_____

Reason for not preferring your answer 3: _____

_____

PART B – The COMPUTER

This section asks you questions about your experiences of, perceptions about and attitudes towards using computers.

By **LEISURE PURPOSES** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

By **BUSINESS PURPOSES** we mean the use of the computer for the tasks needed to develop your profession or to complete your studies. If you are student and use a computer to study, that is considered business use.

3. What are the reasons for never have used computers for leisure purposes?

(Select the three reasons, ranking them importance: 1- the most important, 2 – the second most important and 3 – the third most important)

	ranking
Don't see any advantages in using computers	
Never needed to use computers	
Never had the opportunity to use computers	
Would not know how to use computers	
Would not like to use computers	
Other: *(please, specify)*	

Explain why you have indicated the reason 1 as the most important one _____

4. Why would you use computers for LEISURE PURPOSES?

(Write in the main reason. One reason only) _____

Explain why you consider that the main reason) _____

5. Do you have a computer that you can use at home or school/job?

(Write in two crossess – one in eacjh collumn)

	At home	At school/job
Yes		
No		

6. If you were using computers for leisure purposes, what tasks would you do?

(Tick the box(es) that suit your answer(s). Several answers possible)

U se the internet	
Write texts	
Play games	
Get information about products and services	
Buy products and services	
Ckeck e-mail	
Other: *(specify)*	

The next four questions aim at knowing what do you think and feel about the use of the computer <u>for leisure purposes</u>.

By **'LEISURE PURPOSES'** we mean the use of the computer for other purposes that working or studying. What is important <u>is not</u> <u>from where you use</u> the computer, but <u>the purposes for which you use it</u>, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

We have set out some statements about the use of computers for leisure purposes. We would like you to indicate your level of agreement with each statement by ticking the box that best matches your answer.

<u>We would like you to complete ALL the statements, even if you think you are not sure about the answer.</u>

7. Continue the sentence: "To me, using computers for leisure purposes is ..."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to execute tasks faster					
A means to execute tasks with less effort					
A way to improve the quality of the tasks					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

8. Thinking about using computers for LEISURE PURPOSES, please state your level of agreement with the following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen what others do using their computer					
I have had plenty of opportunity to see the computer being used					
I have seen many people that are important to me using computers					
I am afraid that my life becomes dependent on the computer					
Using a computer is a waste of time					
I intend to use the computer in the near future					
I intend to use the computer in the distant future					

In the following questions, what we would like you to do is to look at the alternative words presented and tick the box between the words that is closest to your opinion about your use of computers. For example, in a different study we might have asked you to complete the following statement about the use of the mobile phone and you might have given the answers shown.

Making a phone call through a cellular phone is:	Hard	1	2	3	4	5	6	X 7	Easy
	Safe	1	X 2	3	4	5	6	7	Risky

We ask you to answer all statements, even if you think that you are not sure about the correct answer

9. Continue a sentence: "To me, using computers for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

10. Please, continue a sentence: "To me, using a computer for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

11. Thinking about the use of the computer for leisure purposes, continue the sentence. "When using computers for LEISURE PURPOSES, I fell..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

PART C – The INTERNET

This section asks you questions about your experiences of, perceptions about and attitudes towards using the Internet.

By **'LEISURE PURPOSES'** we mean the use of the Internet for other purposes that working or studying. What is important is not from where you use the Internet, but the purposes for which you use it, that is, if you use your business hours for other purposes than working or studying, that is considered leisure use of the Internet.

By **'BUSINESS PURPOSES'** we mean the use of the Internet for the tasks needed to develop your profession or to complete your studies. If you are student and use the Internet to study, that is considered business use.

12. What are the reasons for never have used the Internet for leisure purposes?

(Select the three reasons, ranking them importance: 1- the most important, 2 – the second most important and 3 – the third most important)

	ranking
Don't see any advantages in using the Internet	
Never needed to use the Internet	
Never had the opportunity to use the Internet	
Would not know how to use the Internet	
Would not like to use the Internet	
Don't have access to a computer	
Other: *(please, specify)*	

_____

Explain why you have indicated the reason 1 as the most important one _____

_____

_____

13. Why would you use the Internet for leisure purposes?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

_____

14. Which activities would you do on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify):* _____		

15. Do you have a computer linked to Internet at your home or office/school that you can use?

(Write in two crosses – one in each column)		At home	At school/job
	Yes		
	No		

16. Thinking about using the Internet for LEISURE PURPOSES, please state your level of agreement with the two following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I intend to use the Internet in the near future					
I intend to use the Internet in the distant future					

PART D – PURCHASING TRAVEL ELECTRONICALLY

This section asks you questions about your experiences of, perceptions about and attitudes towards purchasing electronically (through the computer and the Internet), focusing on purchasing leisure journeys.

A **LEISURE JOURNEY** is a journey of at least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.).

An **ELECTRONIC PURCHASE** is any purchase where you have used the computer and the Internet to search, select, reserve and pay any product you buy. You should consider that you have made an electronic purchase only, and if only, you have completed the purchase process on the Internet.

TOURISM RELATED PRODUCTS are any products that will be consumed when travelling. Examples: commercial transport (Flight – domestic or international –, bus, train or boat); Accommodation (Hotels, self-catering, hostels, 'pousadas'); Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.; Cruises; Packages (journeys organised by tour operators that include at least accommodation and transport and are sold by a single price) or Rent-a-car. Therefore, **ELECTRONIC PURCHASE OF LEISURE TRAVEL** is any purchase of flights, accommodation, packages, rent-a-car, etc. for the journeys of at least one night, whose main purpose is to make use of your time when not in work (holidays, weekends, etc.), using the computer and the Internet to search, select, reserve and pay.

17. What type of products or services would you buy for leisure purposes using computers and the Internet?

(Tick the box(es) that best suits your answer. Several answers possible)

Books		***Computers***	
CD's/Cassettes		***Rent-a-car***	
Fight tickets		***Tourist accommodation***	
Entertainment tickets		***Cruises***	
Movies		***Insurance***	
Packages		***Other:*** *(specify)*	
Financial services (Loans, credit cards)			

18. What are the reasons for never have purchased tourism related products for leisure journeys (see definition on previous page) through computers and the Internet?

(Select THREE factors, ordering them by order of importance: 1 – most important reason, 2 – second most important reason and 3 – third most important reason

I don't see any advantages of buying tourism products through the Internet	
I don't have Internet	
I don't have a computer	
I do not trust in purchasing through the Internet	
I don't like to purchase through the Internet	
I wouldn't know how to purchase using the computer and the Internet	
I have not travelled	
Other: *(specify)* _____	

Explain why you have indicated your answer 1 as the most important reason _____

19. Why would you buy tourism related product for leisure journeys using computers and the Internet?

(write in the reasons why you would buy)

Main reason _____

Other reasons _____

Explain why you consider the main reason as the most important one _____

As previously (in part 2, about the use of the computer), we have set out pairs of words and statements about the purchasing of leisure travel electronically. We would like you to tick the box between the words that is closest to your opinion.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what you think about it.

20. Continue a sentence: "To me, purchasing tourism related products for leisure journeys using computers and the Internet is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

21. Please, continue a sentence: "To me, purchasing tourism related products for leisure journeys using a computer and the Internet is...

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

22. Please, continue the sentence. "If I was buying tourism related products for leisure journeys using computers and the Internet, I would feel..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

As previously (in part 2, about the use of the computer), we have set out sentences about the purchasing of leisure travel electronically. We would like you to tick the box that indicates your level of agreement with each statements.

<u>You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what do you think about it.</u>

23. Continue the sentence. "To me, purchasing tourism related products for leisure journeys using computers and the Internet is....."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to purchase faster					
A means to purchase with less effort					
A way to improve the quality of the purchase					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

24. Please state your level of agreement with the following statements:

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen many people that are important to me purchasing tourism related products for leisure journeys over the Internet					
I have talked to others about purchasing tourism related product for leisure journey over the Internet					
When purchasing tourism related products over Internet the probability of doing the best deal is high.					
I might loose money If I buy tourism related products for leisure journeys over the Internet					
I intend to purchase tourism related products for leisure journeys over the Internet in the near future					
I intend to purchase tourism related products for leisure journeys over the Internet in the distant future					

25. Do you have credit cards of your own?

(If your answer is no, explain why. If your answer is yes, tick two boxes, one in each column)

NO. Explain why: _____

_____

YES. What is the credit limit:

	Of the total of the cards	Of the card with the highest limit
Up to 500 Euros		
From 501 to 1000 Euros		
From 1001 to 1500 Euros		
From 1501 to 2500 Euros		
From 2501 to 5000 Euros		
More than 5000 euros		

26. Which payment methods would you prefer to use when purchasing travel over the Internet?

Write in the rank you give to each payment method: 1-most preferred, 2- second most preferred, ..., and 5 – fifth most preferred)

	rank
Credit card, communicating the details to the seller through the phone	
Credit card, communicating the details to the seller through the email	
Credit card, communicating the details to the seller online(Internet)	
Bank transfer	
Debit Card	

Explain why you have indicated your answer 1 as the most preferred method _____

_____

_____

Return this questionnaire by mail as soon as possible, using the stamped envelope left with this questionnaire.

THANK YOU VERY MUCH for your cooperation!

Appendix A2: Version 2 of the questionnaire

QUESTIONNAIRE

(Version 2: respondents who have used computers in the past but never used the Internet)

Please, READ ALL THE INSTRUCTIONS before you answer.

All answers will be treated in the strictest confidence.

This questionnaire aim at assessing peoples' perceptions and experience of and attitudes towards the purchasing of tourism related products over the Internet.
One of the problems in this is that tourism-related products need to be defined so that all those answering the questionnaire answer from the same understanding of what constitutes a tourism-related product. Therefore, to help you complete this questionnaire, we have given below examples of types of tourism related products.

Tourism related products – any product that will be consumed when travelling. Examples:

- Commercial transportation (Flight - domestic or international, bus, train or boat)
- Accommodation (Hotels, self-catering, hostels, *pousadas*)
- Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.
- Packages (journey bought from a brochure/journey organised by tour operators that includes at least accommodation and transport and is sold by a single price)
- Rent-a-car
- Cruises

PART A – TRAVELLING: EXPERIENCE AND PREFERENCES

In this first part of the questionnaire we would like you to answer questions about your travelling experience and preferences and how you would buy and organise your leisure journeys.

