

CHAPTER ONE

INTRODUCTION

Introduction

This chapter presents an overview of the proposed research, beginning with the purpose of the study. The research problem is then discussed, offering a justification for the study, and defining the research questions. The significance and boundary of the study are explained. Finally, key terms are defined.

Purpose of the Study

The main purpose of this study is to profile mature travelers on the basis of Internet use. More specifically, the intention is to examine the demographic and socio-economic characteristics of mature travelers who use the Internet compared to those who do not use the Internet. In addition, the purpose of the present study is to examine whether or not differences exist between Internet users and Internet non-users among mature travelers with respect to travel behavior. Attention is paid to investigate types of trip selected, the preferred activities participated in during the travel, length of stay, travel-related expenditures, type of lodging, type of transportation, number in the travel party, and type of travel party in explaining the differences between Internet users and Internet non-users of the mature market.

Statement of the Problem

The purpose of this exploratory study is to profile mature travelers based on Internet users and Internet non-users and to examine the differences between Internet users and Internet non-users of the mature market. Specifically, the manner in which demographic and socio-economic characteristics and travel behavior variables, either directly or indirectly, influence a mature individual's degree of involvement in pleasure travel are studied.

While numerous books and research projects have investigated the importance of the mature market, most practitioners and academicians have not been successful in identifying and understanding in-depth the mature market.

To date, research efforts have focused primarily on the motivations, constraints, and behaviors of those mature individuals who travel for pleasure and other non-business purposes. However, even though recognizing the significance of the mature market in terms of their market size and economic potential, little research has been conducted to identify and understand the mature travelers who use the Internet.

Justification of the Study

Travel and tourism marketers face a highly competitive environment brought on by the changing demographics of the U.S. population, the most significant change being the growth in size of the mature segment of the population. The travel and tourism industry is one of the few industries that has recognized the value and impact of the mature market.

The 50-plus market is much healthier today (Rosenberg 2000) as the baby boom generation entered this age bracket. The 50-plus consumer segment spends more (Swartz, 1999), travels more often, goes greater distances, and stays away longer than any other age group (Shoemaker 1989). This means that businesses cannot afford to ignore this growing segment of the population and its apparently unlimited wealth. Businesses will have to develop more effective ways of evaluating and analyzing this important segment. The need for market segmentation and its benefits for planning an

effective marketing strategy have been well documented (Lazer 1985; Hawes 1988; Shoemaker 1989; Nichols 1992; Lieux, Weaver, and McCleary 1994; Moschis 1996; Stephenson 1996; Timmerman 1999; Balazs 2000; Medina and Migliaccio 2000; Sonnenberg 2000). By developing appropriate strategies, travel marketers and planners can more effectively identify markets and develop plans to reach these markets.

The mature market appears to be a demographic discovery (Javalge, Thomas, and Rao 1992) because of two reasons: market size and market potential. In terms of market size, there are currently 73 million people age 50 and older, comprising nearly one-fourth of the U.S. population (U.S. Census Bureau 2000). That number is expected to rise to 96 million by 2010, representing one-third of the population (Rasmusson 2000). Looking even further, it is predicted that the under-50 population will increase by a mere three percent while the over-50 population expands by an astounding 73 percent (Swartz, 1999).

A swelling population is not the only enticement that this age group offers. It is important to note that many mature consumers have deep pockets and a strong desire to spend. The mature have generally made their financial and time investments in home and family, have become free from their children's dependency, and possess a relatively large share of all discretionary dollars (Anderson and Langmeyer 1982; Blazey 1987; Javalgi, Thomas, and Rao 1992). In fact, they control more than three-quarters of the wealth and one-half of the discretionary income in the nation. It is also estimated that they lay claim to three-fourths of the country's financial assets and boast more than \$1 trillion in annual buying power. When all is said and done, this age group accounts for 40 percent of the total consumer demand in the United States (Swartz, 1999).

Not only is there interest in the increasing size and potential of the mature market, there is also interest in the increasing number of mature individuals who use the Internet. The mature have embraced the Internet and are shopping and surfing online in ever-increasing numbers than before. Now they are the fastest growing Internet demographic group. Tourism and travel marketers/planners may be able to develop a competitive advantage if they are able to identify and market to this segment.

Research Questions

This study attempts to investigate the demographic and socio-economic differences of mature travelers who use the Internet compared to those who do not use the Internet, and to examine the travel behavior of Internet users and Internet non-users based on the mature market. The specific research questions are the following:

- Research Question 1: What differences in demographic/socio-economic characteristics exist between Internet users and Internet non-users on the basis of the mature market?
- Research Question 2: What differences in travel-related characteristics exist between Internet users and Internet non-users on the basis of the mature market?

Research Question 3: Which characteristics among demographic/socio-economic characteristics and travel-related characteristics, and Internet -related characteristics are most effective in differentiating the Internet users from Internet non-users on the basis of the mature market?

Significance of the Study

The results and knowledge gathered from this study should provide both theoretical and practical contributions to the tourism literature, as well as provide much needed information to travel marketers and travel planners as they search for ways to increase travel activity and participation by the mature market. Knowledge of this information will facilitate a better method of planning by travel and tourism professionals and can be given to marketers for developing marketing strategies. In addition, travel planners can benefit from using this information in planning appropriate travel activities and facilities.

This study will also help lay the foundation for a variety of marketing strategies aimed at the mature market using the Internet to gather travel-related information and purchase travel-related products and services. Travel destinations employing marketing strategies that utilize the Internet as a tourism promotional medium will profit from this valuable information. The overall results of this study will be of importance to those marketers and planners who are looking for competitive advantage.

Boundary of the Study

This study focuses on the examination of the Internet use by mature travelers. However, there appears to be great disagreement when it comes to the definition of Internet users and non-users. The classification of Internet users versus Internet non-users is limited to a binary response. This classification does not account for levels of use, such as heavy users or light users. It is quite possible that the levels of use are related to some of the characteristics profiled in this study.

The boundary of the research is as follows:

1. A select sample of people who reside in Southwest Virginia and Virginia Beach, Virginia is included in this study.
2. The study examines only those who are over 50 years of age.
3. The study examines pleasure travelers alone and does not investigate business travelers (or pleasure travelers combined with business travel).

Functional Definition of Key Terms

- The mature:** Persons 50 years of age and older. The description was based on the minimum age to join the American Association of Retired Persons (AARP). According to AARP, people 50 years of age and older pass through more major life -changing events than in any other age group (Winslow 1995; Shoemaker 2000).
- Internet:** The global information system that is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons; is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and provides uses or makes accessible, either publicly or privately, high-level services layered on the communications and related infrastructure described herein.
- Internet Users:** Mature travelers who use the Internet.
- Pleasure travel:** Travel specifically for the purpose of pleasure or enjoyment. It is distinct from travel for business-related reasons.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The purpose of this chapter is to review relevant and related literature on mature travelers and the Internet. The discussion is divided into two sections. The first reviews the research on the mature market, which is related to the study of travel behavior, comparison, and segmentation. The second is a summary of Internet research, including size and growth, the online population, challenges of the Web, Internet as a marketing tool, and mature surfers.

The Mature

Despite an increasing interest in the mature market and the implications of its market size, economic potential, and desire to travel, relatively little is known about its current situation in the travel marketplace (Javalgi, Thomas, and Rho 1992). Much of the research on the mature market that has been reported in academic travel and tourism journals has focused on the travel behavior of the mature market, the difference between mature travelers and travelers from other age groups, and market segmentation of those in the mature market who travel for pleasure and other purposes.

Travel Behavior

Recently, the travel behavior of the mature market has become an increasingly important area of interest to various public policy makers and researchers (Javalgi, Thomas, and Rao 1992). Guinn (1980) observed Texas seniors and identified some motivations for travel. According to Guinn's study, seniors traveled primarily for the benefits of rest and relaxation. Tongren (1980) investigated older travelers and their attitude in studying the travel planning process (pre- and post-retirement). In profiling the similarities and differences between the under-50 and over-50 age groups, Anderson and Langmeyer (1982) indicated that both groups travel for rest and relaxation and to visit relatives. However, a significantly higher percentage of the over-50 age group travels to visit historic sites. Hagan and Uysal (1991) studied a large group of seniors from across the United States and noted that the opportunities for socialization, exposure to novel situations, and escape from the stresses of daily life were powerful motivators for travel by this segment of society (Zimmer, Brayley, Searle 1995).

A review of the literature on the travel behavior of the mature market suggested that there might be changes between the current mature market and the previous one. In the most recent study, Shoemaker (2000), who compared the study conducted in 1986 and in 1996, concluded that the reasons for travel have remained fairly consistent over the past 10 years. In addition, he identified that the most important reason for senior travelers' vacation travel is to visit new places, and also revealed that the percentage of respondents claiming to take at least one pleasure trip per year is higher than the travel behaviors of those who participated in the 1986 study. Furthermore, predominantly descriptive in their approaches, Capella and Greco (1987); McGuire, Uysal, and McDonald (1988); Romsa and Blenman (1989); Vincent and de los Santos (1990); Cuba (1991); Foster and Murphy (1991); and Lawson (1991) have added to our understanding of the mature market's travel-related behavior, such as information search practices, travel modes, vacation activities, expenditure patterns, lodging selection, and destination choice (Zimmer, Brayley, Searle 1995).

The present knowledge of travel behavior of the mature market is somewhat limited. In order for destination planners and marketers to be successful, they need to know the travel behavior of the mature market and investigate as many factors as possible which influence the travel behavior.

Comparative analysis

Many observers have recognized the potential of mature individuals as consumers and examined the similarities and differences between mature and younger travelers' travel habits (Anderson and Langmeyer 1982; Norvell 1985; Blazey 1987; Hawes 1989; Lawson 1991; Ananth, DeMicco, Moreo, and Howey 1992; Javalgi, Thomas, and Rho 1992; Rubin and Nieswiadomy 1994; Zimmer, Brayley, and Searle 1995; Shifflet 1999).

The mature market has generally made their financial and time investments in home and family, have become free from their children's dependency, and hold a relatively large share of all discretionary dollars (Anderson and Langmeyer 1982; Blazey 1987; Javalgi, Thomas, and Rho 1992; Zimmer, Brayley, and Searle 1995). These factors put the mature market in a key position for tourism marketers and planners. As Rosenfeld (1986) and Shoemaker (1989) indicated, this segment travels more frequently, goes longer distances, stays away longer, and spends more money than any other age group. Also, this has been proved in the research conducted by Anderson and Langmeyer (1982) of an analysis of mature travelers and non-mature travelers, and Javalgi, Thomas, and Rho (1992) of profiling the similarities and differences between the under-50 and over-50 travelers. Both studies identified differences in a number of important dimensions (e.g., demographics characteristics: education, income, employment status, health, etc.; trip types; expenditure patterns; activities; and travel-related characteristics) and concluded that age can be used as a segmenting variable, and suggested the need for developing effective travel marketing programs aimed at each group. Also, Shifflet (1999) identified some significant differences in travel patterns relative to the other age groups, including higher likelihood for the following: being a frequent leisure traveler, stopping over en route, and traveling out of the region.

The current knowledge of travel behavior patterns of mature and younger travelers is very limited. Whether the current differences between mature and younger travelers will be gradually closed appears to be a big issue for marketers, as baby boomers move into the mature group. Therefore, future research is needed to define and classify the mature market, as it relates to the success of the business.

Segmentation of the Mature Market

The heterogeneity of older Americans has only recently begun to receive significant attention as the focus of empirical studies (Lazer and Shaw 1987). Even though previous researchers confirmed that members of the mature market can be divided into sub-markets based on their motivations for travel (e.g., Shoemaker 1989; Lieux, Weaver, and McCleary 1994), little research has been done in the area of the travel and tourism industry. The mature market is extremely diverse, making it virtually impossible to lump it into one generic group.

Literature on segmenting the mature market indicates that this segment can be divided on the basis of four criteria. First, one way to segment by age is to break them into four subgroups: the older population (young-old), ages 50 to 64; the elderly population (middle-old), the 65-to-74-year-olds; the aged, aged 75 to 84; and very

old, aged 85 and over (Lazer 1985; Nichols 1992; Timmermann 1999; Sonnenberg 2000; Balazs 2000).

Second, segment by life events. One of the most useful ways to segment the mature market is by the typical life events that occur after age 50. They generally include retirement, becoming a grandparent, death of a spouse, etc (Milman 1998; Timmermann 1999). The gerontographics (an approach that acknowledges individual differences in aging processes, as well as differences in the type of aging dimensions that occur in late life) (Moschis 1992) life-stage model classifies older adults into four groups based on the amount and type of aging they have experienced: healthy indulgers, healthy hermits, ailing outgoers, and frail recluses (Lazer 1985; Moschis 1996).

Third, segment by a defining event. Retirement is perhaps the defining event for people over age 50. There are three ways one might segment the mature market if considered from a retirement perspective: pre-retirees, retirees, and sustaining retirees (Andrews 1999; Timmermann 1999; Medina and Migliaccio 2000).

Finally, segment by consumer behaviors. One of the most useful ways to segment the mature market is to group it on the basis of its consumer behaviors (e.g., the primary reason for travel: escape and learn group; family travelers, distinct groups of food purchasers: the nutrition-concerned; the fast-and-healthy; the traditional couponers) (Hawes 1988; Shoemaker 1986, 2000; Stephenson 1996).

Clearly a need exists for additional research to better understand the needs and wants of the subgroup, as well as the whole mature market in the travel and tourism area.

Internet

The Internet is recognized currently as the "world's largest repository of on-line digital information" (Williams, Bascombe, Brenner, and Green 1996; Bonn, Furr, and Susskind 1999; Connolly 1997). The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location (Leiner et al 2000). The term Internet, according to the Federal Networking Council (1995), was defined as follows: Internet refers to the global information system that is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-ons; is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein.

The Internet was originally developed for the United States Department of Defense for communications and information sharing (Peterson, Balasubramanian, and Bronnenberg 1999; Connolly 1997). At first, its use was restricted to government and academic use (Connolly 1997). Today, the Internet has blossomed into a viable vehicle

for commerce with the emergence of the World Wide Web (WWW). It is quickly becoming a part of everyday life.

The literature assessing the Internet in general focuses mainly on four topical areas: the number of users, their profiles, the challenges of Web use, and the Internet as an alternative tool of the existing marketing channels.

Size and Growth

The Internet population has grown tremendously since its opening to commercial traffic in 1991 (Maignan and Lukas 1997). Millions of individuals use online Internet services from their homes, organizations, and institutions, as the popularity of Internet use continues to escalate at a steady rate (Au and Hobson 1997). Worldwide estimates suggest that the number of people using computers is less than five percent of the total population (Dobrzynski, 1997) versus 37.4 million American households, or 36.6 percent in the United States (Newburger 1997). According to a nationwide Harris Poll (February, 1999), the number of people using computers soars up to almost two-thirds (63%) of all adult Americans (Taylor 1999).

One major use of computers that has grown rapidly in the past decade is accessing the Internet. There is no doubt that an ever-increasing number of Americans are using the Internet. At school, home, and work, the three major places where people access the Internet, 56.7 million Americans (22.2 percent) used the Internet in 1997 (Newburger 1997). According to the recent research conducted by the CommerceNet and Nielsen Media Research and IntelliQuest, the number of Internet users is more than 90 million Americans (Fornoff 1999; Cook 1999).

The Internet is often referred to as a virtual world, but that does not mean it is completely unconnected to everyday life. The travel industry consistently has been identified as one industry likely to be affected most by the advance of the Internet. This proposition is said to be applicable to both advertising and selling on the Internet (Weber and Roehl 1999). According to the Travel Industry Association of America (TIA), more than 50 million people (26 percent of Americans) used the Internet, up from about 30 million in 1996. More than one in four users have made travel plans or reservations online, up from one in ten in 1996 (Kate 1998). The Internet is highly correlated with travel. The growing resources available on the Internet are making it possible for more travelers to visit cyberspace first to plan their vacation and business trips (Schley 1997). According to Travel Industry Association of America (TIA) research, the number of on-line travelers has grown 190 percent, from 29 million in 1996 to 85 million in 1999 (Keefe 2000). Along with the growth of the number of Internet users for travel products and services, on-line travel revenues have surprisingly increased. According to Jupiter Communications, on-line travel revenues, including air travel, hotel rooms, car rentals, and packaged vacation travel products, as well as on-line advertising on travel sites, totaled \$276 million in 1996. In 1997, the number will skyrocket to \$827 million (Machlis 1997), and by the year 2000 the size of the online travel industry will top \$4.7 billion. It will reach \$8.9 billion in the year 2002 (Keefe 2000). According to Shapiro (1997), the travel market will make up almost 50 percent of all sales made on-line by the turn of the twenty-first century.

The Online Population

Research suggests that gender, age, education, income, occupation, race, and origin all influence Internet use. People who are most likely to use the Internet are male, relatively younger, more educated, hold higher levels of income, stay more often in commercial lodging establishments, and spend more money each day while traveling, U.S. residents and white people, although the gaps are gradually closing. (Times Mirror 1995; Yankelovich Partners 1995; Pitkow and Kehoe 1996; Schonland and Williams 1996; Hoffman, Kalsbeek, Novak 1996; Fram and Grady 1997; Kennedy 1997; TIA 1997; Furr and Bonn 1998; Martinez 1998; Meeks 1998; Bellman, Johnson and Lohse 1999; Bonn, Furr, and Susskind 1999; Cook 1999; Taylor 1999; Weber and Roehl 1999; Bonn, Furr, and Hausman 2000; Lieb 2000).

There is no doubt that men were the early adopters of the Internet (CommerceNet 1999), but women have recently emerged as a powerful buying force on the Web. Women often are the primary buying decision makers in households (Weber and Roehl 1999) and handle most of the family's finances (Smith 1999). The new Internet demographics study reveals that women are now the driving force in the growth of Internet buying, as the proportion of women among on-line buyers increased more than 40 percent within only four years, from five percent in 1994 to 48 percent in 1998 (Smith 1999). According to the study by eMarketer, women will account for roughly 51 percent of Web surfers by 2002 (Berst 1998). Research on females who actually do shop on-line reveals their potential; they are well-educated professionals with high incomes (Fram and Grady 1997).

Also, what may be surprising to some is that mature individuals are finding the Internet attractive for on-line shopping and purchasing. This will be discussed in more detail later in this chapter.

Challenges of the Web

While the Internet offers great potential, it also presents some challenges. Several factors have been identified as shortcomings and impediments to the growth of Internet shopping from the previous research. According to the studies conducted by Jarvenpaa and Todd (1997), and Fram and Grady (1997), consumers have identified difficulties with navigating the Internet and finding specific items, the limited offerings of individual sites, difficult transactions, the lack of price competitiveness, the lack of visuals/graphics, and disappointment with customer service as factors limiting their Internet shopping. Long downloading time, faulty site designs, and missing links represent further problems for potential consumers that have to be addressed by Internet marketers (Hoffman 1996).

The number one deterrent to Internet use is the lack of confidence in the security of the transaction (Eng and Hof 1997), followed by the inability to touch the merchandise, not being familiar with the on-line merchant, and finding it too time-consuming or difficult (Maddox 1998). Security is not just an Internet issue (Mott 1997). Consumers are concerned about their rights to privacy. As their personal information passes over the Internet through the many nodes and through numerous intermediaries,

the concern for privacy rises. Currently, the Internet is like a frontier; there are few rules, and enforcement of the rules that do exist is frequently through vigilante-style justice (Spar and Bussgang 1996). Many security and privacy issues have yet to be resolved, and some will probably require government intervention.

Internet as a Marketing Tool

The potential of the Internet for businesses to conduct electronic commerce has received even greater attention in the literature (Alba et al. 1997; Camp and Sirbu 1997; Peterson, Balasubramanian, and Bronnenberg 1997). Consumers are responding to mass marketing efforts, such as television or print advertisements. Now, electronic innovations, such as computers and the Internet, are transforming the potential and the capabilities of direct marketing (Walle 1996). The Internet acts as a viable alternative to traditional marketing channel intermediaries (Burke 1997), which benefits the traveler and the hospitality marketing professionals (Bonn, Furr, and Susskind 1999). It will become a critical distribution channel for the majority of successful enterprises (Kennedy 1997). Rust and Varki (1996) went so far as to speculate that the Internet would functionally replace traditional mass media.

According to a survey conducted by the Travel Industry Association of America (TIA 2000), one-half of all Americans use travel media, everything from newspaper travel sections and television travel shows to on-line newsletters, to plan their vacations. Among them, Internet web sites are ranked as the most useful sources for travel news, as the Internet becomes more accessible (Williams et al 1996), less expensive (Burke 1997), and more comfortable than ever before. In the past, travelers may have used catalogs (Bellman, Lohse and Johnson 1999) or were forced to patronize traditional travel agents, a long-standing marketing channel in the tourism industry.

Today, however, many consumers take advantage of e-commerce sites on the Web (Bellman, Lohse and Johnson 1999) and believe they can save time and money by doing so (Bhatnager 2000). And they possibly gain additional convenience by bypassing the traditional travel agent (Walle 1996). In their study, Peterson et al (1997) view the Internet as a marketing channel. As such, the Internet not only shares characteristics with other marketing channels, but also possesses characteristics unique to itself. Peterson et al concluded that no existing marketing channel possesses all of these characteristics.

The Mature Surfers

Studies of the mature individuals' adoption of high-technology products (Gilly 1985; Goslar 1987; Hawes 1987; Sherman and Delener 1987; Dolliver 2000) indicated that most mature individuals are quite receptive to computer technologies. Furlong and Kearsley (1986) reported that mature individuals are overwhelmingly positive about their experience with computers. Also, Brown, Brown and Baack (1990) examined the mature market's attitudes toward computers, using the Attitude Toward Computer Usage Scale (ATCUS). Their findings concluded that the overall anxiety level toward computers is low. More recently, Festervand, Meinert, and Vitell (1994) suggested that the mature

recognize the likely impact of computers upon their lives, but they have yet to form strong attitudes, either positive or negative, concerning specific expectations and applications. However, their concerns over potential barriers to adoption and utilization appear more developed.

Several demographic factors have been identified as being related to attitudes toward computers and the Internet (Krauss and Hoyer, 1984; Sherman and Delener, 1987; Festervand, Meinert, and Vitell 1994; Miller 1996; Hillebrand 2000). In general, men (Krauss and Hoyer, 1984), younger adults (Festervand, Meinert, and Vitell 1994; Miller 1996), those with computer experience (Krauss and Hoyer 1984), and those having higher income and educational levels (Kerschner and Hart, 1984; Festervand, Meinert, and Vitell 1994) hold significantly more positive views of personal computers when compared to their counterparts.

CHAPTER THREE

METHOD

Introduction

The preceding chapters present the background of the study, define the research problems, and review the relevant literature for this study. This chapter presents the research method and procedures to achieve the objective of this study. In the first section of this chapter, the research framework is proposed. Based on this framework, three research questions, two research propositions, and twelve main hypotheses are addressed. An overview of population, sample frame, data collection method, and survey instrument as research design is also described. The chapter then describes demographics, type of Internet use, and travel behavior as part of measures, and explains data analysis to be used to test hypotheses.

Research Framework

This study is designed to profile mature travelers who use the Internet and those who do not. This exploratory study examines the role of demographic factors (age, gender, education, occupation, and household income) in evaluating the differences between Internet users and Internet non-users. This study further investigates whether differences exist among mature travelers on the basis of Internet use with respect to selected travel characteristics. These characteristics includes types of trip, preferred activities participated in during pleasure travel, length of stay, travel-related expenditures, type of lodging, type of transportation, number in the travel party, and type of travel party.

The following are the research questions the study at hand strives to answer:

1. What differences in demographic/socio-economic characteristics exist between Internet users and Internet non-users on the basis of the mature market?
2. What differences in travel-related characteristics exists between Internet users and Internet non-users on the basis of the mature market?
3. Which characteristics among demographic/socio-economic and travel-related characteristics, Internet-related characteristics are most effective in differentiating the Internet users from Internet non-users on the basis of the mature market?

Figure 1 presents the research questions proposed in the study.

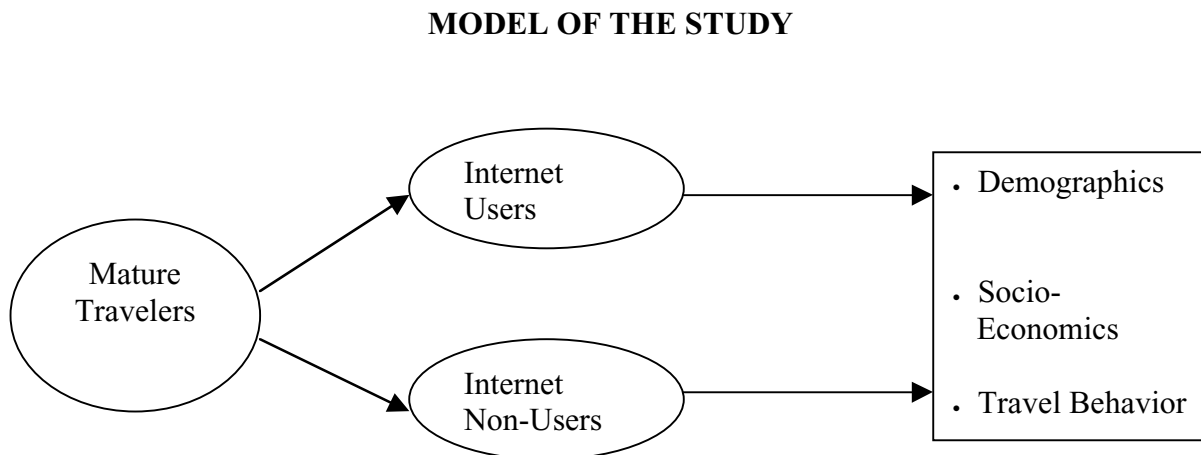


Figure 1 Model of the study

Developing a consumer profile permits marketing professionals and service providers to assemble services in a manner best suited to a specific consumer group s characteristics (Mazanec 1992). There appears to be a greater consensus when it comes

to the profile of Internet users. Previous research suggests that age, gender, education, income, race, and occupation all influence Internet use. People who are most likely to use the Internet are male, quite highly educated, married, trained professionals, have high socioeconomic statuses, and are white (Pitkow and Kehoe 1996; Aggarwal, Kehoe, Pitkow, Rogers, and Sutton 1999). However, even though there has been a great deal of research conducted to identify and understand the general Internet user, little research has been conducted to recognize and grasp the specific market, like the mature travelers who use the Internet and those who do not.

Research Propositions and Hypotheses

Based on the research objectives and the literature review, twelve main research hypotheses and sub-hypotheses are formulated to guide the objectives of this study. Two propositions are also developed for this study. The propositions and hypotheses of the study are:

- Proposition 1: Mature travelers who use the Internet and those who do not differ in age, the level of education, the level of household income, gender, and occupation.

- Hypothesis 1: Internet users and Internet non-users among mature travelers do not differ in age.
- Hypothesis 2: Internet users and Internet non-users among mature travelers do not differ in the level of education.
- Hypothesis 3: Internet users and Internet non-users among mature travelers do not differ in the level of household income.
- Hypothesis 4: Internet users and Internet non-users among mature travelers do not differ in gender.
- Hypothesis 5: Internet users and Internet non-users among mature travelers do not differ in occupation.

- Proposition 2: Mature travelers who use the Internet and those who do not differ in the types of trip, preferred activities participated in during pleasure travel, length of stay, travel-related expenditure, type of lodging, type of transportation, number of travel party, and type of travel party..

- Hypothesis 6: There is no difference in selecting trip type between Internet users and Internet non-users.
- Hypothesis 6.1: There is no difference in selecting city trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.2: There is no difference in selecting cruise trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.3: There is no difference in selecting theme park trip as a type of trip between Internet users and Internet non-users.

- Hypothesis 6.4: There is no difference in selecting eco-tourism trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.5: There is no difference in selecting touring vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.6: There is no difference in selecting resort vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.7: There is no difference in selecting outdoor vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.8: There is no difference in selecting visiting friends and relatives trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.9: There is no difference in selecting beach trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 7: There is no difference in selecting activities during the travel between Internet users and Internet non-users.
- Hypothesis 8: There is no difference in length of stay in the destination between Internet users and Internet non-users.
- Hypothesis 9: There is no difference in travel-related expenditures between Internet users and Internet non-users.
- Hypothesis 9.1: There is no difference in lodging expenditures between Internet users and Internet non-users.
- Hypothesis 9.2: There is no difference in entertainment expenditures between Internet users and Internet non-users.
- Hypothesis 9.3: There is no difference in shopping expenditures between Internet users and Internet non-users.
- Hypothesis 9.4: There is no difference in transportation expenditures between Internet users and Internet non-users.
- Hypothesis 9.5: There is no difference in food expenditures between Internet users and Internet non-users.
- Hypothesis 10: There is no difference in selecting type of lodging between Internet users and Internet non-users.
- Hypothesis 11: There is no difference in selecting type of transportation between Internet users and Internet non-users.
- Hypothesis 12: There is no difference in number of travel party between Internet users and Internet non-users.
- Hypothesis 12.1: There is no difference in type of travel party between Internet users and Internet non-users.

Research Design

Population

The population for this study is comprised of those who are at least 50 years of age or older and who reside in Southwest Virginia and Virginia Beach. Respondents were screened based on their age identification, as this study is limited to mature travelers. Participants were also screened on their travel patterns during the past year. To participate in this study, respondents were to have traveled away from home for at least one night during the past year, and the purpose of the trip should be for pleasure (or combined with business travel).

Sampling Design

Sampling is the process of using a small number of items or parts of a larger population to make conclusions about the whole population (Zikmund 2000). The sample was obtained from a reputable mailing list provider. In an effort to have a more efficient sample and reflect accurately the population on the basis of the criteria used for stratification, a stratified sampling method was used (from 33 counties and 13 cities). Specifically, the counties included were Alleghany, Amherst, Augusta, Bath, Bedford, Bland, Botetourt, Buchanan, Campbell, Carroll, Craig, Dickenson, Floyd, Franklin, Giles, Grayson, Henry, Highland, Lee, Montgomery, Patrick, Pittsylvania, Pulaski, Roanoke, Rockbridge, Rockingham, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe. The cities were Bedford, Bristol, Covington, Clifton, Forge, Danville, Galax, Lexington, Lynchburg, Martinsville, Radford, Roanoke, Salem, Staunton, and Virginia Beach.

Survey Instrument

The survey instrument was developed to investigate factors influential in Internet use and to measure determinants affected by Internet users and Internet non-users. The survey instrument consisted of the cover letter and three parts. The cover letter contained the reason for this study and explained its sole focus on academic research. The questionnaire contained three sections designed to attain the required information for the purpose of the study. Section One consisted of questions designed to gather information on travel characteristics: the types of trip; the preferred activities participated in during pleasure travel; length of stay; tourism-related expenditures; type of lodging; type of transportation; number in the travel party; and type of travel party. Section Two was comprised of questions devised to gather information on Internet use. Section Three was made up of questions designed to collect demographic information, such as age, gender, marital status, education, income, and occupation. The cover letter and survey instrument were mailed to the individuals on the mailing list with a pre-addressed, stamped return envelope.

Data Collection Method

The type of data collection in the study was a mail survey. The self-administered survey questionnaire was sent to 2,000 residents who are 50 years of age or older and who live in Southwest Virginia and Virginia Beach. The names and addresses of the random sample were obtained through a reputable mailing list provider.

In an effort to decrease the non-response rate and enhance the response rate, special efforts were employed. Self-addressed and stamped envelopes were included in the package being mailed to the respondents to ensure ease of return. In addition, each of the cover letters was signed in an attempt to show personalization and increase the response rate. Each envelope was also stamped individually with a regular postage stamp to prevent the survey from looking like a mass mailing, again, to try to increase the response rate (Zikmund 2000).

Late and Non-Response Bias

The answers of the late respondents (those who returned the completed survey in the fourth week after the questionnaire was mailed out) were compared with those of the early respondents (those who returned the completed survey in the first week after the questionnaire was mailed out) to test if non-respondents are significantly different from the respondents of the survey.