For our purposes, a **journey** is *any taken journey outside your usual residence staying away at least one night, in Portugal or abroad, having used commercial transport (plane, bus, train, boat) and/or tourist accommodation*. In some questions we would like you to divide your answers between business and leisure.

For the purposes of the study, a **Business journey** is a journey of at least one night whose main purpose is to go away in representation of some organisation or company; a **Leisure journey** is a journey of al least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.). If you have had a journey as part of your studies, that is considered a business journey

1. How many journeys (see definition above) have you had since 1st January 2000?

(write the number in the Appropriate box. Divide your answer by main purpose of travel (business or leisure) and by main visited country

	Business Journeys	Leisure Journeys
In Portugal		
In Spain		
In other European Union (EU) countries		
Other European (non-EU) countries		
Other countries		

The REMAINING QUESTIONS are related to leisure journeys. **We would like you to answer the remaining questions of this part 1 even if you have never gone on a leisure journey (of at least one night), or never booked one, or event if you think you are not sure about the answer.**

2. SUPPOSE that in the near future you will do LEISURE JOURNEYS:

a) The TRAVEL RESERVATIONS, directly to suppliers (airlines, hotels, etc.) or through a travel agent, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer)r

Always by me	
Most of the times by me	
Most of the times by others	
Always by others	

Explain why: _____

_____

b) The RESERVATIONS, according to your personal opinions, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer.

Always directly to suppliers (airlines, hotels, etc.)	
Most of the times directly to suppliers	
Most of the times to the travel agency	
Always to the travel agency	

Explain why: _____

_____

c) What would be the PREFERRED COMMUNICATION MEANS to CONTACT with the selling company(ies)?

Please rank your answer by order of preference – 1 to the most preferred mean and 3 for the less preferred. Write in the one reason for preferring your answer 1 and one reasons for not preferring your answer 3.

	rank
By telephone	
By email	
Personally (face to face)	

Reason for preferring your answer 1: _____

_____

Reason for not preferring your answer 3: _____

_____

PART B – The COMPUTER

This section asks you questions about your experiences of, perceptions about and attitudes towards using computers.

By **LEISURE PURPOSES** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

By **BUSINESS PURPOSES** we mean the use of the computer for the tasks needed to develop your profession or to complete your studies. If you are student and use a computer to study, that is considered business use.

3. WHEN have you used computers for the FIRST time?

(Write in the year of first use of the computer) ***Year*** ☐

4. WHERE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***At school*** ☐
- ***At your home*** ☐
- ***At family and friends' home*** ☐
- ***At office*** ☐
- ***Other*** *(specify):* ☐

_____

5. For which PURPOSE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***To work*** ☐
- ***To study*** ☐
- ***To play games*** ☐
- ***Other*** *(specify):* ☐

_____

If you DID NOT USE a computer in the LAST MONTH for LEISURE PURPOSE, please continue on the next question (7).

If you have USED computer for LEISURE PURPOSE in the LAST MONTH, please go to question 9

6. WHEN was the LAST time you have used computers for LEISURE PURPOSES?

(Tick the box that best suits your answer. One answer only.)

- ***In 2002: (specify Month) _____*** ☐
- ***October, November or December 2001*** ☐
- ***July, August or September 2001*** ☐
- ***April May or June 2001*** ☐
- ***January, February or March 2001*** ☐
- ***In 2000 or 1999*** ☐
- ***In 1998 or 1997*** ☐
- ***In 1996 or before*** ☐

7. Which are the main reasons for NOT HAVING used computers for LEISURE PURPOSES in the last month?

(Select THREE factors, ordering them by order of preference: 1 – most important factor, 2 – second most important factor and 3 – third most important factor

rank

- ***I don't have access to a computer*** ☐
- ***I don't see any advantages of using computers*** ☐
- ***I do not need to use computers*** ☐
- ***I do not like to use computers*** ☐
- ***Other:*** *(specify)* ☐

_____

Explain why you have indicated your answer 1 as the most important reason _____

_____

_____

If you answered to the two previous questions (7 e 8), continue on question 10

8. How many HOURS, in a normal week (7 days: five week days and weekend) do you use computers?

(Divide your answer by use of the computer for leisure purposes and use of the computer for business purposes)

	At home	At office	At school	Other place (specify) _____
Leisure purposes (tasks not related with your job)	☐	☐	☐	☐
Business purposes (tasks related to your job or studies)	☐	☐	☐	☐

9. Why would you use computers for LEISURE PURPOSES?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

10. Do you have a computer that you can use at home or school/job?

(Write in two crosses – one in each column)	At home	At school/job
Yes	☐	☐
No	☐	☐

11. What activities have you done when you have used computers for LEISURE PURPOSES?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Write texts*** ☐
- ***Play games*** ☐
- ***Other:*** *(specify)* ☐

_____

12. What activities do you think you will do when using computers for leisure purposes?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Use the Internet*** ☐
- ***Write texts*** ☐
- ***Play games*** ☐
- ***Get information about products and services*** ☐
- ***Purchase products and services*** ☐
- ***Check email*** ☐
- ***Other:*** *(specify)* ☐

_____

The next four questions aim at knowing what do you think and feel about the use of the computer for leisure purposes.

By **'LEISURE PURPOSE'** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

We have set out some statements about the use of computers for leisure purposes. We would like you to indicate your level of agreement with each statement by ticking the box that best matches your answer.

We would like you to complete ALL the statements, even if you think you are not sure about the answer.

13. Continue the sentence: "To me, using computers for leisure purposes is ..."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to execute tasks faster					
A means to execute tasks with less effort					
A way to improve the quality of the tasks					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

14. Thinking about using computers for LEISURE PURPOSES, please state your level of agreement with the following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen what others do using their computer					
I have had plenty of opportunity to see the computer being used					
I have seen many people that are important to me using computers					
I am afraid that my life becomes dependent on the computer					
Using a computer is a waste of time					
I intend to use the computer in the near future					
I intend to use the computer in the distant future					

In the following questions, what we would like you to do is to look at the alternative words presented and tick the box between the words that is closest to your opinion about your use of computers. For example, in a different study we might have asked you to complete the following statement about the use of the mobile phone and you might have given the answers shown.

Making a phone call through a cellular phone is:									
	Hard	1	2	3	4	5	6	☒ 7	Easy
	Safe	1	☒ 2	3	4	5	6	7	Risky

We ask you to answer all statements, even if you think that you are not sure about the correct answer

15. Continue a sentence: "To me, using computers for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

16. Please, continue a sentence: "To me, using a computer for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

17. Thinking about the use of the computer for leisure purposes, continue the sentence. "When using computers for LEISURE PURPOSES, I fell..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

PART C – The INTERNET

This section asks you questions about your experiences of, perceptions about and attitudes towards using the Internet.

By **'LEISURE PURPOSES'** we mean the use of the Internet for other purposes that working or studying. What is important is not from where you use the Internet, but the purposes for which you use it, that is, if you use your business hours for other purposes than working or studying, that is considered leisure use of the Internet.

By **'BUSINESS PURPOSES'** we mean the use of the Internet for the tasks needed to develop your profession or to complete your studies. If you are student and use the Internet to study, that is considered business use.

18. What are the reasons for never have used the Internet for leisure purposes?

(Select the three reasons, ranking them importance: 1- the most important, 2 – the second most important and 3 – the third most important)

	ranking
Don't see any advantages in using the Internet	
Never needed to use the Internet	
Never had the opportunity to use the Internet	
Would not know how to use the Internet	
Would not like to use the Internet	
Don't have access to a computer	
Other: *(please, specify)*	

Explain why you have indicated the reason 1 as the most important one _____

19. Why would you use the Internet for leisure purposes?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

_____

20. Which activities would you do on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify)**:*** _____		

21. Do you have a computer linked to Internet at your home or office/school that you can use?

(Write in two crosses – one in each column)	At home	At school/job
Yes		
No		

22. Thinking about using the Internet for LEISURE PURPOSES, please state your level of agreement with the two following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I intend to use the Internet in the near future					
I intend to use the Internet in the distant future					

PART D – PURCHASING TRAVEL ELECTRONICALLY

This section asks you questions about your experiences of, perceptions about and attitudes towards purchasing electronically (through the computer and the Internet), focusing on purchasing leisure journeys.

A **LEISURE JOURNEY** is a journey of at least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.).

An **ELECTRONIC PURCHASE** is any purchase where you have used the computer and the Internet to search, select, reserve and pay any product you buy. You should consider that you have made an electronic purchase only, and if only, you have completed the purchase process on the Internet.

TOURISM RELATED PRODUCTS are any products that will be consumed when travelling. Examples: commercial transport (Flight – domestic or international –, bus, train or boat); Accommodation (Hotels, self-catering, hostels, 'pousadas'); Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.; Cruises; Packages (journeys organised by tour operators that include at least accommodation and transport and are sold by a single price) or Rent-a-car. Therefore, **ELECTRONIC PURCHASE OF LEISURE TRAVEL** is any purchase of flights, accommodation, packages, rent-a-car, etc. for the journeys of at least one night, whose main purpose is to make use of your time when not in work (holidays, weekends, etc.), using the computer and the Internet to search, select, reserve and pay.

23. What type of products or services would you buy using computers and the Internet for leisure purposes?

(Tick the box(es) that best suits your answer. Several answers possible)

Books		***Computers***	
CD's/Cassettes		***Rent-a-car***	
Fight tickets		***Tourist accommodation***	
Entertainment tickets		***Cruises***	
Movies		***Insurance***	
Packages		***Other:*** *(specify)*	
Financial services (Loans, credit cards)			

24. What are the reasons for never have purchased tourism related products for leisure journeys (see definition on previous page) through computers and the Internet?

(Select THREE factors, ordering them by order of importance: 1 – most important reason, 2 – second most important reason and 3 – third most important reason

I don't see any advantages of buying tourism products through the Internet	
I don't have Internet	
I don't have a computer	
I do not trust in purchasing through the Internet	
I don't like to purchase through the Internet	
I wouldn't know how to purchase using the computer and the Internet	
I have not travelled	
Other: *(specify)* _____	

Explain why you have indicated your answer 1 as the most important reason _____

25. Why would you buy tourism related product for leisure journeys using computers and the Internet?

(write in the reasons why you would buy)

Main reason _____

Other reasons _____

Explain why you consider the main reason as the most important one _____

As previously (in part 2, about the use of the computer), we have set out pairs of words and statements about the purchasing of leisure travel electronically. We would like you to tick the box between the words that is closest to your opinion.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what you think about it.