Variables

Demographic Variables

For the purpose of this study, demographic characteristics were determined by age, gender, education, occupation, and household income. Respondents were asked to indicate their age, gender, highest education level completed, marital status, type of occupation, and range of household income, including other demographic factors. The indicators were selected because they were important in determining the use type: Internet users versus Internet non-users (whether mature travelers use the Internet). Table 1 contains the main demographic variables.

Table 1
Main Demographic Variables

<u>Indicators</u>	<u>Questions</u>
Age	What is your age?
Gender	What is your sex?
Marital Status	What is your current marital status?
Education	What is the highest level of education you have completed?
Household Income	What is your annual household income before taxes in U.S. dollars?
Race	How would you classify yourself?
Occupation	Which of the following categories best describes the industry you primarily work in?

Internet Use Type

For the purpose of this study, only two categories of type were included. Internet use type was assessed by a self-identification question. Respondents were asked to indicate whether they use the Internet.

Travel Behavior

The type of trip was measured by asking respondents to check the category which best describes their recent trip. The choices given were: City Trip, Touring Vacation, Cruise, Resort Vacation, Theme Park, Outdoors Vacation, Eco-tourism, Visiting Friends and Relatives, Beach, and Other. If Other were chosen, respondents were asked to specify in their own words the type of trip they had taken. Table 2 includes information on the type of trip.

Table 2
The Types of Trip

<p>City Trip — A trip to a city where you may shop, enjoy entertainment, dine, visit museums, attend theater, and/or just enjoy the city.</p> <p>Touring Vacation — A vacation by car, bus, or train through scenic areas.</p> <p>Cruise — A trip on a cruise ship where you enjoy all on-board activities and the planned stops at points of interests.</p> <p>Resort Vacation — A trip to a resort or resort area where a wide variety of activities such as beaches, skiing, tennis, golfing, etc. are available either on the premises or close by.</p> <p>Theme Park — A vacation taken primarily for the purpose of visiting a major theme park.</p> <p>Outdoors Vacation — A vacation in a natural are where you may engage in activities such as camping, hunting, hiking, rafting, and fishing, etc.</p> <p>Eco-tourism - A trip that consists of traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestation found in these areas. (Boo 1990)</p> <p>Visiting Friends and Relatives — A vacation which involves visiting family members and friends.</p> <p>*All above definitions except Eco-tourism and visiting family and friends were adapted from the 1995 U.S. Pleasure Travel Market in Canada Survey.</p>
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Activities travelers actually took part in during pleasure travel were measured by a checklist question. Respondents were asked, Please indicate the activities you participated in during your most recent pleasure trip. Possible responses to this question were categorized into 22 categories. These categories were based on previous studies reported by Gailliard s (1999), McIntosh, Goeldner, and Ritchie (1995) and Seeamerica (2000). The activity categories included were: adventure travel, camping, cruise, cultural/history/heritage, cycling, eco-tourism/nature, festival events, fishing, fly/drive, food, gaming/casinos, golf, hiking, visiting family/relative, mountains, museum/theater/concert, shopping, sightseeing, skiing, sports, theme parks, and others. If others were chosen, respondents were asked to specify in their own words the type of activities they had taken. It was understood that respondents might have participated in several activities during their leisure travel.

The length of stay is usually defined as the amount of time travelers spend at a destination and is frequently measured in the number of days or nights the tourist spends at the site (Pearce and Elliott 1983; Uysal, McDonald, and O Leary 1988). It was measured by asking the open-ended question, As a whole, how many nights did you stay on this trip?

Travel-related expenditures were measured by asking, How much would you estimate you spent on this trip? In addition, respondents were asked to indicate their spending on other categories, such as lodging, entertainment, shopping, transportation, food, and others. A discussion of these variables as it relates to Internet user/non-user

groups has been included here because it highlights the economic impact differences between the Internet user and Internet non-user groups. According to the research reported by the TIA (2000), the average spending by frequent on-line bookers is much larger than by those who book less frequently on-line.

Pretest of the Measurement Instrument

A pretest of the measurement instrument was conducted in two stages. First, the survey questionnaire was distributed to several faculty member and graduate students in the Department of Hospitality and Tourism Management at Virginia Polytechnic Institute and State University (Virginia Tech). Each participant was asked to provide comments after completing the questionnaire regarding the layout, wording, and ease of understanding of the measurement items (Zikmund 2000). The feedback was then taken into account in the revision of the questionnaire. Second, the revised questionnaire was tested through a group of convenience samples consisting of residents in Southwest Virginia collected from a series of on-site interviews. Also, the survey questionnaire received was considered in the final revision of the survey instrument.

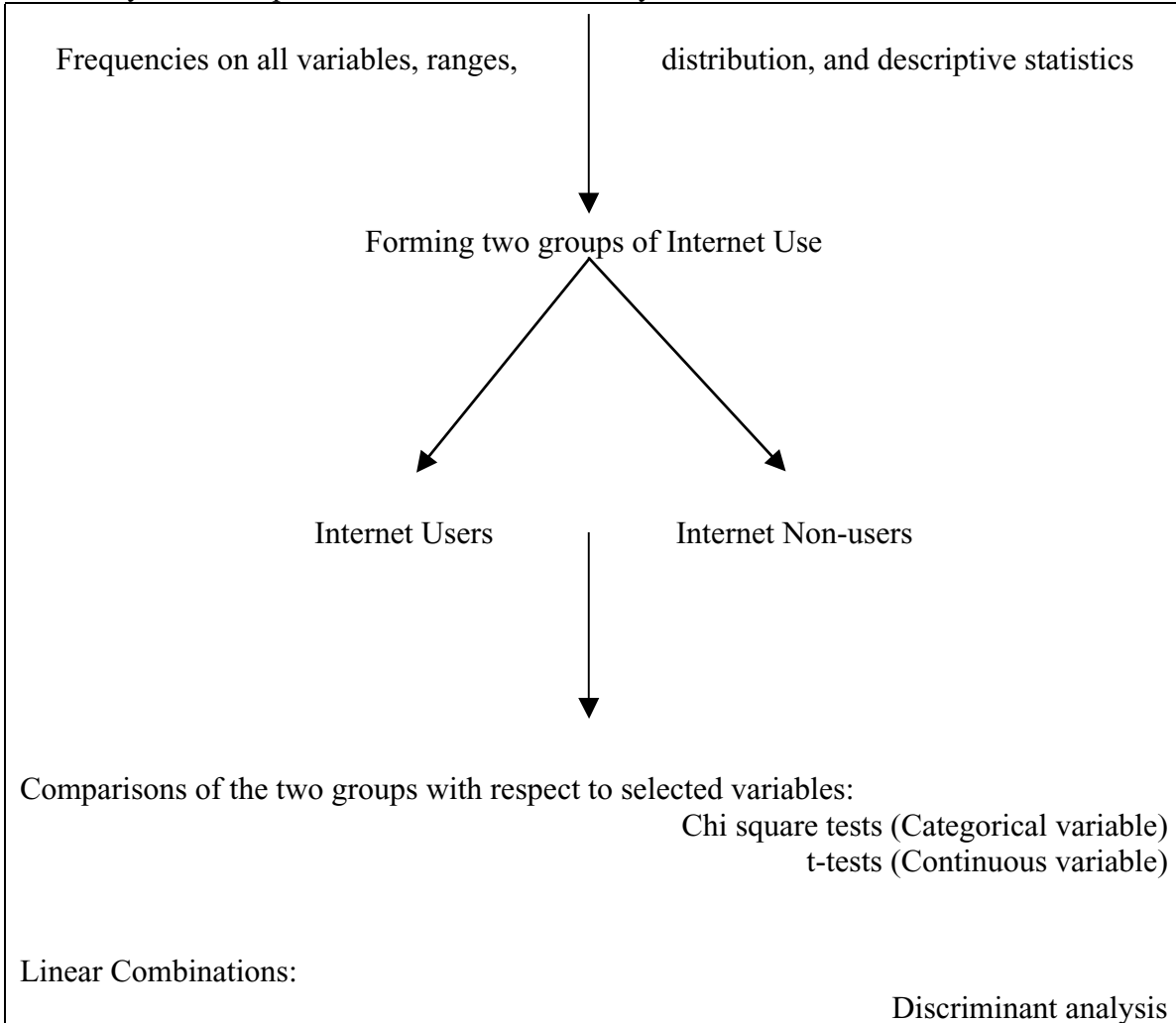
Data Analysis

To effectively complete an analysis of the data, a quantitative method of analysis was applied. The hypotheses corresponding to the study objectives were analyzed using Statistical Package for Social Sciences Program (SPSS, V. 10.0). All results were considered to be statistically significant at the .05 or better probability level.

Several steps were taken to explore the study objectives and test the hypotheses. Descriptive statistics was performed on all variables to obtain ranges, frequencies, and measures of central tendency, such as mean, median, and mode. Data were analyzed by involving three types of data analysis. First, chi-square tests of independence were used. The chi-square statistic (i.e., cross-tabulations) was chosen to test the non-continuous data variables because of its proven ability to accurately evaluate the discrepancy between a set of observed frequencies and a set of expected frequencies. Each hypothesis test using chi-square test of independence checked the assumption. Second, t-tests were applied to those variables representing continuous data (i.e., travel-related expenditure) to examine whether differences existed between Internet users and non-users. The t-test is a technique used to test the hypothesis that the mean scores on some interval-scaled variable will be significantly different for two independent groups. Finally, multiple discriminant analysis was used to determine which variables are more associated with the probability of an object falling into one of two groups or categories. Multiple discriminant analysis is a statistical technique for predicting the probability of objects belonging in two or more mutually exclusive categories (dependent variable) based on several independent variables. This technique was performed to examine a relationship between demographic, socio-economic, travel-related variables, and computer-related questions as independent variables and Internet use type as dependent variables.

The summary of the steps involved in the data analysis is presented in Table 3.

Table 3
Summary of the Steps Involved in the Data Analysis



CHAPTER FOUR

RESULTS

Introduction

This chapter includes an analysis of response rate, demographic and socio-economic characteristics of the respondents, and an analysis of late and non-response bias. The results of data analysis and hypotheses testing are presented. A summary of findings is presented.

Sampling Results

The population for this study was comprised of those who: (1) are at least 50 years of age or older, and (2) reside in Southwest Virginia and Virginia Beach and have participated in pleasure travel (or pleasure travel combined with business travel) within the last year. A cover letter and survey questionnaire were mailed to 2,000 travelers who met the aforementioned criteria (See APPENDIX A).

The overall response rate was 25.77 percent (476 respondents — 153 which were returned undeliverable) (See Table 4). Forty- three (43) of the returned questionnaires were excluded as the data were being coded because they were returned blank or only partially completed or without meeting the population criteria. After eliminating the unusable responses, 433 responses (23.44 percent of the total population) were coded and used for data analysis.

Table 4

Response Rate

	Number	Percent (%)
Total Target Population	2000	100.00
Less Undeliverable	153	7.65
Total Survey Population	1847	92.35
Total Sample	1847	100.00
Total Responses	476	25.77
Less Unusable	43	2.33
Total Usable Responses	433	23.44

Demographic Analysis of Respondents

The demographic characteristics of age, gender, marital status, education, income, ethnic origin, and occupation were included in the study providing a descriptive profile of the survey respondents (Table 5). A general overview of the demographics of the respondents was as follows:

Age

Survey respondents were simply asked their age in an open-ended question. The majority of the respondents belonged to the 55-59 years old group (22.9%), followed by the 50-54 years old group (18.7%), the 60-64 years old group (16.6%), the 70-74 years

old group (15.0%), the 65-69 years old group (14.8%), and the 75+ years old group (12.0%). The average age of the respondents in this study was 63.22 years of age.

Gender

Survey respondents were asked to check if they were male or female. Of the 433 respondents, 289 (66.7%) represented themselves as male and 144 (33.3%) represented themselves as female.

Marital Status

Respondents were asked to provide information regarding their marital status by checking one of the following choices: divorced, married, single, separated, or widowed. The vast majority of respondents in this study were married (84.5%), followed by widowed (6.7%), divorced (5.1%), single (2.8%), and separated (0.9%).

Education

Respondents were asked to provide information regarding the level of education they had completed by checking one of the following choices: grade school, high school or equivalent, vocational/technical school, some college, college graduate, master s degree, doctoral degree, and professional degree. Most respondents (89.0%) indicated some college or higher level of education.

Income

Respondents were asked to provide information regarding the annual household income before taxes. Almost 78 percent of the respondents reported an income over \$50,000. The highest reported income was over \$100,000 at the rate of 36.5 percent. The next highest reported income, between \$50,000 and \$74,999, was indicated by 28 percent of the respondents. Fourteen (14) percent reported they earn between \$75,000 and \$99,999.

Ethnic Origin

Respondents were asked to provide information regarding their ethnic origin. The vast majority of respondents identified themselves as Caucasian/White (97.5%), with only 1.4 percent being Asian/Pacific Islander and 1.2 percent being African-American.

Occupation

Respondents were asked to provide information regarding their occupation. Almost one-half of the respondents reported themselves as retired, followed by education industry (13.6%) and health care (7.9%).

Residence

Of all the respondents in this study, 40.2 percent resided in a suburban area, and slightly more than 34.4 percent in a rural area. Respondents who resided in an urban area represented 25.4 percent. For more specific details regarding the respondents characteristics, please refer to Table 5.

Table 5
Profile of Respondents

	Frequency	Percent (%)
<u>Age (n = 433)</u>		
50-54	81	18.7
55-59	99	22.9
60-64	72	16.6
65-69	64	14.8
70-74	65	15.0
Over 75	52	12.0
<u>Gender (n = 433)</u>		
Male	289	66.7
Female	144	33.3
<u>Marital Status (n = 433)</u>		
Divorced	22	5.1
Married	366	84.5
Single	12	2.8
Separated	4	0.9
Widowed	29	6.7
<u>Education (n = 433)</u>		
Grade School	1	0.2
High School or Equivalent	36	8.3
Vocational/Technical School	11	2.5
Some College	72	16.6
College Graduate	122	28.2
Master's Degree	88	20.3
Doctoral Degree	50	11.5
Professional Degree	53	12.2
<u>Income (n = 384)</u>		
Under \$10,000	2	0.5
\$10,000-\$19,999	5	1.3
\$20,000-\$29,999	20	5.2
\$30,000-\$39,999	22	5.7
\$40,000-\$49,999	34	8.9
\$50,000-\$74,999	108	28.1
\$75,000-\$99,999	53	13.8
Over \$100,000	140	36.5

Table 5 (con t)
 Profile of Respondents

	Frequency	Percent (%)
<u>Ethics (n = 433)</u>		
Caucasian/White	422	97.5
Asian/Pacific Islander	6	1.4
African-American	5	1.2
<u>Occupation (n = 430)</u>		
Retired	228	53.0
Unemployed	6	1.4
Education	59	13.7
Homemaker	7	1.6
Government and Public Administration	9	2.1
Hotel and Food Services	6	1.4
Finance and Insurance	12	2.8
Retail	4	0.9
Publishing	5	1.2
Manufacturing	12	2.8
Utilities	3	0.7
Computer and Electronics	2	0.5
Transportation and Warehousing	10	2.3
Health Care	34	7.9
Scientific or Technical Service	7	1.6
Construction	8	1.9
Wholesale	5	1.2
Agriculture, Forestry, Fishing and Hunting	3	0.7
Information Service	5	1.2
Legal Service	5	1.2
<u>Residence (n = 433)</u>		
Urban	110	25.4
Suburban	174	40.2
Rural	149	34.4

Late and Non-Response Bias

The potential non-response bias was investigated through comparing the responses of the early respondents to those of the late respondents. The early respondents (those who returned the completed survey in the first week after the questionnaire was mailed out) were compared to the late respondents (those who returned the completed survey in the fourth week after the questionnaire was mailed out) by using t-test (i.e., parametric) and chi square test of independence (i.e., nonparametric) with selected survey questions. Several demographic, travel-related, and Internet-related questions from the questionnaire were compared.

The results from those tests are reported in APPENDIX B. The t-test was employed on metric data (e.g., age) and indicated that there was no significant difference, and chi square test of independence was performed on non-metric data (e.g., gender) and indicated that there was no significant relationship.