26. Continue a sentence: "To me, purchasing tourism related products for leisure journeys using computers and the Internet is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

27. Please, continue a sentence: "To me, purchasing tourism related products for leisure journeys using a computer and the Internet is...

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

29. Please, continue the sentence. "If I was buying tourism related products for leisure journeys using computers and the Internet, I would feel..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

As previously (in part 2, about the use of the computer), we have set out sentences about the purchasing of leisure travel electronically. We would like you to tick the box that indicates your level of agreement with each statements.

<u>You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what do you think about it.</u>

30. Continue the sentence. "To me, purchasing tourism related products for leisure journeys using computers and the Internet is....."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to purchase faster					
A means to purchase with less effort					
A way to improve the quality of the purchase					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

31. Please state your level of agreement with the following statements:

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen many people that are important to me purchasing tourism related products for leisure journeys over the Internet					
I have talked to others about purchasing tourism related product for leisure journey over the Internet					
When purchasing tourism related products over Internet the probability of doing the best deal is high.					
I might loose money If I buy tourism related products for leisure journeys over the Internet					
I intend to purchase tourism related products for leisure journeys over the Internet in the near future					
I intend to purchase tourism related products for leisure journeys over the Internet in the distant future					

32. Do you have credit cards of your own?

(If your answer is no, explain why. If your answer is yes, tick two boxes, one in each column)

NO. Explain why: _____

_____

YES. What is the credit limit:

	Of the total of the cards	Of the card with the highest limit
Up to 500 Euros		
From 501 to 1000 Euros		
From 1001 to 1500 Euros		
From 1501 to 2500 Euros		
From 2501 to 5000 Euros		
More than 5000 euros		

33. Which payment methods would you prefer to use when purchasing travel over the Internet?

Write in the rank you give to each payment method: 1-most preferred, 2- second most preferred, ..., and 5 – fifth most preferred)

	rank
Credit card, communicating the details to the seller through the phone	
Credit card, communicating the details to the seller through the email	
Credit card, communicating the details to the seller online(Internet)	
Bank transfer	
Debit Card	

Explain why you have indicated your answer 1 as the most preferred method _____

_____

_____

Return this questionnaire by mail as soon as possible, using the stamped envelope left with this questionnaire.

THANK YOU VERY MUCH for your cooperation!

Appendix A3: Version 3 of the questionnaire

QUESTIONNAIRE

(Version 3: respondents who have used computers and the Internet in the past but never purchased over the Internet)

Please, READ ALL THE INSTRUCTIONS before you answer.

All answers will be treated in the strictest confidence.

This questionnaire aim at assessing peoples' perceptions and experience of and attitudes towards the purchasing of tourism related products over the Internet.
One of the problems in this is that tourism-related products need to be defined so that all those answering the questionnaire answer from the same understanding of what constitutes a tourism-related product. Therefore, to help you complete this questionnaire, we have given below examples of types of tourism related products.

Tourism related products – any product that will be consumed when travelling. Examples:

- Commercial transportation (Flight - domestic or international, bus, train or boat)
- Accommodation (Hotels, self-catering, hostels, *pousadas*)
- Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.
- Packages (journey bought from a brochure/journey organised by tour operators that includes at least accommodation and transport and is sold by a single price)
- Rent-a-car
- Cruises

PART A – TRAVELLING: EXPERIENCE AND PREFERENCES

In this first part of the questionnaire we would like you to answer questions about your travelling experience and preferences and how you would buy and organise your leisure journeys.

For our purposes, a **journey** is *any taken journey outside your usual residence staying away at least one night, in Portugal or abroad, having used commercial transport (plane, bus, train, boat) and/or tourist accommodation*. In some questions we would like you to divide your answers between business and leisure.

For the purposes of the study, a **Business journey** is a journey of at least one night whose main purpose is to go away in representation of some organisation or company; a **Leisure journey** is a journey of al least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.). If you have had a journey as part of your studies, that is considered a business journey

1. How many journeys (see definition above) have you had since 1st January 2000?

(write the number in the Appropriate box. Divide your answer by main purpose of travel (business or leisure) and by main visited country

	Business Journeys	Leisure Journeys
In Portugal		
In Spain		
In other European Union (EU) countries		
Other European (non-EU) countries		
Other countries		

The REMAINING QUESTIONS are related to leisure journeys. **We would like you to answer the remaining questions of this part 1 even if you have never gone on a leisure journey (of at least one night), or never booked one, or event if you think you are not sure about the answer.**

2. SUPPOSE that in the near future you will do LEISURE JOURNEYS:

a) The TRAVEL RESERVATIONS, directly to suppliers (airlines, hotels, etc.) or through a travel agent, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer)r

Always by me	
Most of the times by me	
Most of the times by others	
Always by others	

Explain why: _____

_____

b) The RESERVATIONS, according to your personal opinions, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer.

Always directly to suppliers (airlines, hotels, etc.)	
Most of the times directly to suppliers	
Most of the times to the travel agency	
Always to the travel agency	

Explain why: _____

_____

c) What would be the PREFERRED COMMUNICATION MEANS to CONTACT with the selling company(ies)?

Please rank your answer by order of preference – 1 to the most preferred mean and 3 for the less preferred. Write in the one reason for preferring your answer 1 and one reasons for not preferring your answer 3.

	rank
By telephone	
By email	
Personally (face to face)	

Reason for preferring your answer 1: _____

_____

Reason for not preferring your answer 3: _____

_____

PART B – The COMPUTER

This section asks you questions about your experiences of, perceptions about and attitudes towards using computers.

By **LEISURE PURPOSES** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

By **BUSINESS PURPOSES** we mean the use of the computer for the tasks needed to develop your profession or to complete your studies. If you are student and use a computer to study, that is considered business use.

3. WHEN have you used computers for the FIRST time?

(Write in the year of first use of the computer) ***Year*** ☐

4. WHERE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***At school*** ☐
- ***At your home*** ☐
- ***At family and friends' home*** ☐
- ***At office*** ☐
- ***Other*** *(specify):* ☐

_____

5. For which PURPOSE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***To work*** ☐
- ***To study*** ☐
- ***To play games*** ☐
- ***Other*** *(specify):* ☐

_____

If you DID NOT USE a computer in the LAST MONTH for LEISURE PURPOSE, please continue on the next question (7).

If you have USED computer for LEISURE PURPOSE in the LAST MONTH, please go to question 9

6. WHEN was the LAST time you have used computers for LEISURE PURPOSES?

(Tick the box that best suits your answer. One answer only.)

- ***In 2002: (specify Month)*** _____ ☐
- ***October, November or December 2001*** ☐
- ***July, August or September 2001*** ☐
- ***April May or June 2001*** ☐
- ***January, February or March 2001*** ☐
- ***In 2000 or 1999*** ☐
- ***In 1998 or 1997*** ☐
- ***In 1996 or before*** ☐

7. Which are the main reasons for NOT HAVING used computers for LEISURE PURPOSES in the last month?

(Select THREE factors, ordering them by order of preference: 1 – most important factor, 2 – second most important factor and 3 – third most important factor

rank

- ***I don't have access to a computer*** ☐
- ***I don't see any advantages of using computers*** ☐
- ***I do not need to use computers*** ☐
- ***I do not like to use computers*** ☐
- ***Other:*** *(specify)* ☐

_____

Explain why you have indicated your answer 1 as the most important reason _____

_____

_____

If you answered to the two previous questions (7 e 8), continue on question 10

8. How many HOURS, in a normal week (7 days: five week days and weekend) do you use computers?

(Divide your answer by use of the computer for leisure purposes and use of the computer for business purposes)

	At home	At office	At school	Other place (specify) _____
Leisure purposes (tasks not related with your job)	☐	☐	☐	☐
Business purposes (tasks related to your job or studies)	☐	☐	☐	☐

9. Why would you use computers for LEISURE PURPOSES?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

10. Do you have a computer that you can use at home or school/job?

	At home	At school/job
(Write in two crosses – one in each column)		
Yes	☐	☐
No	☐	☐

11. What activities have you done when you have used computers for LEISURE PURPOSES?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Write texts*** ☐
- ***Play games*** ☐
- ***Other:*** *(specify)* ☐

_____

12. What activities do you think you will do when using computers for leisure purposes?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Use the Internet*** ☐
- ***Write texts*** ☐
- ***Play games*** ☐
- ***Get information about products and services*** ☐
- ***Purchase products and services*** ☐
- ***Check email*** ☐
- ***Other:*** *(specify)* ☐

_____

The next four questions aim at knowing what do you think and feel about the use of the computer for leisure purposes.

By **'LEISURE PURPOSE'** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

We have set out some statements about the use of computers for leisure purposes. We would like you to indicate your level of agreement with each statement by ticking the box that best matches your answer.

We would like you to complete ALL the statements, even if you think you are not sure about the answer.

13. Continue the sentence: "To me, using computers for leisure purposes is ..."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to execute tasks faster					
A means to execute tasks with less effort					
A way to improve the quality of the tasks					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

14. Thinking about using computers for LEISURE PURPOSES, please state your level of agreement with the following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen what others do using their computer					
I have had plenty of opportunity to see the computer being used					
I have seen many people that are important to me using computers					
I am afraid that my life becomes dependent on the computer					
Using a computer is a waste of time					
I intend to use the computer in the near future					
I intend to use the computer in the distant future					

In the following questions, what we would like you to do is to look at the alternative words presented and tick the box between the words that is closest to your opinion about your use of computers. For example, in a different study we might have asked you to complete the following statement about the use of the mobile phone and you might have given the answers shown.

Making a phone call through a cellular phone is:									
	Hard	1	2	3	4	5	6	X 7	Easy
	Safe	1	X 2	3	4	5	6	7	Risky

We ask you to answer all statements, even if you think that you are not sure about the correct answer

15. Continue a sentence: "To me, using computers for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

16. Please, continue a sentence: "To me, using a computer for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

17. Thinking about the use of the computer for leisure purposes, continue the sentence. "When using computers for LEISURE PURPOSES, I fell..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

PART C – The INTERNET

This section asks you questions about your experiences of, perceptions about and attitudes towards using the Internet.

By **'LEISURE PURPOSES'** we mean the use of the Internet for other purposes that working or studying. What is important is not from where you use the Internet, but the purposes for which you use it, that is, if you use your business hours for other purposes than working or studying, that is considered leisure use of the Internet.