Hypotheses Testing

The main purpose of this study was to profile mature travelers on the basis of Internet use. More specifically, the intention was to examine the demographic and socio-economic characteristics of mature travelers who use the Internet compared to those who do not. This study also examined whether or not differences exist between Internet users and Internet non-users among mature travelers with respect to travel behavior. Attention was paid to investigate the types of trip selected, the preferred activities participated in during the travel, the length of stay, travel-related expenditures, the type of lodging, the type of transportation, the number in the travel party, and the type of travel party in explaining the differences between Internet users and Internet non-users of the mature market.

Earlier chapters have presented the research methods that guided this study, as well as three research questions, twelve main hypotheses and sub-hypotheses. Each research question, proposition, and hypothesis is stated below, and the statistical analyses for each hypothesis are presented.

Research Question One

1. What differences in demographic/socio-economic characteristics exist between Internet users and non-users on the basis of the mature market?

Since the first research question and the first five hypotheses are devised to deal with the difference between Internet users and Internet non-users in age, gender, education, household income, and occupation, either t-test or chi-square test are employed based on the type of question to be answered, the number of variables, and the scale of measurement of each variable.

Proposition 1: Mature travelers who use the Internet and those who do not differ in age, the level of education, the level of household income, gender, and occupation.

Analysis of Hypothesis 1

Hypothesis 1: Internet users and Internet non-users among mature travelers do not differ in age.

Respondents were simply asked their age in an open-ended question and asked to check yes or no to the Internet use question. All respondents were classified as either Internet users or Internet non-users based on their response to the question. The result of this analysis indicated that 367 (84.8%) respondents (n = 433) identified themselves as Internet users, and 66 (15.2%) respondents identified themselves as Internet non-users. The first hypothesis is evaluated by employing a t-test (Table 6). The t-test is a technique used to test the hypothesis that the mean scores on some interval-scaled variable will be significantly different for two independent groups. The t-test comparing the mean age of Internet users who identified themselves as Internet users to the mean age of Internet non-users who identified themselves as Internet non-users found a significant difference between the means of the two groups ($t(431) = -7.134, p < .05$). The mean age of Internet users ($M = 62.02, sd = 7.97$) was significantly younger than the mean age of Internet non-users ($M = 69.77, sd = 8.93$).

Table 6

Hypothesis 1:

Internet users and Internet non-users among mature travelers do not differ in age.

Do you use the Internet?		N	Mean	SD	t-value	d.f.	Sig. (2-tailed)
Age	Yes	367	62.02	7.97	-7.134	431	.000
	No	66	69.77	8.93			

Analysis of Hypothesis 2

Hypothesis 2: Internet users and Internet non-users among mature travelers do not differ in the level of education.

The respondents were originally asked to check the level of education completed in eight categories. These eight categories were then condensed into four in order not to violate the assumption that the expected frequencies for each category should be at least one, and no more than 20 percent of the categories should have expected frequencies of less than five. For the purposes of analysis, education was categorized as lower education level (grade school, high school or equivalent, and vocational/technical school), some college, college graduate, more than grad graduate school (master s degree, doctoral degree, and professional degree).

For the analysis of the second hypothesis, the chi-square test of independence was employed to determine whether or not two variables are independent of each other. Chi square, symbolized as χ^2 , is a nonparametric test of significance appropriate when the data are in the form of frequency counts (or percentages or proportions which can be converted to frequencies) occurring in two or more mutually exclusive categories. Thus, chi square is appropriate when the data represent a nominal scale, and the categories may be true categories (e.g., male vs. female) or artificial categories (e.g., tall vs. short). A chi square test compares proportions actually observed in a study with proportions expected, to see if they are significantly different. Expected proportions are usually the frequencies which would be expected if the groups were equal, although they may be based on past data (Gay 1996).

The chi-square test of independence was calculated comparing the frequency of level of education for Internet users and Internet non-users. The result of the analysis shows interesting differences. Almost 10 percent of less than some college use the Internet, while almost 20 percent of less than some college do not use the Internet. Almost 47 percent of more than grad graduate use the Internet, while almost 27 percent of more than grad graduate do not use the Internet. The result of the analysis indicated that there is significant dependence of one variable on the other (chi square (3) = 14.14, $p < .05$). Based on this result, respondents who have higher levels of education were more likely to use the Internet than respondents who have lower levels of education (Table 7).

Table 7

Hypothesis 2:

Internet users and Internet non-users among mature travelers do not differ in the level of education.

		Education				Total
		<Some college	Some college	College graduate	>Grad graduate	
Do you use the Internet?	Yes	35 (9.5%)	55 (15.0%)	104 (28.3%)	173 (47.1%)	367 (84.8%)
	No	13 (19.7%)	17 (25.8%)	18 (27.3%)	18 (27.3%)	66 (15.2%)
Total		48 (11.1%)	72 (16.6%)	122 (28.2%)	191 (44.1%)	433 (100%)
Pearson $\chi^2 = 14.14$ (d.f. = 3) Significance = .003						

Analysis of Hypothesis 3

Hypothesis 3: Internet users and Internet non-users among mature travelers do not differ in the level of household income.

Respondents were asked to provide information regarding the annual household income before taxes. More of the respondents left this question blank than any other question on the survey; 384 of the 433 respondents answered this question. Of those who did answer the question, only 1.8 percent indicated income less than \$20,000.

The eight income categories were condensed into six categories for the process of analysis. Even though there are very few assumptions needed for the chi square test, the expected frequencies for each category should be at least one, and no more than 20 percent of the categories should have expected frequencies of less than five. For the purposes of analysis, income was categorized as under \$30,000; \$30,000-\$39,999; \$40,000-\$49,999; \$50,000-\$74,999; \$75,000-\$99,999; and over \$100,000.

In hypothesis three, the chi square test of independence was employed to determine whether or not Internet use and household income are independent of each other. The chi square test of independence was calculated comparing the frequency of level of household income for Internet users and Internet non-users. The result of the test showed that almost 19 percent of those who make less than \$50,000 household income answered they use the Internet, while 38.4 percent of those who make less than \$50,000 household income answered they do not use the Internet. Also, 54 percent of Internet users make more than \$75,000, while only 27 percent of Internet non-users answered they make more than \$75,000. The result of the analysis indicated that there is significant dependence of one variable on the other (chi square (5) = 22.075, $p < .05$). Based on this result, respondents who have higher household incomes were more likely to use the Internet than respondents who have lower household incomes (Table 8).

Table 8

Hypothesis 3:

Internet users and Internet non-users among mature travelers do not differ in the level of household income.

		Income						Total
		< \$29,999	\$30,000- \$39,999	\$40,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	> \$100,000	
Do you use the Internet?	Yes	17 (5.1%)	18 (5.4%)	28 (8.4%)	90 (27.1%)	47 (14.2%)	132 (39.8%)	332 (86.5%)
	No	10 (19.2%)	4 (7.7%)	6 (11.5%)	18 (34.6%)	6 (11.5%)	8 (15.4%)	52 (13.5%)
Total		27 (7.0%)	22 (5.7%)	34 (8.9%)	108 (28.1%)	53 (13.8%)	140 (36.5%)	384 (100%)
Pearson $\chi^2 = 22.075$ (d.f. = 5) Significance = .001								

Analysis of Hypothesis 4

Hypothesis 4: Internet users and Internet non-users among mature travelers do not differ in gender.

The fourth hypothesis was evaluated by employing the chi square test of independence to determine association between the two groups and gender. The result of this analysis indicated that the variables (Internet use and gender) did not vary significantly from independence (chi square (1) = .450, $p > .05$) (Table 9).

The result of this analysis was inconsistent with the previous study reported by various researchers (Times Mirror 1995; Yankelovich Partners 1995; Pitkow and Kehoe 1996; Schonland and Williams 1996; Hoffman, Kalsbeek, Novak 1996; Fram and Grady 1997; Kennedy 1997; TIA 1997; Furr and Bonn 1998; Martinez 1998; Meeks 1998; Bellman, Johnson and Lohse 1999; Bonn, Furr, and Susskind 1999; Cook 1999; Taylor 1999; Weber and Roehl 1999; Bonn, Furr, and Hausman 2000; Lieb 2000), which confirmed that people who are most likely to use the Internet are male.

Based on the result, the proportion of women among on-line surfers accounted for almost one-half of Internet users and will gradually increase, along with the increase in the number of women entering the workforce.

Table 9

Hypothesis 4:

Internet users and Internet non-users among mature travelers do not differ in gender.

		Gender		Total
		Male	Female	
Do you use the Internet?	Yes	249(85.6%)	118(83.1%)	367
	No	42(14.4%)	24(16.9%)	66
Total		291	142	433
Pearson $\chi^2 = .450$ (d.f. = 1) Significance = .502				

Analysis of Hypothesis 5

Hypothesis 5: Internet users and Internet non-users among mature travelers do not differ in occupation.

The last hypothesis of the first proposition was tested by using chi square test of independence to determine whether or not there is an association between two groups (Internet users and Internet non-users) and occupation. The 20 occupation categories were condensed into two categories, retired and working, in order to meet the assumption of chi square test. The chi square test of independence was calculated comparing the frequency of type of occupation for Internet users and Internet non-users. The result of

the test showed that 47.7 percent of those who use the Internet answered they were retired, while 80.3 percent of those who do not use the Internet answered they were retired. In addition, 52.3 percent of Internet users answered they were still working, while only 19.7 percent of Internet non-users answered they were working. The result of the analysis indicated that there is significant dependence of one variable on the other (chi square (1) = 23.876, $p < .05$). Based on this result, mature travelers who were still working are more likely to use the Internet than those who were not working (Table 10).

Table 10

Hypothesis 5:

Internet users and Internet non-users among mature travelers do not differ in occupation.

		Occupation		Total
		Retired	Working	
Do you use the Internet?	Yes	175(47.7%)	192(52.3%)	367(84.8%)
	No	53(80.3%)	13(19.7%)	66(15.2%)
Total		228(52.7%)	205(47.3)	433(100%)
Pearson $\chi^2 = 23.876$ (d.f. = 1) Significance = .000				

Research Question Two

2. What differences in travel-related characteristics exist between Internet users and Internet non-users on the basis of the mature market?

The second research question and seven hypotheses and sub-hypotheses were devised to deal with the travel characteristics, such as types of trip selected, the preferred activities participated in during the travel, the length of stay, travel-related expenditures, the type of lodging, the type of transportation, the number in the travel party, and the type of travel party, of two groups (Internet users and Internet non-users) among mature travelers.

Proposition 2: Mature travelers who use the Internet and those who do not differ in travel behavior.

Analysis of Hypothesis 6

Hypothesis 6: There is no difference in selecting trip type between Internet users and Internet non-users.

Hypothesis 6.1: There is no difference in selecting city trip as a type of trip between Internet users and Internet non-users.

- Hypothesis 6.2: There is no difference in selecting cruise trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.3: There is no difference in selecting theme park trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.4: There is no difference in selecting eco-tourism trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.5: There is no difference in selecting touring vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.6: There is no difference in selecting resort vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.7: There is no difference in selecting outdoor vacation trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.8: There is no difference in selecting visiting friends and relatives trip as a type of trip between Internet users and Internet non-users.
- Hypothesis 6.9: There is no difference in selecting beach trip as a type of trip between Internet users and Internet non-users.

Respondents were asked to identify the last vacation trip they took. The answers to this question were coded from 1 (e.g., city trip) to 8 (e.g., beach trip) based on their responses. Further, each respondent has been assigned 1 (Yes) or 2 (No) in each type of trip variable. For example, if a respondent answered that he/she has taken city trip, first he/she was assigned 1 in the variable of trip type, and then was assigned 1 (Yes) in the variable of city trip. Also, respondents were simply asked to check Yes or No to the Internet use question. These two questions were used to see whether differences exist between Internet users and non-users in the type of trip they took.

Table 11 contains information on the types of trips taken by mature travelers. As shown in Table 11, for both the most frequent trip was touring vacation, resort vacation, and visiting friends and relatives. However, mature travelers who use the Internet have taken resort vacation the most, followed by touring vacation and visiting friends and relatives, while the most frequent trip for mature travelers who do not use the Internet was visiting friends and relatives, followed by touring vacation and resort vacation. Overall, the results of this analysis revealed that there were no significant differences ($\chi^2(8) = 8.776, p > .05$) in selecting type of trips between Internet users and Internet non-users. Therefore, hypothesis six was not supported by the results from the test.

Table 11

Hypothesis 6:

There is no difference in selecting trip type between Internet users and non-users.

Type of trip	Do you use the Internet?		
	Yes	No	Total (%)
City trip	33 (9.0%)	7 (10.6%)	40 (9.2%)
Cruise	29 (7.9%)	7 (10.6%)	36 (8.3%)
Theme park	7 (1.9%)	2 (3.0%)	9 (2.1%)
Eco-tourism	4 (1.1%)	1 (1.5%)	5 (1.2%)
Touring vacation	81 (22.1%)	14 (21.2%)	95 (21.9%)
Resort vacation	94 (25.6%)	9 (13.6%)	103 (23.8%)
Outdoors vacation	39 (10.6%)	6 (9.1%)	45 (10.4%)
Visiting friends and relatives	66 (18.0%)	19 (28.8%)	85 (19.6%)
Beach	14 (3.8%)	1 (1.5%)	15 (3.5%)
Total	367 (100%)	66 (100%)	433 (100%)
Pearson $\chi^2 = 8.776$.
(d.f. = 8)			.
Significance = .362		.	.

The next phase of this study tested whether there were significant differences between Internet users and Internet non-users in selecting a specific type of trip. The chi square test of independence was calculated comparing the frequency of each type of trip for Internet users and Internet non-users. The χ^2 difference test indicated that there were significant differences in two types of trip. As shown in Table 12, the largest percentage difference appears to be in the resort vacation (chi square (1) = 4.426, $p < .05$) category, where 25.6 percent of those who use the Internet answered they have taken resort vacation, but only 13.6 percent of those who do not use the Internet answered they have taken resort vacation. Regarding the other category, visiting friends and relatives, (chi square (1) = 4.139, $p < .05$), only 18.0 percent of Internet users answered they have taken such a trip, while 28.8 percent of Internet non-users indicated that they have taken such a trip.

Table 12
Hypothesis 6.1 — 6.9:
Comparison of trip types of Internet users and non-users.

° Type of trip	Do you use the Internet?		χ ²	d.f.	p
	Yes	No			
City trip	33 (9.0%)	7 (10.6%)	0.174	1	0.677
Cruise	29 (7.9%)	7 (10.6%)	0.537	1	0.464
Theme park	7 (1.9%)	2 (3.0%)	0.347	1	0.556
Eco-tourism	4 (1.1%)	1 (1.5%)	0.089	1	0.766
Touring vacation	81 (22.1%)	14 (21.2%)	0.024	1	0.877
Resort vacation	94 (25.6%)	9 (13.6%)	4.426	1	0.035
Outdoors vacation	39 (10.6%)	6 (9.1%)	0.142	1	0.707
Visiting friends and relatives	66 (18.0%)	19 (28.8%)	4.139	1	0.042
Beach	14 (3.8%)	1 (1.5%)	0.885	1	0.347

Analysis of Hypothesis 7

Hypothesis 7: There is no difference in selecting activities during the travel between Internet users and Internet non-users.

Respondents were asked to identify the activities they took part in during their last vacation trip. The answers to this question were coded as follows: if they participated in cruise, cruise category was assigned 1 (Yes); if no, 2 (No). Table 13 contains information on the activities mature travelers took part in during their last vacation trip. As shown in Table 13, they participated in shopping most, followed by sightseeing, food, visiting family/relatives, cultural/history/heritage, and fly/drive.

Examination of the results of the χ² difference test indicated that there were statistically significant differences between Internet use type (Internet users vs. Internet non-users) and cycling (chi square (1) = 9.050, $p < .05$), festival events (chi square (1) = 3.955, $p < .05$), shopping (chi square (1) = 4.865, $p < .05$), cultural/history/heritage (chi square (1) = 6.398, $p < .05$), and eco-tourism/nature (chi square (1) = 6.895, $p < .05$). To see how Internet users and Internet non-users differ in selecting activities, a frequency table was included in Table 13. As shown in Table 13, only six percent of 367 Internet users participated in cycling, while 16.7 percent of 66 Internet non-users took part in such an activity. In the activity of festival events, almost 11 percent of Internet users participated in this activity, while only three percent of Internet non-users participated in this activity. For shopping, 64.3 percent of Internet users answered they participated in shopping, while half of Internet non-users answered they took part in this activity. In the category of cultural/history/heritage, 137 of 367 Internet users answered they participated in this activity, while only 14 of 66 Internet non-users answered they participated in this activity. For participation in eco-tourism/nature, almost 20 percent of Internet users indicated that they took part in this activity, while four

percent of Internet non-users indicated that they took part in this activity. Overall, the results of this study partially confirmed that Internet users and Internet non-users participated in different activities during their travel.

Table 13

Hypothesis 7:

There is no difference in selecting activities during the travel between Internet users and Internet non-users.

Activities	Do you use the Internet?		Total	χ^2	d.f.	p
	Yes	No				
Adventure travel	30 (8.2%)	4 (6.1%)	34	0.345	1	0.557
Cruise	41 (11.2%)	7 (10.6%)	48	0.018	1	0.893
Cycling	22 (6.0%)	11 (16.7%)	33	9.050	1	0.003
Festival events	40 (10.9%)	2 (3.0%)	42	3.955	1	0.047
Fly/Drive	108 (29.4%)	16 (24.2%)	124	0.736	1	0.391
Gaming/Casinos	34 (9.3%)	11 (16.7%)	45	3.292	1	0.070
Hiking	55 (15.0%)	6 (9.1%)	61	1.606	1	0.205
Visiting family/relative	129 (35.1%)	25 (37.9%)	154	0.182	1	0.670
Shopping	236 (64.3%)	33 (50.0%)	269	4.865	1	0.027
Theme parks	30 (8.2%)	3 (4.5%)	33	1.046	1	0.306
Camping	31 (8.4%)	3 (4.5%)	34	1.177	1	0.278
Cultural/History/Heritage	137 (37.3%)	14 (21.2%)	151	6.398	1	0.011
Eco-tourism/Nature	71 (19.3%)	4 (6.1%)	75	6.895	1	0.009
Fishing	32 (8.7%)	10 (15.2%)	42	2.642	1	0.104
Food	179 (48.8%)	32 (48.5%)	211	0.002	1	0.966
Golf	49 (13.4%)	10 (15.2%)	59	0.154	1	0.695
Mountains	69 (18.8%)	12 (18.2%)	81	0.014	1	0.905
Museum/Theater/Concert	80 (21.8%)	12 (18.2%)	92	0.437	1	0.508
Sightseeing	215 (58.6%)	41 (62.1%)	256	0.290	1	0.590
Sports	29 (7.9%)	5 (7.6%)	34	0.008	1	0.928
Beach	26 (7.1%)	2 (3.0%)	28	1.520	1	0.218

Analysis of Hypothesis 8

Hypothesis 8: There is no difference in length of stay in the destination between Internet users and Internet non-users.

Respondents were simply asked to answer the question, As a whole, how many nights did you stay on last vacation trip? in an open-ended style. Table 14 contains

information on the length of stay in the destination between Internet users and Internet non-users. The eighth hypothesis was evaluated by employing t-test. The t-test comparing the average length of stay of Internet users who identified themselves as Internet users to the average length of stay of Internet non-users who identified themselves as Internet non-users found a significant difference between the means of the two groups ($t(424) = 2.005, p < .05$). As shown in Table 14, the average length of stay in the destination for Internet users was 8.63 days, and the average length of stay in the destination for Internet non-users was 7.02 days. As a whole, Internet users stay more in the destination than their counterparts.

Table 14

Hypothesis 8:

There is no difference in length of stay in the destination between Internet users and Internet non-users.

	Do you use the Internet?	N	Mean	SD	t-value	d.f.	Sig. (2-tailed)
Length of stay	Yes	364	8.63	6.01	2.005	424	0.046
	No	62	7.02	4.99			

Analysis of Hypothesis 9

Hypothesis 9: There is no difference in travel-related expenditures between Internet users and Internet non-users.

Hypothesis 9.1: There is no difference in lodging expenditures between Internet users and Internet non-users.

Hypothesis 9.2: There is no difference in entertainment expenditures between Internet users and Internet non-users.

Hypothesis 9.3: There is no difference in shopping expenditures between Internet users and Internet non-users.

Hypothesis 9.4: There is no difference in transportation expenditures between Internet users and Internet non-users.

Hypothesis 9.5: There is no difference in food expenditures between Internet users and Internet non-users.

The ninth hypothesis and five sub-hypotheses tested the significant differences between spending patterns of the mature travelers who use the Internet and those who do not. Respondents were simply asked about their spending in an open-ended question. The hypotheses were evaluated by employing a t-test. The t-test comparing the mean total spending of Internet users who identified themselves as Internet users to the mean total spending of Internet non-users who identified themselves as Internet non-users found a significant difference between the means of the two groups ($t(398) = 2.028, p < .05$). The mean total expenditure of Internet users ($M = \$2,337.84, sd = \$2,112.48$) was

significantly higher than the mean total expenditure of Internet non-users ($M = \$1,738.97$, $sd = \$1,868.03$).

The results of five sub-hypotheses partially confirmed that Internet users were different from Internet non-users in spending patterns (Table 15). Hypothesis testing revealed that there was a statistically significant difference between Internet users and Internet non-users in lodging expenditures, shopping expenditures, and food expenditures. However, no significant differences were found in entertainment expenditures and transportation expenditures. Lodging expenditures for the group who use the Internet were significantly higher than the group who do not ($t(42) = 2.449$, $p < .05$). Internet users spend an average of \$806.17 on lodging, while Internet non-users spent only \$523.62. For shopping expenditures ($t(74) = 3.245$, $p < .05$), Internet users spent \$404.27 compared to the Internet non-users who spent an average of \$197.00. In addition, Internet users spent more money on food compared to those who do not use the Internet ($t(280) = 2.386$, $p < .05$). These results intuitively make sense, because Internet users spend more days in the destination than Internet non-users. On the other hand, the fact that there were no significant differences on entertainment and transportation expenditures between Internet users and Internet non-users was not as expected because it was hypothesized that Internet users would differ on entertainment and transportation spending from Internet non-users.

Table 15

Hypothesis 9 (9.1 — 9.5)

Comparison of means for total expenditures, lodging expenditures, entertainment expenditures, shopping expenditures, transportation expenditures, and food expenditures between Internet users and Internet non-users.

Expenditure	Do you use the Internet?	N	Mean	SD	t-value	d.f.	Sig. (2-tailed)
Total	Yes	342	\$2,337.84	\$2,112.48	2.028	398	0.043
	No	58	\$1,738.97	\$1,868.03			
Lodging	Yes	237	\$ 806.17	\$ 765.40	2,449	42	0.019
	No	29	\$ 523.62	\$ 560.68			
Entertainment	Yes	162	\$ 316.51	\$ 431.97	0.563	184	0.574
	No	24	\$ 264.79	\$ 326.29			
Shopping	Yes	198	\$ 404.27	\$ 604.45	3.245	74	0.002
	No	25	\$ 197.00	\$ 236.37			
Transportation	Yes	233	\$ 505.67	\$ 646.08	0.263	263	0.793
	No	32	\$ 470.47	\$1,070.01			
Food	Yes	249	\$ 399.44	\$ 354.48	2.386	280	0.018
	No	33	\$ 246.52	\$ 271.67			

Analysis of Hypothesis 10

Hypothesis 10: There is no difference in selecting type of lodging between Internet users and Internet non-users.

This hypothesis tested whether or not significant differences exist between Internet users and Internet non-users in selecting type of lodging. Respondents were simply asked to answer the question, Which of the following best describes where you stayed overnight? Table 16 contains information on the type of lodging and Internet use. As a whole, both Internet users and Internet non-users selected Hotel/Motel/B&B (54.5%) as their primary lodging type, followed by Friends/Relatives Home (20.3%)

The chi square test of independence was calculated comparing the frequency of each type of lodging for Internet users and Internet non-users. The χ^2 difference test indicated that there were significant differences (chi square (5) = 12.530, $p < .05$) in selecting lodging type between Internet users and Internet non-users. As shown in Table 16, the largest difference in selecting lodging type appears to be in Friends/Relatives Home and Condo/Time Share. Eighteen (18) percent of Internet users chose Friends/Relatives Home as their primary lodging type, while 33.3 percent of Internet non-users selected it as their primary lodging type. Almost 13 percent of Internet users used Condo/Time Share, while only 4.5 percent of Internet non-users used such a type of lodging.

Table 16

Hypothesis 10

There is no difference in selecting mode of lodging between Internet users and Internet non-users.

		Do you use the Internet?		
		Yes	No	Total
Lodging	Hotel/Motel/B&B	204 (55.6%)	32 (48.5%)	236 (54.5%)
	Friends/Relatives Home	66 (18.0%)	22 (33.3%)	88 (20.3%)
	RV or Tent	17 (4.6%)	1 (1.5%)	18 (4.2%)
	Condo/Time Share	48 (13.1%)	3 (4.5%)	51 (11.8%)
	Ship	27 (7.4%)	7 (10.6%)	34 (7.9%)
	Cabin	5 (1.4%)	1 (1.5%)	6 (1.4%)
Total		367 (100%)	66 (100%)	433 (100%)
Pearson $\chi^2 = 12.530$				
(d.f. = 5)				
Significance = .028				

Analysis of Hypothesis 11

Hypothesis 11: There is no difference in selecting type of transportation between Internet users and Internet non-users.

This hypothesis tested whether significance differences exist between Internet users and Internet non-users in selecting the mode of transportation. Respondents were simply asked to answer the question, Which of the following best describes your primary mode of transportation? Table 17 contains information on the type of transportation and Internet use. The primary mode of transportation for Internet users was Own Auto/Truck (53.7%), followed by Airplane (22.3%), Rental Car (11.4%), Ship/Boat (7.6%), and Camper/RV and Bus (2.5%). Internet non-users had a different frequency from Internet users. Almost 59 percent of Internet non-users used their own auto/truck as their primary mode of transportation, followed by Ship/Boat (12.1%), Rental Car (10.6%), Bus (9.1%), Airplane (7.6%), and Camper/RV (1.5%). As expected, the results of the χ^2 difference test indicated that there were statistically significant differences between Internet use type (Internet users vs. Internet non-users) and transportation selection (chi square (5) = 15.094, $p < .05$).

Based on this result, the primary difference of Internet users and Internet non-users appears to be in the categories of Airplane and Bus. Airplane was selected by 22.3 percent of Internet users as their primary transportation, while only 7.6 percent of Internet non-users selected it as their primary transportation. Only 2.5 percent of Internet users chose Bus as their primary transportation, while almost nine percent of Internet non-users chose it as their primary transportation.

Table 17
Hypothesis 11
There is no difference in selecting mode of lodging between Internet users and non-users.

	Do you use the Internet?		
	Yes	No	Total
Transportation Own Auto/Truck	197 (53.7%)	39 (59.1%)	236 (54.5%)
Rental Car	42 (11.4%)	7 (10.6%)	49 (11.3%)
Camper/RV	9 (2.5%)	1 (1.5%)	10 (2.3%)
Ship/Boat	28 (7.6%)	8 (12.1%)	36 (8.3%)
Airplane	82 (22.3%)	5 (7.6%)	87 (20.1%)
Bus	9 (2.5%)	6 (9.1%)	15 (3.5%)
Total	367 (100%)	66 (100%)	433 (100%)
Pearson $\chi^2 = 15.094$			
(d.f. = 5)			
Significance = .010			

Analysis of Hypothesis 12

Hypothesis 12: There is no difference in number of travel party between Internet users and Internet non-users.

Hypothesis 12.1: There is no difference in type of travel party between Internet users and Internet non-users.

The last hypothesis of the second proposition tested the significant differences between travel party of Internet users and Internet non-users. First, this study tested whether there were significant differences in the number of travel party between Internet users and Internet non-users. Respondents were simply asked to identify the number in their travel party during their last vacation trip in an open-ended style. This hypothesis was evaluated by employing a t-test. The t-test compared the average number of travel party of Internet users to the average number of travel party of Internet non-users found a significant difference between the means of the two groups ($t(70) = -2.031, p < .05$). As shown in Table 18, the average number of travel party of Internet users was 3.47 persons; the average number of travel party of Internet non-users was almost six persons. Based on this result, Internet users were more likely to travel with fewer people than Internet non-users.

This study then tested whether there were significant differences in the type of travel party between Internet users and Internet non-users. Respondents were asked to categorize themselves in one of five categories: Alone, Family members, Group tour, Couple, and Friends and relatives. The chi square test of independence was calculated comparing the frequency of each type of travel party for Internet users and Internet non-users. As expected from the previous test, the results of the χ^2 difference test indicated that there were statistically significant differences between Internet use type (Internet users vs. Internet non-users) and the type of travel party ($\chi^2(4) = 16.738, p < .05$). As shown in Table 19, both Internet users (41.8%) and Internet non-users (34.8%) mainly took the trip with their family members. The main difference appears to be in the category of Group tour, Couple, and Friends and relatives: only 3.8 percent of Internet users took the group tour, while 12.1 percent of Internet non-users took such a tour; 37.2 percent of Internet users took a trip as a couple, while 22.7 percent of Internet non-users took a trip in such a type; and only 10.4 percent of Internet users took a trip with their friends and relatives, while almost 20 percent of Internet non-users took a trip with their friends and relatives. These results were consistent with the results of hypothesis eleven and hypothesis twelve.

Table 18

Hypothesis 12

There is no difference in number of travel party between Internet users and non-users.

	Do you use the Internet?	N	Mean	SD	t-value	d.f.	Sig. (2-tailed)
# of travel party	Yes	365	3.47	4.89	-2.031	70	0.046
	No	65	5.98	9.77			

Table 19

Hypothesis 12.1

There is no difference in type of travel party between Internet users and non-users.

	Do you use the Internet?		
	Yes	No	Total
Travel party Alone	25 (6.8%)	7 (10.6%)	32 (7.4%)
Family members	153 (41.8%)	23 (34.8%)	176 (40.7%)
Group tour	14 (3.8%)	8 (12.1%)	22 (5.1%)
Couple	136 (37.2%)	15 (22.7%)	151 (35%)
Friends and relatives	38 (10.4%)	13 (19.7%)	51 (11.8%)
Total	366 (100%)	66 (100%)	432 (100%)
Pearson $\chi^2 = 16.738$			
(d.f. = 4)			
Significance = .002			

Research Question Three

- Which characteristics among demographic/socio-economic characteristics and travel-related characteristics, and Internet-related characteristics are most effective in differentiating the Internet users from Internet non-users on the basis of mature market?

One of the objectives of the present study was to identify the variables that are important for distinguishing among the groups (Internet users and Internet non-users) and to develop a procedure for predicting group membership for new cases whose group membership is undetermined. Multiple discriminant analysis is the statistical technique most commonly used to investigate this kind of problem. The objectives of multiple discriminant analysis are to understand group differences and to predict the likelihood that an entity (individual or object) will belong to a particular class or group based on several predictor variables. The concept underlying multiple discriminant analysis is fairly simple. Linear combinations of the independent, or predictor, variables are formed and serve as the basis for classifying cases into one of the groups (Norusis 1994).

The first step in multiple discriminant analysis is to select cases and variables (the dependent and the independent variables) to be included in the computations. Multiple discriminant analysis is quite sensitive to the ratio of sample size to the number of independent variables. The minimum sample size recommended for multiple discriminant analysis is five observations per independent variable (Hair, Anderson, Tatham and Black 1998). In the present study, 23 variables (resort vacation, outdoors vacation, cruise, visiting friends and relatives, festival events, shopping, sightseeing, hiking, adventure travel, eco-tourism/nature, cultural/history/heritage, food, length of stay, number of travel party, total expenditure, age, marital status, education, income, retired/working, length of computer use, have/does not have a computer in the home, using travel guides/books/magazines for travel information) were used as independent variables to discriminate between Internet users and Internet non-users (the dependent variables). Table 20 shows the output produced after all the data have been processed. The sample of 153 observations met the suggested minimum (5-to-1 ratio) for discriminant analysis by providing a 7-to-1 ratio of observations to independent variables in the analysis. Thirty-nine (39) cases were excluded from the analysis because those contained missing information for the variable that defines the groups or for any of the independent variables. The reason of using reduced sample size from original sample size (433) was to balance the sample size of each group. This could be done by randomly sampling from the larger group (Internet users — 367), thereby reducing their size to a level comparable to the smaller group (Internet non-users — 66). If the groups vary widely in size, this may impact the estimation of the discriminant function and the classification of observations (Hair, Anderson, Tatham and Black 1998).