By **'BUSINESS PURPOSES'** we mean the use of the Internet for the tasks needed to develop your profession or to complete your studies. If you are student and use the Internet to study, that is considered business use.

18. WHEN have you used the Internet for the FIRST time?

(Write in the year of first use of the computer) ***Year*** ☐

19. WHERE have you used the Internet for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***At school*** ☐
- ***At my home*** ☐
- ***At friends of relatives home*** ☐
- ***At work*** ☐
- ***Other:*** *(specify)* ☐

20. For which PURPOSE have you used the Internet for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

To work	☐
To study	☐
To get information about products and services	☐
By curiosity	☐
other: *(specify)*	☐

_____

If you HAVE NOT USED the Internet for LEISURE PURPOSES in the LAST MONTH, continue on the next question (25). If you HAVE USED the Internet for LEISURE PURPOSES in the LAST MONTH, go to question 27.

21. WHEN was the LAST time you have used the Internet for LEISURE PURPOSES?

(Tick the box that best suits your answer. One answer only.)

In 2002: (specify Month) _____	☐
October, November or December 2001	☐
July, August or September 2001	☐
April May or June 2001	☐
January, February or March 2001	☐
In 2000 or 1999	☐
In 1998 or 1997	☐
In 1996 or before	☐

22. Which are the main reasons for NOT HAVING used the Internet for LEISURE PURPOSES in the last month?

(Select THREE factors, ordering them by order of preference: 1 – most important factor, 2 – second most important factor and 3 – third most important factor

	rank
I don't have access to a computer	☐
I don't see any advantages of using computers	☐
I do not need to use computers	☐
I do not like to use computers	☐
Other: *(specify)*	☐

_____

Explain why you have indicated your answer 1 as the most important reason

_____

_____

_____

If you answered to the two previous questions (7 e 8), continue on question 10

23. How many HOURS, in a normal week (7 days: five week days and weekend) do you use the Internet?

(Divide your answer by use of the computer for leisure purposes and use of the computer for business purposes)

	At home	At office	At school	Other place (specify) _____
Leisure purposes (tasks not related with your job)	☐	☐	☐	☐
Business purposes (tasks related to your job or studies)	☐	☐	☐	☐

24. Why would you use the Internet for leisure purposes?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

_____

25. Which activities have you done on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify)**:*** _____		

26. Which activities would you do on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify)**:*** _____		

27. Do you have a computer linked to Internet at your home or office/school that you can use?

(Write in two crosses – one in each column)		At home	At school/job
	Yes		
	No		

28. Thinking about using the Internet for LEISURE PURPOSES, please state your level of agreement with the two following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I intend to use the Internet in the near future					
I intend to use the Internet in the distant future					

PART D – PURCHASING TRAVEL ELECTRONICALLY

This section asks you questions about your experiences of, perceptions about and attitudes towards purchasing electronically (through the computer and the Internet), focusing on purchasing leisure journeys.

A **LEISURE JOURNEY** is a journey of at least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.).

An **ELECTRONIC PURCHASE** is any purchase where you have used the computer and the Internet to search, select, reserve and pay any product you buy. You should consider that you have made an electronic purchase only, and if only, you have completed the purchase process on the Internet.

TOURISM RELATED PRODUCTS are any products that will be consumed when travelling. Examples: commercial transport (Flight – domestic or international –, bus, train or boat); Accommodation (Hotels, self-catering, hostels, 'pousadas'); Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.; Cruises; Packages (journeys organised by tour operators that include at least accommodation and transport and are sold by a single price) or Rent-a-car. Therefore, **ELECTRONIC PURCHASE OF LEISURE TRAVEL** is any purchase of flights, accommodation, packages, rent-a-car, etc. for the journeys of at least one night, whose main purpose is to make use of your time when not in work (holidays, weekends, etc.), using the computer and the Internet to search, select, reserve and pay.

29. What type of products or services would you buy for leisure purposes using computers and the Internet?

(Tick the box(es) that best suits your answer. Several answers possible)

Books	☐	***Computers***	☐
CD's/Cassettes	☐	***Rent-a-car***	☐
Fight tickets	☐	***Tourist accommodation***	☐
Entertainment tickets	☐	***Cruises***	☐
Movies	☐	***Insurance***	☐
Packages	☐	***Other:*** *(specify)*	☐
Financial services (Loans, credit cards)	☐	_____	

30. What are the reasons for never have purchased tourism related products for leisure journeys (see definition on previous page) through computers and the Internet?

(Select THREE factors, ordering them by order of importance: 1 – most important reason, 2 – second most important reason and 3 – third most important reason

I don't see any advantages of buying tourism products through the Internet	☐
I don't have Internet	☐
I don't have a computer	☐
I do not trust in purchasing through the Internet	☐
I don't like to purchase through the Internet	☐
I wouldn't know how to purchase using the computer and the Internet	☐
I have not travelled	☐
Other: *(specify)* _____	☐

Explain why you have indicated your answer 1 as the most important reason

_____

_____

_____

31. Why would you buy tourism related product for leisure journeys using computers and the Internet?

(write in the reasons why you would buy)

Main reason _____

Other reasons _____

Explain why you consider the main reason as the most important one _____

As previously (in part 2, about the use of the computer), we have set out pairs of words and statements about the purchasing of leisure travel electronically. We would like you to tick the box between the words that is closest to your opinion.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what you think about it.

32. Continue a sentence: "To me, purchasing tourism related products for leisure journeys using computers and the Internet is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

33. Please, continue a sentence: "To me, purchasing tourism related products for leisure journeys using a computer and the Internet is...

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

34. Please, continue the sentence. "If I was buying tourism related products for leisure journeys using computers and the Internet, I would feel..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

As previously (in part 2, about the use of the computer), we have set out sentences about the purchasing of leisure travel electronically. We would like you to tick the box that indicates your level of agreement with each statements.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what do you think about it.

35. Continue the sentence. "To me, purchasing tourism related products for leisure journeys using computers and the Internet is....."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to purchase faster					
A means to purchase with less effort					
A way to improve the quality of the purchase					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

36. Please state your level of agreement with the following statements:

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen many people that are important to me purchasing tourism related products for leisure journeys over the Internet					
I have talked to others about purchasing tourism related product for leisure journey over the Internet					
When purchasing tourism related products over Internet the probability of doing the best deal is high.					
I might loose money If I buy tourism related products for leisure journeys over the Internet					
I intend to purchase tourism related products for leisure journeys over the Internet in the near future					
I intend to purchase tourism related products for leisure journeys over the Internet in the distant future					

37. Do you have credit cards of your own?

(If your answer is no, explain why. If your answer is yes, tick two boxes, one in each column)

NO. Explain why: _____

_____

YES. What is the credit limit:

	Of the total of the cards	Of the card with the highest limit
Up to 500 Euros		
From 501 to 1000 Euros		
From 1001 to 1500 Euros		
From 1501 to 2500 Euros		
From 2501 to 5000 Euros		
More than 5000 euros		

38. Which payment methods would you prefer to use when purchasing travel over the Internet?

Write in the rank you give to each payment method: 1-most preferred, 2- second most preferred, ..., and 5 – fifth most preferred)

	rank
Credit card, communicating the details to the seller through the phone	
Credit card, communicating the details to the seller through the email	
Credit card, communicating the details to the seller online(Internet)	
Bank transfer	
Debit Card	

Explain why you have indicated your answer 1 as the most preferred method _____

_____

_____

Return this questionnaire by mail as soon as possible, using the stamped envelope left with this questionnaire.

THANK YOU VERY MUCH for your cooperation!

Appendix A4: Version 4 of the questionnaire

QUESTIONNAIRE

(Version 4: respondents who have used computers, the Internet and who have purchased over the Internet)

Please, READ ALL THE INSTRUCTIONS before you answer.

All answers will be treated in the strictest confidence.

This questionnaire aim at assessing peoples' perceptions and experience of and attitudes towards the purchasing of tourism related products over the Internet.
One of the problems in this is that tourism-related products need to be defined so that all those answering the questionnaire answer from the same understanding of what constitutes a tourism-related product. Therefore, to help you complete this questionnaire, we have given below examples of types of tourism related products.

Tourism related products – any product that will be consumed when travelling. Examples:

- Commercial transportation (Flight - domestic or international, bus, train or boat)
- Accommodation (Hotels, self-catering, hostels, *pousadas*)
- Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.
- Packages (journey bought from a brochure/journey organised by tour operators that includes at least accommodation and transport and is sold by a single price)
- Rent-a-car
- Cruises

PART A – TRAVELLING: EXPERIENCE AND PREFERENCES

In this first part of the questionnaire we would like you to answer questions about your travelling experience and preferences and how you would buy and organise your leisure journeys.

For our purposes, a **journey** is *any taken journey outside your usual residence staying away at least one night, in Portugal or abroad, having used commercial transport (plane, bus, train, boat) and/or tourist accommodation*. In some questions we would like you to divide your answers between business and leisure.

For the purposes of the study, a **Business journey** is a journey of at least one night whose main purpose is to go away in representation of some organisation or company; a **Leisure journey** is a journey of al least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.). If you have had a journey as part of your studies, that is considered a business journey

1. How many journeys (see definition above) have you had since 1st January 2000?

		Business Journeys	Leisure Journeys
(write the number in the Appropriate box. Divide your answer by main purpose of travel (business or leisure) and by main visited country	***In Portugal***		
	In Spain		
	In other European Union (EU) countries		
	Other European (non-EU) countries		
	Other countries		

The REMAINING QUESTIONS are related to leisure journeys. **We would like you to answer the remaining questions of this part 1 even if you have never gone on a leisure journey (of at least one night), or never booked one, or event if you think you are not sure about the answer.**

2. SUPPOSE that in the near future you will do LEISURE JOURNEYS:

a) The TRAVEL RESERVATIONS, directly to suppliers (airlines, hotels, etc.) or through a travel agent, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer)r

Always by me	
Most of the times by me	
Most of the times by others	
Always by others	

Explain why: _____

_____

b) The RESERVATIONS, according to your personal opinions, WOULD BE DONE...

(Please tick the box that matches your answer. One answer only. Explain why you have chosen that answer.

Always directly to suppliers (airlines, hotels, etc.)	
Most of the times directly to suppliers	
Most of the times to the travel agency	
Always to the travel agency	

Explain why: _____

_____

c) What would be the PREFERRED COMMUNICATION MEANS to CONTACT with the selling company(ies)?

Please rank your answer by order of preference – 1 to the most preferred mean and 3 for the less preferred. Write in the one reason for preferring your answer 1 and one reasons for not preferring your answer 3.

	rank
By telephone	
By email	
Personally (face to face)	

Reason for preferring your answer 1: _____

_____

Reason for not preferring your answer 3: _____

_____

PART B – The COMPUTER

This section asks you questions about your experiences of, perceptions about and attitudes towards using computers.

By **LEISURE PURPOSES** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

By **BUSINESS PURPOSES** we mean the use of the computer for the tasks needed to develop your profession or to complete your studies. If you are student and use a computer to study, that is considered business use.

3. WHEN have you used computers for the FIRST time?

(Write in the year of first use of the computer) ***Year*** ☐

4. WHERE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***At school*** ☐
- ***At your home*** ☐
- ***At family and friends' home*** ☐
- ***At office*** ☐
- ***Other*** *(specify):* ☐

_____

5. For which PURPOSE have you used computers for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***To work*** ☐
- ***To study*** ☐
- ***To play games*** ☐
- ***Other*** *(specify):* ☐

_____

If you DID NOT USE a computer in the LAST MONTH for LEISURE PURPOSE, please continue on the next question (7).

If you have USED computer for LEISURE PURPOSE in the LAST MONTH, please go to question 9

6. WHEN was the LAST time you have used computers for LEISURE PURPOSES?

(Tick the box that best suits your answer. One answer only.)

- ***In 2002: (specify Month)*** _____ ☐
- ***October, November or December 2001*** ☐
- ***July, August or September 2001*** ☐
- ***April May or June 2001*** ☐
- ***January, February or March 2001*** ☐
- ***In 2000 or 1999*** ☐
- ***In 1998 or 1997*** ☐
- ***In 1996 or before*** ☐

7. Which are the main reasons for NOT HAVING used computers for LEISURE PURPOSES in the last month?

(Select THREE factors, ordering them by order of preference: 1 – most important factor, 2 – second most important factor and 3 – third most important factor

rank

- ***I don't have access to a computer*** ☐
- ***I don't see any advantages of using computers*** ☐
- ***I do not need to use computers*** ☐
- ***I do not like to use computers*** ☐
- ***Other:*** *(specify)* ☐

_____

Explain why you have indicated your answer 1 as the most important reason _____

_____

_____

If you answered to the two previous questions (7 e 8), continue on question 10

8. How many HOURS, in a normal week (7 days: five week days and weekend) do you use computers?

(Divide your answer by use of the computer for leisure purposes and use of the computer for business purposes)

	At home	At office	At school	Other place (specify) _____
Leisure purposes (tasks not related with your job)	☐	☐	☐	☐
Business purposes (tasks related to your job or studies)	☐	☐	☐	☐

9. Why would you use computers for LEISURE PURPOSES?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

10. Do you have a computer that you can use at home or school/job?

(Write in two crosses – one in each column)	At home	At school/job
Yes	☐	☐
No	☐	☐

11. What activities have you done when you have used computers for LEISURE PURPOSES?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Write texts*** ☐
- ***Play games*** ☐
- ***Other:*** *(specify)* ☐

_____

12. What activities do you think you will do when using computers for leisure purposes?

(Tick the box(es) that suit your answer(s). Several answers possible)

- ***Use the Internet*** ☐
- ***Write texts*** ☐
- ***Play games*** ☐
- ***Get information about products and services*** ☐
- ***Purchase products and services*** ☐
- ***Check email*** ☐
- ***Other:*** *(specify)* ☐

_____

The next four questions aim at knowing what do you think and feel about the use of the computer for leisure purposes.

By **'LEISURE PURPOSE'** we mean the use of the computer for other purposes that working or studying. What is important is not from where you use the computer, but the purposes for which you use it, that is, if you use you business computer for other purposes than working or studying, that is considered leisure use of the computer.

We have set out some statements about the use of computers for leisure purposes. We would like you to indicate your level of agreement with each statement by ticking the box that best matches your answer.

We would like you to complete ALL the statements, even if you think you are not sure about the answer.

13. Continue the sentence: "To me, using computers for leisure purposes is ..."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to execute tasks faster					
A means to execute tasks with less effort					
A way to improve the quality of the tasks					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

14. Thinking about using computers for LEISURE PURPOSES, please state your level of agreement with the following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen what others do using their computer					
I have had plenty of opportunity to see the computer being used					
I have seen many people that are important to me using computers					
I am afraid that my life becomes dependent on the computer					
Using a computer is a waste of time					
I intend to use the computer in the near future					
I intend to use the computer in the distant future					

In the following questions, what we would like you to do is to look at the alternative words presented and tick the box between the words that is closest to your opinion about your use of computers. For example, in a different study we might have asked you to complete the following statement about the use of the mobile phone and you might have given the answers shown.

Making a phone call through a cellular phone is:	Hard	1	2	3	4	5	6	X 7	Easy
	Safe	1	X 2	3	4	5	6	7	Risky

We ask you to answer all statements, even if you think that you are not sure about the correct answer

15. Continue a sentence: "To me, using computers for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

16. Please, continue a sentence: "To me, using a computer for LEISURE PURPOSES is ..."

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

17. Thinking about the use of the computer for leisure purposes, continue the sentence. "When using computers for LEISURE PURPOSES, I fell..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

PART C – The INTERNET

This section asks you questions about your experiences of, perceptions about and attitudes towards using the Internet.

By **'LEISURE PURPOSES'** we mean the use of the Internet for other purposes that working or studying. What is important is not from where you use the Internet, but the purposes for which you use it, that is, if you use your business hours for other purposes than working or studying, that is considered leisure use of the Internet.

By **'BUSINESS PURPOSES'** we mean the use of the Internet for the tasks needed to develop your profession or to complete your studies. If you are student and use the Internet to study, that is considered business use.

18. WHEN have you used the Internet for the FIRST time?

(Write in the year of first use of the computer) ***Year*** ☐

19. WHERE have you used the Internet for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

- ***At school*** ☐
- ***At my home*** ☐
- ***At friends of relatives home*** ☐
- ***At work*** ☐
- ***Other:*** *(specify)* ☐

20. For which PURPOSE have you used the Internet for the FIRST time?

(Tick the box that best suits your answer. One answer only.)

To work	☐
To study	☐
To get information about products and services	☐
By curiosity	☐
other: *(specify)*	☐

_____

If you HAVE NOT USED the Internet for LEISURE PURPOSES in the LAST MONTH, continue on the next question (25). If you HAVE USED the Internet for LEISURE PURPOSES in the LAST MONTH, go to question 27.

21. WHEN was the LAST time you have used the Internet for LEISURE PURPOSES?

(Tick the box that best suits your answer. One answer only.)

In 2002: (specify Month) _____	☐
October, November or December 2001	☐
July, August or September 2001	☐
April May or June 2001	☐
January, February or March 2001	☐
In 2000 or 1999	☐
In 1998 or 1997	☐
In 1996 or before	☐

22. Which are the main reasons for NOT HAVING used the Internet for LEISURE PURPOSES in the last month?

(Select THREE factors, ordering them by order of preference: 1 – most important factor, 2 – second most important factor and 3 – third most important factor

	rank
I don't have access to a computer	☐
I don't see any advantages of using computers	☐
I do not need to use computers	☐
I do not like to use computers	☐
Other: *(specify)*	☐

_____

Explain why you have indicated your answer 1 as the most important reason _____

_____

_____

If you answered to the two previous questions (7 e 8), continue on question 10

23. How many HOURS, in a normal week (7 days: five week days and weekend) do you use the Internet?

(Divide your answer by use of the computer for leisure purposes and use of the computer for business purposes)

	At home	At office	At school	Other place (specify) _____
Leisure purposes (tasks not related with your job)	☐	☐	☐	☐
Business purposes (tasks related to your job or studies)	☐	☐	☐	☐

24. Why would you use the Internet for leisure purposes?

(Write in the main reason. One reason only) _____

_____

_____

Explain why you consider that the main reason) _____

_____

_____

25. Which activities have you done on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify)**:*** _____		

26. Which activities would you do on the Internet when using it for LEISURE PURPOSES?

		Not frequently	*Most frequently*
(Tick the boxes that match ONLY the things you do/have done on the Internet, saying the level of frequency that you do/done it – not frequently or most frequently.	***Read newspapers***		
	Get free music		
	Use email		
	Get information about products/services		
	Use my bank account		
	Purchase products and services		
	Get non-commercial information		
	Compare offers from sellers		
	Other *(specify)**:*** _____		

27. Do you have a computer linked to Internet at your home or office/school that you can use?

		At home	At school/job
(Write in two crosses – one in each column)	*Yes*		
	No		

28. Thinking about using the Internet for LEISURE PURPOSES, please state your level of agreement with the two following statements.

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I intend to use the Internet in the near future					
I intend to use the Internet in the distant future					

PART D – PURCHASING TRAVEL ELECTRONICALLY

This section asks you questions about your experiences of, perceptions about and attitudes towards purchasing electronically (through the computer and the Internet), focusing on purchasing leisure journeys.

A **LEISURE JOURNEY** is a journey of at least one night whose main purpose is to make use of your time when not in work (holidays, weekends, etc.).

An **ELECTRONIC PURCHASE** is any purchase where you have used the computer and the Internet to search, select, reserve and pay any product you buy. You should consider that you have made an electronic purchase only, and if only, you have completed the purchase process on the Internet.

TOURISM RELATED PRODUCTS are any products that will be consumed when travelling. Examples: commercial transport (Flight – domestic or international –, bus, train or boat); Accommodation (Hotels, self-catering, hostels, 'pousadas'); Entertaining tickets – shows, thematic parks, theatres, monuments, festivals, etc.; Cruises; Packages (journeys organised by tour operators that include at least accommodation and transport and are sold by a single price) or Rent-a-car. Therefore, **ELECTRONIC PURCHASE OF LEISURE TRAVEL** is any purchase of flights, accommodation, packages, rent-a-car, etc. for the journeys of at least one night, whose main purpose is to make use of your time when not in work (holidays, weekends, etc.), using the computer and the Internet to search, select, reserve and pay.