Table 20
Case Summary

Unweighted Cases		°	N	Percent
Valid				
Do you use the Internet?	Yes		108	
	No		45	
	Total °		153	79.7
Excluded (At least one missing discriminating variable)				
Do you use the Internet?	Yes		18	
	No		21	
	Total	°	39	20.3
Total		°	192	100

Table 21 contains the means for the 23 independent variables for mature travelers who use the Internet and those who do not use the Internet, along with the corresponding standard deviations.

Table 21
Group Means and Standard Deviations for the Independent Variables

Dependent Variables	Independent Variables	Mean	Std. Deviation
Internet users	Resort vacation	1.769	0.424
	Outdoor vacation	1.889	0.316
	Adventure travel	1.926	0.263
	Cruise	1.861	0.347
	Festival events	1.898	0.304
	Hiking	1.833	0.374
	Visiting family/relatives	1.685	0.467
	Shopping	1.315	0.467
	Cultural/History/Heritage	1.556	0.499
	Eco-tourism/Nature	1.787	0.411
	Food	1.556	0.499
	Sightseeing	1.343	0.477
	Length of stay	9.213	6.326
	Total expenditure	2731.204	2516.200
	Number of travel party	3.380	5.043
	Do you have a computer in your home?	1.009	0.096
	How long have you used the computer?	8.926	5.719
	Travel guides/Books/Magazines	1.593	0.494
	Age	61.519	8.208
	Education	5.500	1.568
	Income	6.546	1.665
	Retire/Working	1.556	0.499
	Marital status	1.176	0.383
Internet non-users	Resort vacation	1.844	0.367
	Outdoor vacation	1.889	0.318
	Adventure travel	1.978	0.149
	Cruise	1.933	0.252
	Festival events	1.978	0.149
	Hiking	1.911	0.288
	Visiting family/relatives	1.556	0.503
	Shopping	1.489	0.506

°Internet non-users	Cultural/History/Heritage	1.822	0.387
°	Eco-tourism/Nature	1.933	0.252
°	Food	1.511	0.506
°	Sightseeing	1.378	0.490
°	Length of stay	7.289	5.417
°	Total expenditure	1632.444	1756.658
°	Number of travel party	5.867	9.979
°	Do you have a computer in your home?	1.667	0.477
°	How long have you used the computer?	1.800	3.616
°	Travel guides/Books/Magazines	1.778	0.420
°	Age	69.178	9.021
°	Education	4.778	1.757
°	Income	5.333	1.771
°	Retire/Working	1.222	0.420
°	Marital status	1.333	0.477

Table 22 shows the Wilks lambda and univariate ANOVA used to assess the significance between means of the independent variables for the two groups. The Wilks lambda is the ratio of the within-groups sum of squares to the total sum of squares, ranging from 0 to 1.0. Small values indicate strong group differences, and values close to 1 indicate no group differences. The F statistic is a ratio of between-groups variability to the within-groups variability. Large F values indicate greater discriminatory power. As shown in Table 22, Do you have a computer in your home? , How long have you used the computer? , Age, and Income appear to have greater discriminatory power. These tests indicate that 13 of the 23 independent variables show significant univariate differences between the two groups.

Table 22
Tests for the Equality of the Group Means

Independent Variables	Wilks' lambda	Univariate F ratio	Sig
Resort vacation	0.993	1.101	0.296
Outdoor vacation	1.000	0.000	1.000
Adventure travel	0.990	1.538	0.217
Cruise	0.990	1.592	0.209
Festival events	0.982	2.801	0.096
Hiking	0.990	1.556	0.214
Visiting family/relatives	0.985	2.342	0.128
Shopping	0.973	4.208	0.042
Cultural/History/Heritage	0.936	10.260	0.002
Eco-tourism/Nature	0.968	4.911	0.028
Food	0.998	0.250	0.618
Sightseeing	0.999	0.170	0.681
Length of stay	0.979	3.186	0.076
Total expenditure	0.955	7.121	0.008
Number of travel party	0.973	4.177	0.043
Do you have a computer in your home?	0.445	188.610	0.000
How long have you used the computer?	0.716	59.775	0.000
Travel guides/Books/Magazines	0.969	4.859	0.029
Age	0.853	26.079	0.000
Education	0.960	6.274	0.013
Income	0.903	16.232	0.000
Retire/Working	0.907	15.472	0.000
Marital status	0.970	4.632	0.033

Because the objective of this study is to determine which variables were the most efficient in discriminating between the groups, a stepwise procedure was used. The Mahalanobis D^2 measure was used in the stepwise procedure to determine the variable with the greatest power of discrimination. The overall stepwise discriminant analysis results after all the significant variables have been included in the estimation of the discriminant function were provided under Summary of Two-Group Discriminant Analysis Results. Table 23 describes the seven variables that were significant discriminators based on their Wilks' lambda and minimum Mahalanobis D^2 values. The multivariate aspects of the model were reported in Table 24. As shown in Table 24, the discriminant function is highly significant (0.000), which means that it appears unlikely that mature travelers who use the Internet and those who do not use the Internet have the same means on the discriminant function, and displays a canonical correlation of .800. Thus, 64 percent ($= .800^2$) of the variance in the dependent variable (Internet use) can be accounted for by this model, which includes only seven independent variables. Table 25

contains information on both the standardized canonical discriminant function coefficients and the unstandardized discriminant function coefficients. When variables are measured in different units, the scale of an unstandardized coefficient provides little indication of the relative contribution of the variable to the overall discrimination. By standardizing the coefficients, the relative standing of the measurements could be examined. When the sign is ignored, each discriminant coefficient represents the relative contribution of its associated variable to the function. Independent variables with relatively larger coefficients (e.g., Do you have a computer in your home? and Age) contribute more to the discriminating power of the function than do variables with smaller coefficients (e.g., Festival events). Table 26 contains information on discriminant loadings, referred to sometimes as structure correlations. Discriminant loadings measure the simple linear correlation between each independent variable and the discriminant Z score for the discriminant function, and reflect the variance that the independent variables share with the discriminant function.

According to the table, Do you have a computer in your home? , How long have you used the computer? , Age, and Income contribute more to the discriminating power of the function. Table 27 contains information on the group centroids, the average discriminant Z score for all group members. The comparison of the group centroids between the groups is used as one means of assessing overall model fit. Group centroids can be used to interpret the discriminant function results from a global or an overall perspective. The group centroid for mature travelers who use the Internet is —0.854, whereas the group centroid for mature travelers who do not use the Internet is 2.049.

Summary of Two-Group Discriminant Analysis Results

Table 23
Summary Table

Steps	Action Entered	Wilks' Lambda		Minimum D ²	
		Value	Sig.	Value	Sig.
1	Do you have a computer in your home?	0.445	0.000	5.938	0.000
2	Age	0.407	0.000	6.919	0.000
3	Shopping	0.391	0.000	7.411	0.000
4	How long have you used the computer?	0.376	0.000	7.873	0.000
5	Cultural/History/Heritage	0.370	0.000	8.102	0.000
6	Travel guides/Books/Magazines	0.365	0.000	8.279	0.000
7	Festival events	0.361	0.000	8.424	0.000

Table 24

Canonical Discriminant Functions I

Function	Eigenvalue	Percentage of Variance	Cumulative Percentage	Canonical Correlation
1	1.772	100	100	0.800

Note: The first 1 canonical discriminant function was used in the analysis.

Table 24

Canonical Discriminant Functions II

Test of Function	Wilks' Lambda	Chi-square	Degrees of Freedom	Sig.
1	0.361	150.386	7	0.000

Table 25

Canonical Discriminant Function Coefficients

Independent Variables	Standardized	Unstandardized
Festival events	0.133	0.496
Shopping	0.226	0.473
Cultural/History/Heritage	0.192	0.409
Do you have a computer in your home?	0.864	3.201
How long have you used the computer?	-0.241	-.046
Travel guides/Books/Magazines	-0.166	-.350
Age	0.333	.039
(Constant)		-7.734

Table 26
Structure Matrix^{oo}

Independent Variables	Discriminant Function Loadings:Function 1
Do you have a computer in your home?	0.840
How long have you used the computer?	-0.473
Age	0.312
Income	-0.289
Education	-0.217
Cultural/History/Heritage	0.196
Total expenditure	-0.196
Retire/Working	-0.182
Travel guides/Books/Magazines	0.135
Shopping	0.125
Festival events	0.102
Eco-tourism/Nature	0.096
Number of travel party	0.087
Adventure travel	0.060
Sightseeing	-0.050
Food	0.040
Hiking	0.039
Marital status	0.038
Outdoor vacation	0.018
Length of stay	-0.011
Resort vacation	-0.011
Visiting family/relatives	-0.004
Cruise	0.000 ^o

Table 27
Functions at Group Centroids^o

Do you use the Internet?	Function 1
Yes	-0.854
No	2.049

Table 28 contains information on the hit ratio (percentage correctly classified). The hit ratio reveals how well the discriminant function classified the objects. Correctly classified cases appear on the diagonal of the table. Of 126 cases in Internet users, 121 (96.03%) were predicted correctly to be members of Internet users, while five (3.97%) were assigned incorrectly to Internet non-users. Similarly, 47 (71.21%) out of 66 of

Internet non-users were identified correctly, and 19 (28.79%) were misclassified. The overall percentage of cases classified correctly is 87.5 percent ($= [(121 + 47)/192] * 100$). To determine whether 87.5 percent is an acceptable level of predictive accuracy, it was compared with the percentages that could be classified correctly by chance. First, the proportional chance criterion was calculated. The proportional chance criterion is very useful in cases where the sample sizes of two groups are unequal and the researcher wants to correctly identify members of each group equally well. The formula for this criterion is as follows:

$$C_{\text{PRO}} = P^2 + (1 - P)^2$$

Where

P = proportion of individuals in Internet users

$1 - P$ = proportion of individuals in Internet non-users

The calculated proportional chance value is .548 ($[(126/192)^2 + (66/192)^2 = .548]$). Second, the maximum chance criterion — another chance model — is simply the percentage correctly classified if all observations were placed in the group with the greatest probability of occurrence. Because the percentage of being classified into Internet users occurs 65.6 percent ($(126/192 * 100)$) of the time, the maximum chance criterion is 65.6 percent.

The classification accuracy of 87.5 percent is substantially higher than the proportional chance criterion of 54.8 percent and the maximum chance criterion of 65.6 percent. It also exceeds the suggested threshold of the value plus 25 percent, which in this study sets the threshold at 82 percent ($(65.6 * 1.25 = 82.0)$). Finally Press's Q statistic was calculated. Press's Q statistic is a statistical test for the discriminatory power of the classification matrix when compared with a chance model.

$$\text{Press's } Q = [N - (nK)^2 / N(K - 1)]$$

Where

N = total sample size

n = number of observations correctly classified

K = number of groups

The calculated value (108) exceeds the critical value of 6.63 at a significance level of .01. Thus, the classification accuracy exceeds at a statistically significant level the classification accuracy expected by chance.

The percentage of cases classified correctly is one indicator of the effectiveness of the discriminant function. Another index of the effectiveness of the function is the eigenvalue. The eigenvalue is simply the ratio of the between groups to within groups sum of squares. Large eigenvalue means good function. As shown in Table 4.20.2, the relatively large eigenvalue (1.772) is consistent with the results of classification.

Classification Results

°	Do you use the Internet?	Predicted Group Membership		Total
		Yes	No	
Original Count	Yes	121	5	126
	No	19	47	66
Percentage	Yes	96.03	3.97	100
	No	28.79	71.21	100

Note: 87.5% of original grouped cases correctly classified.

Table 29 summarized the interpretive measures to determine the relative importance of each independent variable in discriminating between Internet users and Internet non-users. For interpretation purposes, the discriminant loadings were used because those are considered more valid than weights. As expected, the results suggest that four variables - Do you have a computer in your home? , How long have you used the computer? , Age, and Income — are the best discriminator predictors in discriminating between Internet users and Internet non-users. In addition to these four, Education, Cultural/History/Heritage, Total expenditure, and Retired/Working showed the relatively high discriminating value. Referring to Table 4.18, Internet users were more likely to have a computer in their home, to have used the computer much longer, and were much younger, and have higher income than their counterparts.

Table 29

Summary of Interpretive Measures

Independent Variables	Standardized	Discriminant		Univariate F	
	Weights Value	Loadings Value	Rank	Ratio Value	Rank
Do you have a computer in your home?	0.864	0.840	1	188.610	1
How long have you used the computer?	-0.241	-0.473	2	59.775	2
Age	0.333	0.312	3	26.079	3
Income	NI	-0.289	4	16.232	4
Education	NI	-0.217	5	6.274	8
Cultural/History/Heritage	0.192	0.196	6	10.260	6
Total expenditure	NI	-0.196	7	7.121	7
Retired/Working	NI	-0.182	8	15.472	5
Travel guides/Books/Magazines	-0.166	0.135	9	4.859	10
Shopping	0.226	0.125	10	4.208	12
Festival events	0.133	0.102	11	2.801	15
Eco-tourism/Nature	NI	0.096	12	4.911	9
Number of travel party	NI	0.087	13	4.177	13
Adventure travel	NI	0.060	14	1.538	19
Sightseeing	NI	-0.050	15	0.170	22
Food	NI	0.040	16	0.250	21
Hiking	NI	0.039	17	1.556	18
Marital status	NI	0.038	18	4.632	11
Outdoor vacation	NI	0.018	19	0.000	23
Length of stay	NI	-0.011	20	3.186	14
Resort vacation	NI	-0.011	21	1.101	20
Visiting family/relatives	NI	-0.004	22	2.342	16
Cruise	NI	0.000	23	1.592	17

NI: Not included in the stepwise solution.

Summary of Chapter Four

Chapter Four investigated three research questions and twelve main hypotheses as well as sub-hypotheses. The first research question and the first five hypotheses were devised to deal with whether there is a difference in selected demographic and socio-economic characteristics between mature travelers who use the Internet and those who do not use the Internet. All of the hypotheses except hypothesis four were rejected by the data analysis, which means that there was a difference in age, household income, education, and occupation between Internet users and Internet non-users based on mature travelers.

As a whole, the results revealed that mature travelers who use the Internet were more likely to be younger, have higher annual household incomes, and have higher levels of education than mature travelers who do not use the Internet. The results are consistent

with the previous research identified as being related to attitudes toward computers and the Internet. In general, younger adults (Festervand, Meinert, and Vitell 1994; Miller 1996; TIA 2000) and those having higher income and educational levels (Kerschner and Hart, 1984; Festervand, Meinert, and Vitell 1994) hold significantly more positive views of the Internet when compared to their counterparts. Also, the results indicated that mature travelers who are still working are more likely to use the Internet than those who are not working. However, the test regarding the association between the two groups (Internet users and Internet non-users) and gender indicated no differences.

The second research question and hypothesis six through twelve were devised to deal with travel characteristics of mature travelers. Mature travelers who use the Internet were compared to those who do not use the Internet. Hypothesis six and nine sub-hypotheses partly confirmed that mature travelers who use the Internet are different in selecting specific types of trips from those who do not use the Internet. The results revealed mature travelers who use the Internet were more likely to select resort vacations as a pleasure trip than those who do not use the Internet, while mature travelers who do not use the Internet were more likely to choose visiting friends and relatives as a pleasure trip than those who use the Internet.

The testing of hypothesis seven indicated that Internet users were different from Internet non-users in selecting certain activities during travel. Among 21 activities, there were five which had a statistically significant association with Internet use type: cycling, festival events, shopping, cultural/history/heritage, and eco-tourism/nature. Mature travelers who use the Internet were more likely to participate in festival events, shopping, cultural/history/heritage, and eco-tourism/nature in comparison to their counterparts. Mature travelers who do not use the Internet were more likely to take part in cycling in comparison to their counterparts.