29. What type of products or services have you bought for leisure purposes using computers and the Internet?

(Tick the box(es) that best suits your answer. Several answers possible)

Books	☐	***Computers***	☐
CD's/Cassettes	☐	***Rent-a-car***	☐
Fight tickets	☐	***Tourist accommodation***	☐
Entertainment tickets	☐	***Cruises***	☐
Movies	☐	***Insurance***	☐
Packages	☐	***Other:*** *(specify)*	☐
Financial services (Loans, credit cards)	☐	_____	

30. What type of products or services would you buy for leisure purposes using computers and the Internet?

(Tick the box(es) that best suits your answer. Several answers possible)

Books	☐	***Computers***	☐
CD's/Cassettes	☐	***Rent-a-car***	☐
Fight tickets	☐	***Tourist accommodation***	☐
Entertainment tickets	☐	***Cruises***	☐
Movies	☐	***Insurance***	☐
Packages	☐	***Other:*** *(specify)*	☐
Financial services (Loans, credit cards)	☐	_____	

31. What are the reasons for never have purchased tourism related products for leisure journeys (see definition on previous page) through computers and the Internet?

(Select THREE factors, ordering them by order of importance: 1 – most important reason, 2 – second most important reason and 3 – third most important reason

I don't see any advantages of buying tourism products through the Internet	☐
I don't have Internet	☐
I don't have a computer	☐
I do not trust in purchasing through the Internet	☐
I don't like to purchase through the Internet	☐
I wouldn't know how to purchase using the computer and the Internet	☐
I have not travelled	☐
Other: *(specify)* _____	☐

Explain why you have indicated your answer 1 as the most important reason _____

_____

32. Why would you buy tourism related product for leisure journeys using computers and the Internet?

(write in the reasons why you would buy)

Main reason _____

Other reasons _____

Explain why you consider the main reason as the most important one _____

As previously (in part 2, about the use of the computer), we have set out pairs of words and statements about the purchasing of leisure travel electronically. We would like you to tick the box between the words that is closest to your opinion.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what you think about it.

33. Continue a sentence: "To me, purchasing tourism related products for leisure journeys using computers and the Internet is ..."

(Please tick the box that is closer to your opinion)

worthless	1	2	3	4	5	6	7	***valuable***
prejudicial	1	2	3	4	5	6	7	***beneficial***
relevant	1	2	3	4	5	6	7	***irrelevant***
undesirable	1	2	3	4	5	6	7	***desirable***
appealing	1	2	3	4	5	6	7	***not appealing***
complex	1	2	3	4	5	6	7	***easy***

34. Please, continue a sentence: "To me, purchasing tourism related products for leisure journeys using a computer and the Internet is...

(Please tick the box that is closer to your opinion)

Hard to learn	1	2	3	4	5	6	7	***Easy to learn***
Easy to use	1	2	3	4	5	6	7	***Hard to use***
Hard to learn by myself	1	2	3	4	5	6	7	***Easy to learn by myself***
Easy to fit in my daily routine	1	2	3	4	5	6	7	***Hard to fit in my daily routine***
Approved by my peers	1	2	3	4	5	6	7	***Not approved by my peers***
not important	1	2	3	4	5	6	7	***important***
useful	1	2	3	4	5	6	7	***useless***
essential	1	2	3	4	5	6	7	***dispensable***

35. Please, continue the sentence. "If I was buying tourism related products for leisure journeys using computers and the Internet, I would feel..."

(Please tick the box that is closer to your opinion)

Enjoyed	1	2	3	4	5	6	7	***Bored***
Stressed	1	2	3	4	5	6	7	***Relaxed***
Stimulated	1	2	3	4	5	6	7	***Not stimulated***
Confident	1	2	3	4	5	6	7	***Unsecured***
Excited	1	2	3	4	5	6	7	***Not excited***
Not Entertained	1	2	3	4	5	6	7	***Entertained***
Happy	1	2	3	4	5	6	7	***Unhappy***
Frustrated	1	2	3	4	5	6	7	***Fulfilled***

As previously (in part 2, about the use of the computer), we have set out sentences about the purchasing of leisure travel electronically. We would like you to tick the box that indicates your level of agreement with each statements.

You should answer to all questions even if you think you are not sure about the right answer. It's not important that you have never bought nothing though the Internet. We simply want to know what do you think about it.

36. Continue the sentence. "To me, purchasing tourism related products for leisure journeys using computers and the Internet is....."

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
A way to purchase faster					
A means to purchase with less effort					
A way to improve the quality of the purchase					
A means to enhance my quality of life					
An opportunity to enhance my prestige among my peers					
A symbol of status					
A means to built a positive image of myself					
Compatible with the image I want to convey to others					

37. Please state your level of agreement with the following statements:

(tick the box that best suits your agreement with each statement)	Totally Agree	Agree	Uncertain	Disagree	Totally Disagree
I have seen many people that are important to me purchasing tourism related products for leisure journeys over the Internet					
I have talked to others about purchasing tourism related product for leisure journey over the Internet					
When purchasing tourism related products over Internet the probability of doing the best deal is high.					
I might loose money If I buy tourism related products for leisure journeys over the Internet					
I intend to purchase tourism related products for leisure journeys over the Internet in the near future					
I intend to purchase tourism related products for leisure journeys over the Internet in the distant future					

38. Do you have credit cards of your own?

(If your answer is no, explain why. If your answer is yes, tick two boxes, one in each column)

NO. Explain why: _____

_____

YES. What is the credit limit:

	Of the total of the cards	Of the card with the highest limit
Up to 500 Euros		
From 501 to 1000 Euros		
From 1001 to 1500 Euros		
From 1501 to 2500 Euros		
From 2501 to 5000 Euros		
More than 5000 euros		

39. Which payment methods would you prefer to use when purchasing travel over the Internet?

Write in the rank you give to each payment method: 1-most preferred, 2- second most preferred, ..., and 5 – fifth most preferred)

	rank
Credit card, communicating the details to the seller through the phone	
Credit card, communicating the details to the seller through the email	
Credit card, communicating the details to the seller online(Internet)	
Bank transfer	
Debit Card	

Explain why you have indicated your answer 1 as the most preferred method _____

_____

_____

Return this questionnaire by mail as soon as possible, using the stamped envelope left with this questionnaire.

THANK YOU VERY MUCH for your cooperation!

Appendix A5: Personal details of the respondent

1st visit	**Day: _____ / _____**	**Result**	
	Time: ____h____		
2nd visit	**Day: _____ / _____**	**Result**	
	Time: ____h____		
3rd visit	**Day: _____ / _____**	**Result**	
	Time: ____h____		

PART 5 – The Respondent

Questionnaire delivered to the respondent? **Yes** ☐ **No** ☐ **Who:** _____

A. Age in 12/03/2001 ☐☐

B. Highest education level completed?

No education	☐	*Secondary School (12 years)*	☐	*Male*	☐
4 years (primary school	☐	*University degree*	☐	*Female*	☐
Middle School (9 yeays)	☐		☐		

C. Gender

D. Economic status (Job) _____

E. From the following statement, which applies to you?

I have never used computers	☐ **Q1**
I have used computers at least once but never used the Internet	☐ **Q2**
I have used computers and the Internet at least once but never purchased a product/service over the Internet	☐ **Q3**
I have purchased a product/service over the Internet	☐ **Q4**

If the respondent accepted the questionnaire:

Name: _____ Phone: _____

Remarks:

_____

_____

_____

_____

Appendix A6: Letter left in the respondent mailbox

Dear Sir/Madam

My name is Miguel Moital and I am a lecturer at ESHTE – Escola Superior de Hotelaria e Turismo do Estoril.

At present I am doing a doctoral thesis about what people think about purchasing leisure travel over the Internet. This study will contribute to a better analysis and understanding of what people think about buying over the Internet, notably leisure travel.

The study requires collecting data from the residents in Cascais by the means of a questionnaire and your dwelling was selected to participate in the study. Therefore, within the next days myself or one of my students will return to your dwelling to hand the questionnaire over to you. The visit will take no longer than 3 minutes and will take place on weekdays between 19.30 and 21.30.

What I want is simply to understand what you think about the issue. Thus, it does not matter whether you have ever travelled, used computers and the Internet or purchased anything over the Internet. I only want to know what you think about it.

This is a non-commercial study and is not sponsored by any company. I can assure you that any information you provide will be treated in the strictest confidence. The questionnaire is only aimed at collecting data for the doctoral thesis.

Your cooperation is essential to the success of this thesis. I thank you in advance for your support.

Yours sincerely,

Miguel Moital

Appendix B1: Sub-components of factors influencing the undertaking of the travel reservations

	Non-Internet users (n=52)	Internet users (n=84)	Internet purchasers (n=30)
Information/details			
To be well informed	1	4	
Clarification of doubts		1	
To know the details	1	1	2
Likes to know the details	1	2	1
To get additional/all information	1	3	
Likes to discuss the details	1	1	1
Likes to do it			
Likes to do it	9	8	1
Likes to participate in the organisation	1	4	
Security/trust			
Ensure that everything is allright	2	6	1
More secured	3	1	
Security	1	2	
Not to be cheated	1		
Only trusts himself	1		
Keep control of decisions			
Adapt journey to personal tastes	3	4	3
Wants to control this type of decisions	1	6	1
Time/availability			
Have more time available	1	4	
More available	1	4	
Have free time	2		2
Availability	1		1
Respondent deals with personal issues			
Likes to take care of his/her issues	4	3	
Always takes care of his/her issues	2	2	
Respondent is the one interested	2	2	1
Habit/past experience			
Usually it is me		2	4
Habit	1	3	
The others were organised by me		1	
It is always me	1		1
Due to family structure	1		
Better position to do it			
Has contacts	1	3	2
He/she is more organised	1	2	2
Type of group/journey			
Travels alone		2	
Simple/short course journeys	1	1	
Never books in advance		1	
Sometimes others pay			1
Convenient/practical			
Convenience	2	1	
More practical		1	
Other reasons			
Has nobody else to do it	2		2
More personalised service		2	
When have defined idea		1	
Thinks it is more efficient		2	
Likes to see what buys		1	
Respondent or husband/wife	1	1	4
Respondent or other members of the group	1	2	
Complexity of options			1

Appendix B2: Sub-components of factors influencing against the undertaking of the travel reservations

	Non-Internet users (n=21)	Internet users (n=22)	Internet purchasers (n=12)
Habit/past experience			
Other family members do	4	2	2
Usually it is not me		2	2
Own/friends company does the reservations	1	3	1
Habit		1	
It is never me		1	
Time/availability			
Lack of time	3	3	1
Less available		1	1
Availability			1
Others are in better position to do it			
Others have more knowledge	1	2	
Others have more experience	2		
Lack of/insufficient knowledge	2		
Others have contacts	1		
Type of group/journey			
Travels in group	1	2	
Others pay	1	2	
Convenient/practical			
Convenience	3		1
More practical		1	
Practical	1		
Dislikes to do it			
Laziness/self-indulgence		1	1
No patience			1
Would not have to worry about it			1
Other			
Respondent or husband/wife		1	
Simpler	1		

Appendix B3: Sub-components of factors influencing the purchasing from principals

	Non-Internet users (n=21)	Internet users (n=24)	Internet purchasers (n=15)
Service			
More freedom of choice		1	1
Better knowledge about the product	1		
Agencies are not very efficient			1
Different service	1		
To know the conditions		1	
Security & Trust			
More secured	3		
Trust/higher trust	1		1
Ensure all details are arranged		2	
Not all travel agencies are reliable	1		
Guarantee of efficacy			1
Guarantee of service	1		
Higher credibility		1	
Everything is clarified		1	
Price			
Lower prices	2	2	1
More economic	1	2	
Save money		1	2
Cost reduction		1	1
Discussion of prices	1		
Type of journey/product/group			
Only purchased single products	1	2	1
Usually does not book in advance		2	
They are simple journeys	1		
Travel agents if packages			1
Habit/experience			
Habit		1	
Experience of the past			1
Never travelled through travel agencies		1	
Preference for doing directly/avoid intermediaries			
Avoids intermediaries		3	2
Preference for direct contact	2	1	
Likes to do it	2		
Do not like intermediaries		1	
Likes to take care of his things	1		
Has contacts/works in the industry			
Has contacts in the industry	1	1	
Works in the industry	1		1
Easy/simple			
Easier			1

Appendix B4: Sub-components of factors influencing the purchasing from travel agencies

	Non-Internet users (n=53)	Internet users (n=87)	Internet purchasers (n=30)
Service			
Agencies do the work	6	5	3
They have more/better knowledge	5	2	
Consultancy/advisory role	3	3	1
Greater range of products	2	3	1
Experience of travel agencies	1	2	2
Easier to make the reservation		3	1
Accessibility		2	
Availability of information		2	
Professional/effective		1	1
Personalised service	1		
Easiness of payment			1
Personal contact	1		
Convenience/practical			
More practical	5	6	4
More convenient	3	9	2
Convenience	3	8	1
Security & Trust			
More secured	1	3	1
Security	1		1
Guarantees	1		1
Higher trust		1	
Trust	1		
Ensure all details are arranged		1	
Ensure he/she will not be deceived		1	
Price			
Lower prices		2	
Lower package prices			1
Variety of prices			1
Company has agreements with a travel agency with more convenient prices		1	1
Type of journey/product/group			
Group journeys	3		
If packages	1	1	
When abroad		1	1
To unknown destinations	1	1	
Travels very little	1		
Depends on the type of journey		1	
Easy/Simple			
Easier	5	1	
Ease		5	
Simplicity	1		1
Easier when do not know the suppliers	1		
Easy		1	
Simpler	1		
Habit/experience			
Habit	1	5	
Fidelisation to a travel agency		3	1
Experience of the past		1	
Have been successful		1	
Better knowledge of their work		1	
Time			
Faster	1	5	
Avoid loss of time	1	2	1
Saving of time		2	1
Faster mean to know the options/details			1
No time to do it		2	
Has contacts/Works in the industry			
Has contacts in the field	2	1	1

Appendix B5: Sub-components of factors influencing the preference for the face-to-face as a communication means

	Non-Internet users	Internet users	Internet purchasers
Interactivity			
Clarification of doubts/details	5	3	1
Can make questions and get answers in the moment		8	
More/more accurate information	1	5	
More appropriate to dialogue	3	1	1
Better to evaluate travel alternatives	1	3	
More clarifying	2	2	
Easier to choose		1	2
Easier communication	1	2	
Can solve the problems/details about the journey	1	1	1
Higher empathy with the salesperson	1	2	
Clarification of doubts/details in the moment		3	
Higher communication	1		1
Resolution of problems immediately		1	
Preference for personal contact			
Prefer/likes to do it in person	7	5	1
Likes to talk face to face	5	3	
To know/see to whom is talking to	1	5	1
Likes to do it directly	3	2	
More personal	1	2	
Direct contact		2	
Face to face is the most important communication means			1
First contact must be personal		1	
Can see the place		1	
Personalised service	1		
Security/trust			
Avoid doubts/misunderstandings	2	1	
Safer		2	1
More trust	1	1	
Trust		2	
Higher trust			2
Check the integrity of the company		2	
Feels more trust	1		1
More reliable	1		
More credibility		1	
Ask for a contract	1		
Do not trust machines		1	
Avoid being cheated	1		
Habit/past experience			
Habit	2	3	
The travel agent knows his/her tastes	1		
Travels through a specific travel agency		1	
Easy/simple			
Easier	1		
Simpler	1		
Other reasons			
Look at catalogues	1	1	
More efficient		1	
Availability of time	1		
More convincing	1		

Appendix B6: Sub-components of factors influencing the preference for the telephone as a communication means

	Non-Internet users	Internet users	Internet purchasers
Fast/speed			
Faster	3	10	4
Speed	1	1	2
Fast		2	
Save time	1	1	
Fastest mean in contact in the country	1		
Convenience/Practical			
More practical	3	3	1
Convenience	2	2	2
More convenient	1	3	1
Practical	2		1
Interactivity			
More appropriate to dialogue		2	1
Clarification of doubts/details in the moment	1	1	1
Can make questions and get answers	1	2	
Resolution of problems immediately			1
Can solve the problems/details about the journey			1
More clarifying	1		
Easy/simple			
Easier	2	4	
Ease			2
Simpler	1		
Easier mainly in the country	1		
The first contact is easier			1
Easy use		1	
Preference for personal contact			
Direct contact		1	1
More personal		1	
Likes to do it directly		1	
Most personalised if cannot use personal contact		1	
Habit/past experience			
Is known by the agency	2	1	1
Habit		2	1
Other reasons			
Lack of time to go personally	1	2	
For the first contact			2
The distance of the companies		1	
More efficient			1
Cheaper		1	
Not much contact with email	1		
Just information		1	
Documents can be delievered in the office			1
Not all suppliers have an online reservation service		1	
The one that suits me better	1		
Usually do not have a decided routing		1	

Appendix B7: Sub-components of factors influencing the preference for the email as a communication means

	Non-Internet users	Internet users	Internet purchasers
Fast/Speed			
Fast			1
Knowing the type of products becomes faster			1
Speed	1		
Convenience /Practical			
Convenience		1	
More practical			3
Security/trust			
Keep record of communication		1	2
Easy/simple			
Ease			1
Simpler		1	
Other Reasons			
Cheaper			1
Higher diversity	1		1

Appendix B8: Sub-components of factors influencing against the preference for face-to-face as a communication means

	Non-Internet users	Internet users	Internet purchasers
Journey			
Requires travelling		4	5
Loss of time to go to the places		1	2
Distance to the seller		2	1
Inconvenience of the journey	1		1
Time			
Lack of time		8	5
Lack of time during opening hours		2	1
Time consuming			3
Other reasons			
Not practical	1	1	1
Not necessary		1	1
Books the day before		1	
These issues should not be conducted through this means		1	
After a phone contact			1

Appendix B9 Sub-components of factors influencing against the preference for the telephone as a communication means

	Non-Internet users	Internet users	Internet purchasers
Security/trust			
No image of the company/seller		1	1
Not reliable		1	
Insecure	1		
Excuse for not assuming responsibilities		1	
Impersonal			
Impersonal	1		1
Too impersonal	1		
More impersonal			1
Do not like			
Do not like	1	1	1
Other reasons			
These issues should not be conducted through telehone	1		
Lack of important information		1	
Though the phone the agency has no time		1	
Would do it only in last resort		1	

Appendix B10: Sub-components of factors influencing against the preference for the email as a communication means

	Non-Internet users	Internet users	Internet purchasers
Interactivity			
Not immediate/fast answer		8	3
Less appropriate to dialogue	2	2	1
May not get answer		2	
Not to capture all the details	1		
Everything is too vague		1	
Questions cannot be answered	1		
Impersonal			
Impersonal	3	3	1
Too impersonal		3	2
More impersonal		2	1
'Cold' mean of communication		1	1
No visual contact	1	1	
No personal contact		1	
Security/trust			
Do not trust	1	7	
Not reliable		2	
Insecure		2	
Possibility of misunderstandings	1	1	
Security in payment		1	1
Virus		1	
Excuse for not assuming responsibilities	1		
Lack of credibility		1	
Cannot check honesty of the seller		1	
Email			
No knowledge on how to work with email	7	4	
Do not have email	5	2	
Do not use email	3	2	1
Do not like	3	1	
No experience with email	2	1	
Little experience with email	2		
Uses little the email		1	
Little knowledge on how to work with email		1	
Computer			
Do not have computer	5		
Do not like computers		2	
Lack of time to use computers		1	
Not close relationship with computers	1		
Do not use computers	1		
No knowledge about the use of computers	1		
Internet			
Do not have Internet	5		
Little experience with using the Internet		2	
Uses little the Internet		1	
Do not use the Internet	1		
Do not have Internet at home		1	
Little knowledge about the use of the Internet		1	
No experience with the Internet	1		

Appendix B10: Sub-components of factors influencing against the preference for the email as a communication means (continued)

	Non-Internet users	Internet users	Internet purchasers
Technologies			
Lack of familiarity with informatics			1
Do not like technologies		1	
Do not know how to use technologies sufficiently		1	
Lack of habit/past experience			
Lack of habit		4	1
Not in his/her habits	1		1
Never did it	2		
Other			
Not practical	1	1	
Do not consider it/do not think it is relevant	1	1	
Information is abbreviated/not sufficient		1	1
Little number of companies have a good email service	1		
Not at ease with purchasing on the Internet		1	
Would never do it through this means		1	
Do not use electronic commerce	1		
Sees the travel agent everyday	1		
Not necessary			1
Not appropriate method in certain cases			1
Do not think it is relevant		1	
Only has Internet at home and thus cannot contact the agencies during the day		1	
Too little efficient			1

Appendix B11: Sub-components of factors influencing the preference for a payment method (frequencies)