The testing of hypothesis eight through twelve including several sub-hypotheses indicated that there were significant differences in the length of stay, travel-related expenditures, the type of lodging, the type of transportation, the number in the travel party, and the type of travel party between Internet users and non-users of the mature market. The results indicated that mature travelers who use the Internet were likely to stay longer and spend more than those who do not use the Internet. Regarding the type of lodging, differences surfaced in the category of condo/time share and friends/relatives home. Thirteen (13) percent of Internet users stayed in condo/time share, while only 4.5 percent of Internet non-users stayed in condo/time share. Only 18 percent of Internet users stayed in friends/relatives home, while one-third of Internet non-users stayed in friends/relatives home. Regarding the primary mode of transportation, differences seem to be in the categories of airplane and bus. Airplane was identified as a primary mode of transportation by 22.3 percent of Internet users, while only 7.6 percent of Internet non-users identified it as a primary mode of transportation. Only 2.5 percent of Internet users chose Bus as their primary transportation, while almost 9 percent of Internet non-users chose it as their primary transportation. Hypothesis testing with regard to the travel party revealed that Internet users were more likely to travel with fewer people than Internet non-users. In addition, Internet users were more likely to travel with family members and as a couple, while Internet non-users were likely to travel with friends and relatives or as a group.

The third research question was developed to see which variables were important for distinguishing among the groups (Internet users and Internet non-users). Multiple discriminant analysis was employed to test it. To see the most efficient variable, a stepwise method was used. This analysis used 23 variables (resort vacation, outdoors vacation, cruise, visiting friends and relatives, festival events, shopping, sightseeing, hiking, adventure travel, eco-tourism/nature, cultural/history/heritage, food, length of stay, number in travel party, total expenditures, age, marital status, education, income, retired/working, length of computer use, have/does not have a computer in the home, using travel guides/books/magazines for travel information) as independent variables to discriminate between Internet users and Internet non-users (the dependent variables). The sample of 153 observations meets the suggested minimum (5-to-1 ratio) for discriminant analysis by providing a 7-to-1 ratio of observations to independent variables in the analysis.

First, the overall stepwise discriminant analysis results indicated that the seven variables were significant discriminators based on their Wilks' lambda and minimum Mahalanobis D^2 values. The discriminant function was highly significant (.000) and displayed a canonical correlation of .800. Thus, 64 percent ($= .800^2$) of the variance in the dependent variable can be accounted for by this model, which included only seven independent variables. Then, the results revealed that four variables - Do you have a computer in your home? , How long have you used the computer? , Age, and Income — are the best discriminator predictors in discriminating between Internet users and Internet non-users based on the discriminant weights, the discriminant loadings, and univariate F ratio. In addition to these four, Education, Cultural/History/Heritage, Total expenditures, and Retired/Working showed the relatively high discriminating value. Comparing Internet users to Internet non-users based on the results, Internet users were more likely to have a computer in their home, have used the computer much longer, were much younger, and have higher incomes than their counterparts. Finally, assessing the predictive accuracy of this discriminant function, the overall percentage of cases classified correctly was 87.5 percent, which is far above any classification percentage that one would expect by chance.

CHAPTER FIVE

DISCUSSION, IMPLICATION, AND CONCLUSION

Introduction

This chapter discusses the results of the study and the managerial implication of those results for tourism planning, development, and marketing. The implications for future research are mentioned, and the limitations of the study are presented. The conclusion of the study is then presented.

Findings

The main purpose of this study was to profile mature travelers on the basis of Internet use. More specifically, the intention was to examine the demographic and socio-economic characteristics of mature travelers who use the Internet, compared to those who do not use the Internet. The study also examined whether differences exist between Internet users and Internet non-users with respect to travel behavior. It investigated types of trip selected, the preferred activities participated in during the travel, length of stay, travel-related expenditures, type of lodging, type of transportation, number in the travel party, and the type of travel party in explaining the differences between Internet users and non-users of the mature market. The previous research in the areas of tourism and marketing identified that Internet users are different from Internet non-users in demographics and socio-economic characteristics and travel behavior characteristics. Research suggests that gender, age, education, income, occupation, race, and origin all influence Internet use. People who are most likely to use the Internet are male, relatively younger, more educated, holding higher levels of income, white, staying more often in commercial lodging establishments, and spending more money each day while traveling. Based on this research, the study tried to examine the difference between Internet users and Internet non-users on the basis of mature travelers.

Based on the objectives of the study, three research questions were developed: 1. What differences in demographic/socio-economic characteristics exist between Internet users and Internet non-users on the basis of mature travelers?; 2. What differences in travel-related characteristics exist between Internet users and Internet non-users on the basis of the mature market?; and 3. Which characteristics among demographic/socio-economic characteristics, travel-related characteristics, and Internet-related characteristics are most effective in differentiating Internet users from Internet non-users on the basis of mature market? In order to answer the first and second research question, twelve main hypotheses and sub-hypotheses were developed and tested. Each hypothesis was evaluated by employing the chi-square tests of independence and the t-test based on the type of question to be answered, the number of variables, and the scale of measurement of each variable.

The results of hypotheses testing regarding the demographic/socio-economic characteristics of Internet users and Internet non-users indicated that mature travelers who use the Internet differ from those who do not use the Internet in age, household income, education, and occupation. These results were consistent with and confirmed the previous research (Times Mirror 1995; Yankelovich Partners 1995; Pitkow and Kehoe 1996; Schonland and Williams 1996; Hoffman, Kalsbeek, Novak 1996; Fram and Grady 1997; Kennedy 1997; TIA 1997; Furr and Bonn 1998; Martinez 1998; Meeks 1998; Bellman, Johnson and Lohse 1999; Bonn, Furr, and Susskind 1999; Cook 1999; Taylor 1999; Weber and Roehl 1999; Bonn, Furr, and Hausman 2000; Lieb 2000) that people who are most likely to use the Internet are relatively younger, holding higher levels of income, and more educated. The results also identified that mature travelers who are still working are more likely to use the Internet than those who are not working. However, the test regarding to the association between gender and Internet use type indicated no difference. This result was inconsistent with the previous study that men dominate the on-line population (Heichler 1997) and that people who are most likely to use the Internet

are male. Further, the proportion of women among on-line surfers seems to be gradually increasing, along with the increase in the number of women entering the workforce.

The results of hypotheses testing regarding travel-related characteristics indicated that mature travelers who use the Internet differ from those who do not use the Internet in some types of trip selected, the preferred activities participated in during the travel, length of stay, travel-related expenditures, type of lodging, type of transportation, number in the travel party, and type of travel party. The result for the type of trip indicated that Internet users and Internet non-users are different from each other in selecting a resort vacation and visiting friends and relatives. Internet users are more likely to take a resort vacation, while Internet non-users are more likely to visit friends and relatives, in comparison to their counterparts. Regarding the preferred activities participated in during the travel, the results indicated that there are significant differences in taking part in cycling, festival events, shopping, cultural/history/heritage, and eco-tourism/nature activities between Internet users and Internet non-users. Internet users are more likely to participate in festival events, shopping, cultural/history/heritage, and eco-tourism/nature activities, while Internet non-users are more likely to participate in cycling than their counterparts. The results for the length of stay component indicated that Internet users stay longer than their counterparts and confirmed the previous research reported by Bonn, Furr, and Hausman (2000). Regarding the travel-related expenditures, the results revealed that Internet users are different from Internet non-users in spending on lodging, shopping, and food and indicated that Internet users are spending more money than Internet non-users on such categories. In addition, in total expenditures, Internet users are spending more money than Internet non-users. Regarding the type of lodging, the results indicated that Internet users and Internet non-users differ from each other in selecting condo/time share and friends/relatives home. Internet users are more likely to select condo/time share, while Internet non-users are more likely to choose friends/relatives home in comparison to their counterparts. Regarding the mode of transportation, the results indicated that Internet users and Internet non-users differ from one another in selecting airplane and bus. Internet users are more likely to travel by airplane, while Internet non-users are more likely to travel by bus in comparison to their counterparts. Regarding the travel party, Internet users are more likely to travel with fewer people or as a couple, while Internet non-users are more likely to travel with more people, as a group, or with friends and relatives.

The third research question was tested by employing multiple discriminant analysis. The results revealed that four variables - Do you have a computer in your home? ; How long have you used the computer? ; Age ; and Income — are the best discriminator predictors in discriminating between Internet users and Internet non-users based on the discriminant weights, the discriminant loadings, and univariate F ratio. In addition to these four, Education, Cultural/History/Heritage, Total expenditure, and Retire/Working showed the relatively high discriminating value. When comparing Internet users to Internet non-users based on the results, Internet users are younger with higher incomes, are more likely to have a computer in their home, and have used the computer much longer.

Implications for Tourism Planning and Development

Along with the rapid increase in the number of people using Internet among mature travelers, the results and knowledge gathered from this study will be of importance to travel planners, developers, and marketers who target mature travelers as their primary customer. This study will help the professionals who work in the tourism industry to develop marketing campaigns aimed at mature travelers. Also, by trying to understand and focusing on mature travelers and by promoting marketing strategies that are in the interest of mature travelers, a travel company can have a greater competitive advantage over its competitors.

The findings in the present study suggest that there are numerous differences in demographics, socio-economic characteristics, and travel characteristics between Internet users and Internet non-users among mature travelers. By understanding the differences between Internet users and Internet non-users, tourism planners and marketers can develop appropriate and effective marketing strategies for each group. A tourism company can better identify marketing strategies that appeal to mature travelers who use the Internet and to those do not by utilizing information gathered from Internet users and Internet non-users demographics, socio-economic characteristics, and travel characteristics. For example, with the knowledge that Internet users are more likely to take a resort vacation, travel with fewer people, stay for longer periods of time, and participate in such activities as shopping, festival events, and nature-oriented trips, a tourism company can develop specific resort vacation packages that will cater to these types of travelers. Such packages could be effectively marketed through Internet advertisements. This type of advertisement has the ability to offer customized travel-related information. Similarly, with information that Internet non-users are more likely to travel as a group, a tourism company can promote group tours for mature travelers who do not use the Internet and advertise through traditional distribution channels, such as brochures and travel magazines.

As a result, this study will help lay the foundation for a variety of marketing strategies aimed at the mature market. Specifically, travel destinations employing marketing strategies that utilize the Internet as a promotional medium for tourism will profit from this valuable information. The results of this study, and the conclusions that can be drawn from them, will be of importance to those marketers and planners who are looking to gain an advantage over the competition.

Implications for Future Research

Future research should address possible cultural differences in perceiving Internet use. As well as in Western countries, many consumers in Eastern countries, such as Korea, Japan, and China, use the Internet for their own sake. In this time of globalization, anyone can access and search for information which they want. It is quite possible that each culture has a different perception about Internet use. Further research investigating the perception of Internet use from different cultures needs to be conducted.

Many previous research efforts identified that mature travelers and other age groups like college students and baby boomers differ in travel behavior. In the same context, research investigating travel characteristics of different generations who use the Internet should be considered.

Limitations of the Study

The results of this study indicated and confirmed that Internet users are different from Internet non-users in demographic, socio-economic, and travel characteristics. But this study only classified mature travelers as Internet users and Internet non-users, and did not consider the level of Internet usage. As mentioned in the study by Bonn, Furr, and Hausman (2000), it is possible that the level of usage is significantly related to the characteristics profiled in this study. As a part of understanding Internet users, there is a need to further classify Internet users; for example, creating categories for heavy users, moderate users, and light users.

Another limitation was that this study only examined the respondents who identified themselves as Internet users and Internet non-users and did not further investigate those respondents who gathered information and purchased tourism-related products and services through the Internet and those who do not. By understanding the respondents who gathered information and purchased tourism-related products and services through the Internet and those who do not, a tourism company can obtain further assistance in developing and promoting destination campaigns through the Internet.

Methodologically, the sample studied may or may not be representative of the opinions of the mature market from which it was selected. Although the findings of the study may lack of a high degree of generalizability, the results still shed some light on the identification of mature travelers with respect to current changes in the market place. It is hoped that such limitations will encourage additional research for the mature market.

Conclusion

The results of this study indicated that mature travelers who use the Internet are different from those who do not in demographics, socio-economic characteristics, and travel characteristics. In general, these differences are consistent with the previous research, in which the people who use the Internet are likely to be people who are younger, have some college education, have higher income, are still working, stay longer and more often in commercial lodging establishments, and spend more money. In addition, this study further identified the differences between Internet users and Internet non-users in the type of trip selected, activities at the destination, the number in the travel party, and the type of travel party.

Destination marketers prefer to draw visitors who are capable of contributing to a greater economic impact on the destination area. A campaign that targets a potentially lucrative population, such as mature travelers, through the Internet could be utilized to extend shoulder seasons or boost off-season demand by customizing the Internet-oriented marketing campaigns to specific types (Bonn, Furr, and Hausman 2000). Even though much work remains to be done to understand the relationship between the Internet and the travel behavior of mature travelers, it is anticipated that this study will provide a good foundation.

BIBLIOGRAPHY

- AARP. (2000). Many Americans Face E-Commerce Skills Gap. <http://www.aarp.org/press/2000/nr033000.html>
- Aggarwal, G., Kehoe C., Pitkow, J., Rogers, J. D., and Sutton, K. (1999). GVU s 10th WWW User Surveys. Atlanta: Georgia State University Press.
- Alba, J., Linch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., and Wood, S. (1997). Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces. Journal of Marketing, 61 (July): 38-53.
- Ananth, Mangala., DeMicco, F. J., Moreo, P. J., and Howey, R. M. (1992). Marketplace Lodging Needs of Mature Travelers. Cornell Hotel and Restaurant Administration Quarterly, 33 (4), 12-25.
- Anderson, B., and L. Langmeyer (1982). "The Under 50 and Over 50 Travelers: A Profile of Similarities and Differences. Journal of Travel Research, 20 (Spring): 20-24.
- Andrews, J. H. (1999). Leisure Power. Planning, 65 (11): 4-7.
- Balazs, Anne L. (2000). Expenditures of Older Americans. Academy of Marketing Science, 28 (4): 543-545.
- Bellman, S., Lohse, G. L., and Johnson, E. J. (1999). Predictors of Online Buying Behavior. Communications of the ACM, 42 (12): 32-38.
- Berst, Jesse. (1998). Chasing Women on the Web. [Http://www.zdnet.com/anchordesk](http://www.zdnet.com/anchordesk)
- Bhatnager. A. (2000). On Risk, Convenience, and Internet Shopping Behavior. Communications of the ACM, 43(11): 98-105.
- Blazey, M. A. (1987). "The Differences Between Participants and Nonparticipants in a Senior Travel Program." Journal of Travel Research, 25 (Summer): 7-12.
- Bonn, M. A., Furr, H. L., and Susskind, A. M. (1999). Predicting a Behavioral Profile for pleasure Travelers on the Basis of Internet Use Segmentation. Journal of Travel Research, 37 (May): 333-340.
- Boo, E. (1990). Ecotourism: The Potentials and Pitfalls. Vol. 1. Washington, DC: World Wildlife Fund.
- Brown, T.S., Brown, J.T., and Baack, S.A. (1990). "Attitudes of the Elderly Toward Computers." The Journal of Computer Information Systems, 31: 28-33.

Burke, R. R. (1997). Do You See What I See? The Future of Virtual Shopping. Journal of the Academy of Marketing Science, 25: 352-360.

Camp, L. J., and Sirbu, M. (1997 May). Critical Issues in Internet Commerce. IEEE Communications Magazine, 58-62.

Capella, L. M., and A. J. Greco (1987). "Information Searches for Elderly Vacation Decisions" Annals of Tourism Research, 14 (2):148-51.

CommerceNet. (1999). Women Shoppers Head to the Web in Force as the Number of Internet Buyers Jumps 40% in Nine Months.

<http://www.commerce.net>

Cuba, L. (1991). "Models of Migration Decision Making Reexamined: The Destination Search of Older Migrants to Cape Cod." The Gerontologist, 31 (2): 204-9.

Deighton, J. (1997). Commentary on Exploring the Implications of the Internet for Consumer Marketing. Journal of the Academy of Marketing Science, 25: 347-351.

Dolliver, M. (2000). Tracking the Behavior of Seniors in Cyberspace. Adweek, 41 (29): 46.