	Non-Internet users	Internet users	Internet purchasers
Security/Risk			
The most secure	13	22	9
Security	2	6	9
More secured	6	23	4
Higher security	3	3	2
Control money flow	1	1	1
Direct to the bank	1		1
Do not give credit card details			2
Keep proof of payment		1	1
Lower risk/danger		2	
Security of talking to a vendor	1	1	
Higher confidentiality		1	
Avoid/control frauds		1	
Trust/Reliability/credibility			
Higher trust		4	1
More/the most reliable		1	3
Trust	1	3	
Lack of trust in payment through the Internet		2	
Credibility			1
Lack of trust in other methods		1	
Habit/experience			
The one that uses/uses more	7	7	
Experience	1	2	1
Little use of credit card		1	
Habit	1		
Practical/convenient			
The most/more practical	3	3	2
Practical	1	1	
More convenient	1		1
Convenience	1		
Easy/simple			
Easier/The easiest	1	4	2
Easy	2		
Easiness		1	
Simplicity			1
Fast/speed			
Faster	3	3	1
Fast		1	1
Speed			1
Personal Financial Management			
Cash payment	3	1	
Do not ask for credit	2		
Control bank balance		2	
Credit card ownership			
Do not have credit card		3	
The method available	2	1	
Other reasons			
Do not know which would prefer		3	1
None of the methods		2	
Efficiency		1	
Thinks it is the best	1		
Do not have reasons not to do it			1
Do not make purchases through the net		1	

Appendix C1: Sub-components of factors influencing the use of computers for leisure purposes (frequencies)

	Non-Internet users	Internet users	Internet purchasers
Entertainment	N	N	N
Games	8	16	3
Amusement	8	14	1
Entertainment	5	6	4
Relaxation	2	4	3
While away the time/occupy free time	4		3
Releave from stress	1	2	1
Pleasure		1	
Drawing		1	
Organise family photos	1		
Internet			
Internet	4	26	10
Email		5	3
Communication		4	3
Purchasing			2
Consultations		2	
Banking		1	
Information			
General information	3	6	5
Travel information	1	2	2
Scientific/cultural knowledge	1	1	1
Specific information		2	1
Search new/different topics	2		
Other			
Associative tasks	1	1	1
Liking		2	1
Exceptional circumstances	3		
Useful	1	1	
Curiosity	1	1	
Never had money to buy a computer	1		
If knew how to use a computer	1		
To use with niece	1		
Faster	1		
Memory			1
In case of having a computer	1		
Find out potentialities			1

Appendix C2: Sub-components of factors influencing the use of the Internet for leisure purposes (frequencies)

	Non-Internet users	Internet users	Internet purchasers
Browsing	N	N	N
General information/consultation	13	19	12
Information about products and services	1	5	2
Specific information/consultation		5	1
News	1	3	
Plan journeys	1	1	2
Newspapers	1	1	1
Banking		2	
Communication			
Email	1	19	7
Interpersonal communication	3	7	1
Entertainment			
Entertainment/fun	4	6	2
Amusement/recreational	1	6	
Relaxation		4	
Hobby	3		1
Games	3	1	
Make use of time		3	1
Specific Benefits			
Practical	1	1	2
Fast/Speed		3	
Useful		1	1
Convenience		2	
Ease		1	1
Answer to all types of questions		2	
Diversity			1
The Internet gives all types of interests			1
To have access to more choices	1		
Education/curiosity			
Curiosity	5	4	1
To learn	5	3	1
Cultural enhancement	2	1	
To confirm if could do it		1	
Other reasons			
Music	1	2	4
Leisure	2	4	1
Purchasing	1		1
Own liking			2
Downloads	1		
Be retired		1	
Have no idea	1		

Appendix C3: Sub-components of factors influencing the purchasing of leisure travel on the Internet (frequencies)

	Non-Internet users	Internet users	Internet purchasers
Time	N	N	N
Speed		8	4
Flexibility of time	1	3	1
Fast	1	1	1
Faster	2	2	1
Save time	1	1	
Lack of time	2	1	
More time to evaluate options		1	
Not wait in qeues	1		
Practicality/convenience			
Convenience	3	3	1
More practical	2	5	
Practical	1	1	4
More convenient	1	2	3
Convenience if was not more expensive	1	1	
Product/information			
Higher diversity of products	1	3	4
More information	2		
Easier access to products	1		
Easy to get information		1	1
Better knowledge about the product			2
Information in time		1	
Ease/Simplicity			
Ease	1	2	1
Easy	1	2	1
Easier	3	1	
Simplicity	1		
Simpler		1	
Price			
Cheaper		4	4
If lower prices		3	1
Promotions	1		1
Journey			
Avoid Journey	2	7	1
Not to have to leave home	1	1	
If lived away from cities		1	
Other			
Influence of others	1	2	1
If there was trust	2	1	
If there was no other way	2	1	
In case of urgency	1	1	1
Service		2	
Entertaining			1
Do not see any motives	1		
Would not buy in the short term		1	
Would not buy in actual circumstances		1	
Do not have opinion about it		1	
Prefer the traditional		1	
Do not know if would buy	1		
If had computer	1		

Appendix C4: Reasons used by respondents to explain why they never used/why are not current users of computers for leisure purposes

	Why never used	Why are not current users		
	Non-Internet users	Non-Internet users	Internet users	Internet purchasers
Never needed/do not need to use				
Prefers to use leisure time with other activities		2	3	
Computer not required to work	3		1	
Just used it for professional motives			2	
Do not like computers	1			
Children would do in case of need	1			
Due to age	1			
Still did not have interest in using a computer	1			
Prefers to get professional counselling	1			
Do not like to play games			1	
Was never interested in the use of a computer		1		
No opportunity to use				
Never had/do not have computer	5	*n/a*	*n/a*	*n/a*
Intends to use PC one day	1			
Do not have time to learn but it is not too late	1			
No knowledge				
Never had the opportunity to learn how to use	3			
Never had training in informatics	2			
Lack of interest in learning how to use computers	1			
Technology too much advanced to his/her education level	1	*n/a*	*n/a*	*n/a*
No access to a computer	1			
Courses are expensive	1			
Nobody ever taught him/her	1			
Have never worked with a computer	1			
Have difficulties in using new technologies	1			
Never needed to do anything with computers	1			
Would not/do not like to use				
Prefers to use leisure time with other activities			1	
Do not like to play games			1	
Was never interested in the use of computers		1		
Do not like lifestyle associated with computers			1	
Informatics interferes with nervous system			1	
Just used it for professional motives		1		
Have no motives to use computers			1	
No time				
Works many hours	*n/a*	1	2	
Sometimes has no time			1	
No advantages				
Preference for personal contact	2			
Do not need computers	1			
Do not like computers	1			
Other reasons				
Has no computer and no intention to buy one	1			
Only used for business purposes		1		
No pleasure in using computers		1		
Was on holidays				
Computers are not leisure tools			1	
Lack of will		1		
Uses leisure time with other more pleasurable things			1	

Notes: n/a – not applicable

Appendix C5: Reasons used by respondents to explain why they never used/are not current users of the Internet for leisure purposes (frequencies)

	Why never used	Why are not current users	
	Non-Internet users	Internet users	Internet purchasers
Never needed/do not need to use			
Never needed to do anything through the Internet	4		
Does not feel the need to do it		3	
Leisure is not associated with the Internet	1	1	
Preference for direct access/personalised service	2		
Used time with other activities	1		
When needs to use asks children	1		
The opportunity never happened	1		
Job does not require its use		1	
Prefers other methods for leisure time		2	
Lately did not need to do anything			1
Do not have computer	1		
Sometimes is a long time without using it		1	
Only uses when needs		1	
No access to computers			
Do not have a computer	8		
Do not have computer at home	2		
Not interested in using technologies	1		
Do not know how to work with it	1		
Was on holidays		1	
No opportunity			
Do not have Internet	3		
Do not have computer	2		
Never had the will to use the Internet	1	*n/a*	
Do not have Internet at home	1		
Never needed to use the Internet	1		
No knowledge			
Do not know how to use computers	2		
Have difficulties in understanding the use of computer, mainly the Internet	1	*n/a*	
Never attended a computer course	1		
Never thought about it	1		
Never used the Internet	1		
No time			
The work does not allow to do it		2	
Very busy with professional/student life	*n/a*	2	
Time available is to study		1	
Computer is always being used by other members of the household		1	
Would not/do not like to use			
Does not have any appetitefor the use of computers	1		
Does not like computers, even less the Internet		1	
Computers are not associated with leisure		1	
No advantages			
Do not use computers	1		
Internet does not have any use	1		
Do not have motives to use Internet	1		
Other reasons			
It is boring		1	
Do not use it alone due to insecurity		1	
Currently not linked to the Internet		1	
Uses just as business tool		1	

Notes: n/a – not applicable

Appendix C6: Sub-components of factors influencing against the purchasing of leisure travel on the Internet

	Non-Internet users	Internet users	Internet purchasers
It has not any advantages			
Lack of personalised contact	2	2	1
Trust/fear	1	2	
Cannot see the product	1	1	
Complexity of the tourism product	1		1
Preference for physical shops		1	
Easiness in purchasing offline		1	
Offline offers a wider range of options			1
Do not have Internet			
Internet is essential to purchase	7	3	
Do not have Internet at home	4	2	
Do not want to have	3		
Temporarily without Internet		1	
Age	1		
Do not have computer			
Do not have money to buy a computer	2		
Do not know how to use computer	1		
A computer is essential to purchase	1		
With computer might explore this area		1	
Age	1		
Do not trust purchasing			
Trust in the selling company		7	3
Trust in payment		9	1
Security		4	1
Lack of experience/habit		3	1
Cannot see the salesperson	2	2	
Trust in Internet purchasing			1
Protection of information	1	2	
Cannot see the product	1	2	
Risk/fraud	1		1
Do not like to buy online			
Cannot see the salesperson		7	
Cannot see the product		4	
Security	1	2	
Trust	1	2	
Lack of experience/habit		2	1
Preference for traditional/offline commerce		3	
Lack of interactivity		1	1
Impersonal purchase	1	1	
Lack of important information		1	
Would not know how to buy			
Little/no knowledge on how to use computers	2	1	
Never bought		2	
Lack of habit		1	
Unsecured in the use of Internet		1	
Little knowledge on how to purchase on the Internet		1	
Not travelled			
Have not travelled in the past two years		2	
Financial resources		1	
Not travelled in order to need many travel components			1
Time		1	
Other			
Online expectations not fulfilled		1	3
Risk/trust		2	1
No credit card		2	
Prefers contact with the travel agency	1		