Eng, P. M., and Hof, R. (1997, June 30). A Worried Wide Web. Business Week, 46.

Festervand, T. A., Meinert, D. B., and Vitell, S. J. (1994). Older Adults Attitudes Toward and Adoption of Personal Computers and Computer-Based Lifestyle Assistance. Journal of Applied Business Research, 10 (2): 13-23.

Foster, D. M., and P. Murphy (1991). "Resort Cycle Revisited: The Retirement Connection." Annals of Tourism Research, 18 (4): 553-67.

Fram, E. H., and Grady, D. B. (1997). Internet Shoppers: Is There a Surfer Gender Gap? Direct Marketing, 59 (9): 46-50.

Furlong, M. and Kearsley, G. (1986). "Computer Instruction for Older Adults," Generations, Fall: 32-34.

Gay, L. R. (1996). Educational Research: Competencies for Analysis and Application Prentice Hall Inc. 5th Edition

Gilly, M.C. and Zeithaml, V. A. (1985). "The Elderly Consumer and Adoption of Technologies." Journal of Consumer Research, 12: 353-357.

Goslar, M. (1987). "Marketing and The Adoption of Microcomputers: An Application of Diffusion Theory." Journal of the Academy of Marketing Science, 15: 42-48.

Guinn, Robert (1980). "Elderly Recreational Vehicle Tourists: Motivation for Leisure." Journal of Travel Research, 9 (summer): 9-12.

Hagan, L. A., and M. Uysal (1991). "An Examination of Motivations and Activities of Pre-retirement (50-64) and Post-retirement (65-98) Age Groups for a Touring Group" Proceedings of The Twenty-Second Annual Conference of The Travel and Tourism Research Association, Long Beach, California.

Hawes, D.K. (1987). "The Role of Marketing in Facilitating the Diffusion of Microcomputers and the Information Society." Journal of the Academy of Marketing Science, 15: 83-90.

Hawes, D. K. (1988). Travel-Related Lifestyle Profiles of Older Women. Journal of Travel Research, 27 (2): 22.

Hillebrand, M. (2000). E-Commerce Leaving Older American Behind. E-Commerce Times, March 31.

Heichler, Elizabeth. (1997). Internet Lacks Content for Women Computerworld, 31 (19): 64-65.

Hoffman, D. L., Kalsbeek, W. D., and Novak, T. P. (1996). Internet and Web Use in the U.S. Communications of the ACM, 39 (12): 36-46.

Hoffman, T. (1996). Study Finds Bank Web Sites Unreliable. Computerworld, 30 (49): 17.

Jarvenpaa, S. L., and Todd, P. S. (1997). Is There a Future for Retailing on the Internet? Electronic Marketing and the Consumer, 139-154.

Javalgi, R. G., E. G. Thomas, and S. R. Rao (1992). "Consumer Behavior in the U.S. Pleasure Travel Marketplace: An Analysis of Senior and Nonsenior Travelers" Journal of Travel Research, 30 (Fall): 14-19.

Keefe, C. (2000). New Survey on Travel Media.
<http://www.tia.org/tiaweb/press/061200poll.asp>

Kennedy, D. (1997). Who's on-line? Inc, Boston, 19 (4): 34-37.

Lawson, R. (1991). "Patterns of Tourist Expenditure and Types of Vacation Across the Family Life Cycle" Journal of Travel Research, 29 (Spring): 12-18.

Lazer, William (1985). Inside the Mature Market. American Demographics, March, 22.

Lazer, William and Shaw, E. H. (1987). How Older American Spend Their Money. American Demographics, September, 36-41.

Leiner, B. M., Cerf, V. G., Clark, D. D., Kahn, R. E., Kleinrock, L., Lynch, D. C., Postel, J., Roberts, L. G., and Wolff, S. (2000). A Brief History of The Internet. <http://www.isoc.org>

Lieux, Elizabeth M., Pamela A. Weaver, and Ken W. McCleary (1994). Lodging Preferences of the Senior Tourism Market. Annals of Tourism Research, 21 (4): 712-29.

Maddox, K. (1998). Web Advertising Tolerance Drops as Net Audience Seeks Information on Its Own. Advertising Age, <http://adage.com/interactive>

Maignan, I., and Lukas, B. A. (1997). The Nature and Social Uses of the Internet: A Qualitative Investigation. The Journal of Consumer Affairs, 31 (2): 346-371.
Mazanec, J. (1992). Classifying Tourists into Market Segments: A Neural Network Approach. Journal of Travel and Tourism Marketing, 1 (1): 35-39.

McGuire, F. A., M. Uysal, and C. McDonald (1988). "Attracting the Older Traveller." Tourism Management, 9 (2): 161-64.

McIntosh, R. W., Goeldner, C. R., and Ritchie, J. R. (1995). Tourism: Principles, Practices, Philosophies. 7th edition: 21-23.

Medina, Kurt and Migliaccio John. (2000). Marketing to the 50+ Consumer. Direct Marketing, 63 (3): 41.

Michalski, Jerry. (1995). People are the Killer App. Forbes, Jun 5.

Miller, T. E. (1996). Segmenting the Internet. American Demographics, July.

Milman, Ady. (1998). The Impact of Tourism and Travel Experience on Senior Travelers Psychological Well-being. Journal of Travel Research, 37 (2): 166-170.

Moschis, George. P. (1992). Gerontographics: A Scientific Approach to Analyzing and Targeting the Mature Market The Journal of Service Marketing, 6 (3):17.

Moschis, George. P. (1996). Life Stages of the Mature Market. American Demographics, September, 44-46.

Mott, S. (1997). Coming Soon to A Computer Near You. Credit World, 85 (5): 24-27.

Newburger, E. C. (1997). Computer Use in the United States. U.S. Census Bureau, September: 20-522.

Nichols, Judith E. (1992). Targeting Aging America. Fund Raising Management, 23 (3): 38-41.

- Noe, F. P. (1974). Leisure Lifestyles and Social Class: A Trend Analysis. Sociology and Social Research, 58: 286-294.
- Norvell, H. (1985). "Outlook for Retired/Older Traveler Market Segments." Proceedings of the Eleventh Annual Travel Outlook Forum. Washington, DC: U.S. Travel Data Center, pp. 135-43.
- Pearce, D. G. and J. M. C. Elliott. (1983). The Trip Index. Journal of Travel Research, 22: 6-9.
- Peterson, R. A., Balasubramanian, S., and Bronnenberg, B. J. (1997). Exploring the Implications of the Internet for Consumer Marketing. Journal of the Academy of Marketing Science, 25 (4): 329-346.
- Rasmusson, Erika (2000). The Age of Consumer Spending. Sales and Marketing Management, 152 (4): 16-17.
- Robinson, J. P. (1991). Quitting Time. American Demographics, May, 34-35
- Rosenfeld, Jeffrey P. (1986). "Demographics on Vacation." American Demographics, January, 38-41, 58.
- Romsa, G., and M. Blenman (1989). "Vacation Patterns of the Elderly German. Annals of Tourism Research, 16 (2): 178-88.
- Rubin, Rose M., and Nieswiadomy, Michael (1994). Expenditure Patterns of Retired and Nonretired Persons. Monthly Labor Review, 117 (4), 10-14.
- Rust, R. T. and Varki, S. (1996). Rising From the Ashes of Advertising. Journal of Business Research, 37 (November): 173-181.
- Samli, A.C. and Wills, J. (1986). "Strategies for Marketing Computers and Related Products." Industrial Marketing Management, 15: 23-32.
- Sherman, E. and Delener, N. (1987). "The Impact of Demographics on Household Personal Computer Purchasing Decisions," Journal of the Academy of Marketing Science, 15: 25-31.
- Shifflet, D. K. (1998, April 20). "Retired Road Warriors. Hotel and Motel Management, 214 (9).
- Shoemaker, S. (1989). "Segmentation of the Senior Pleasure Travel Market." Journal of Travel Research, 27 (Winter): 14-21.
- Shoemaker, S. (2000). Segmenting the Market: 10 years later Journal of Travel Research, 39 (Aug): 11-16.

- Smith, E. R. (1999). Marketing to Women on the Web. [Http://www.searchz.com](http://www.searchz.com)
- Sonnenberg, Sabine. (2000). Super Seniors. Target Marketing, 23 (9): 113-118.
- Spar, D. and Bussgang, J. (1996). The Net. Harvard Business Review, 74 (May-June): 125-133.
- Stephenson, Susie. (1996). Selling Seniors. Restaurants & Institutions, 106 (25): 78-79.
- Swartz, Leonard. N. (1999). Marketing to Maturity. Franchising World, 31 (6): 47-50.
- Taylor, Humphrey. (1999). On-Line Population Spends an Average of Six Hours on the Internet or Web per Week. Harris Poll Library, March.
http://www.louisharris.com/harris_poll/index.asp?PID=58
- TIA. (2000). How Americans Use the Travel Media.
<http://www.tia.org/Press/TravelMedia.asp>
- Timmermann, Sandra. (1999). Understanding Our Older Customers: Approaches to Segmenting the Mature Market. Journal of Financial Service Professionals, 53 (6): 32-35.
- Tongren, Hale N. (1980). "Travel Plans of the Over-65 Market Pre-and Post-retirement." Journal of Travel Research, 19 (Fall): 7-11.
- Uysal, Muzaffer, C. D. McDonald, and J. T. O Leary. (1988). Length of Stay: A Macro Analysis for Cross-Country Skiing Trips. Journal of Travel Research 26 (3): 29-31.
- Vincent, V. C., and G. de los Santos (1990). "Winter Texans: Two Segments of the Senior Travel Market." Journal of Travel Research, 29 (Summer): 9-12.
- Walle, A. H. (1996). Tourism and the Internet: Opportunities for Direct Marketing. Journal of Travel Research, 35 (Summer): 72-77.
- Webber, Karin. and Roehl, W. S. (1999). Profiling People Searching for and Purchasing Travel Products on the World Wide Web. Journal of Travel Research, 37: 291-298.
- William, P. W., Bascombe, P., Brenner, N., and Green, D. (1996). Using the Internet for Tourism Research: Information Highway or Dirt Road ? Journal of Travel Research, 34 (Spring): 63-70.
- Winslow, Joyce (1995). Modern Maturity Study Finds Fifties the Most Turbulent Decade in Life. AARP News Release, December: 1

Zimmer, Zachary, Russell E. Brayley, and Mark S. Searle (1995). "Whether to Go and Where to Go: Identification of Important Influences on Seniors' Decisions to Travel." Journal of Travel Research, 33 (fall): 3-10.

Zikmund, William G (2000). Business Research Methods The Dryden Press, 6th Edition

APPENDIX A

Survey Instrument

The cover letter and questionnaire were mailed to 2,000 mature travelers who reside in Southwest Virginia and Virginia Beach, Virginia.

COVER LETTER

Dear Vacationer:

As part of the requirements for my master degree program at Virginia Tech, I am conducting a study to help understand the mature traveler s Internet usage. The study will help the travel/tourism industry enhance its services to mature travelers in the future.

Your help will be greatly appreciated. All you need to do is fill out the enclosed questionnaire and mail it back to me. It will take approximately 10 minutes to complete the enclosed questionnaire. Please answer each question as carefully as possible, place it in the enclosed postage-paid self-addressed envelope and drop it in the mailbox near you as soon as possible. Your individual data will not be shared with. (Be kept strictly confidential)

Since only few travelers from your area will be receiving this questionnaire, your participation is really critical to the completion of this research project and my thesis.

Thank you very much for your help.

Sincerely yours,

SeongMin Cho (Joe)

Enclosures

Survey of Mature Travelers Use of the Internet

This questionnaire is about your last vacation trip. This questionnaire consists of three parts. The first part includes questions regarding your last vacation trip. The second part asks your Internet/World Wide Web Usage. And the third part relates to your demographics.

Part I — Trip Characteristics

1. Please identify the most recent vacation trip you took and check below indicating the type of trip. (Please check Others and specify if the category does not apply to you.)

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> City Trip | <input type="checkbox"/> Touring Vacation |
| <input type="checkbox"/> Cruise | <input type="checkbox"/> Resort Vacation |
| <input type="checkbox"/> Theme Park | <input type="checkbox"/> Outdoors Vacation |
| <input type="checkbox"/> Eco-tourism | <input type="checkbox"/> Visiting Friends and Relatives |
| <input type="checkbox"/> Beach | <input type="checkbox"/> Others (Specify _____) |

2. Please identify the activities that you participated in during your last vacation trip.

- | | |
|---|--|
| <input type="checkbox"/> Adventure travel | <input type="checkbox"/> Camping |
| <input type="checkbox"/> Cruise | <input type="checkbox"/> Cultural/history/heritage |
| <input type="checkbox"/> Cycling | <input type="checkbox"/> Eco-tourism/nature |
| <input type="checkbox"/> Festival events | <input type="checkbox"/> Fishing |
| <input type="checkbox"/> Fly/drive | <input type="checkbox"/> Food |
| <input type="checkbox"/> Gaming/casinos | <input type="checkbox"/> Golf |
| <input type="checkbox"/> Hiking | <input type="checkbox"/> Mountains |
| <input type="checkbox"/> Visiting family/relative | <input type="checkbox"/> Museum/theater/concert |
| <input type="checkbox"/> Shopping | <input type="checkbox"/> Sightseeing |
| <input type="checkbox"/> Skiing | <input type="checkbox"/> Sports |
| <input type="checkbox"/> Theme parks | <input type="checkbox"/> Beach |
| | <input type="checkbox"/> Others (Specify _____) |

3. As a whole, how many nights did you stay on this trip? _____

4. How much would you estimate you spent on this trip? _____

5. How much would you estimate you spent on the following categories?

- | | |
|--|---|
| <input type="checkbox"/> Lodging | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Entertainment | <input type="checkbox"/> Food |
| <input type="checkbox"/> Shopping | <input type="checkbox"/> Others (Specify _____) |

6. Which of the following best describes where you stayed overnight?

- | | |
|--|---|
| <input type="checkbox"/> Hotel/motel/B&B | <input type="checkbox"/> RV or tent |
| <input type="checkbox"/> Friends/relatives homes | <input type="checkbox"/> Condo/time share |
| <input type="checkbox"/> Ship | <input type="checkbox"/> Cabin |
| | <input type="checkbox"/> Others (Specify _____) |

7. Which of the following best describes your primary mode of transportation?

- | | |
|---|---|
| <input type="checkbox"/> Own auto/truck | <input type="checkbox"/> Airplane |
| <input type="checkbox"/> Rental car | <input type="checkbox"/> Bus |
| <input type="checkbox"/> Camper/RV | <input type="checkbox"/> Train |
| <input type="checkbox"/> Ship/boat | <input type="checkbox"/> Others (Specify _____) |

8. Counting yourself, how many people were there in your travel party on the trip? _____

9. Which of the following best describes your travel party?

- | | |
|---|---|
| <input type="checkbox"/> Alone | <input type="checkbox"/> A couple |
| <input type="checkbox"/> Family members | <input type="checkbox"/> Friends and relatives |
| <input type="checkbox"/> Group tour | <input type="checkbox"/> Others (Specify _____) |

Part II — Mature Travelers Use of the Internet

1. Do you have a computer in your house? Yes No

2. If you answered yes, then is it connected to the Internet? Yes No

3. How long have you used the computer? _____

4. Do you use the Internet and/or World Wide Web? Yes No

5. Are you willing to use the Internet and or World Wide Web? Yes No

6. How long have you been using the Internet/World Wide Web?

- | | |
|---|--|
| <input type="checkbox"/> Less than 6 months | <input type="checkbox"/> 3 to 4 years |
| <input type="checkbox"/> 6 months to less than 1 year | <input type="checkbox"/> 5 to 6 years |
| <input type="checkbox"/> 1 to 2 years | <input type="checkbox"/> More than 6 years |

7. On average, how many hours a week do you use the Internet/World Wide Web for personal reasons?

- | | |
|---|---|
| <input type="checkbox"/> 0 to 5 hours | <input type="checkbox"/> 16 to 20 hours |
| <input type="checkbox"/> 6 to 10 hours | <input type="checkbox"/> More than 20 hours |
| <input type="checkbox"/> 11 to 15 hours | |

8. How often do you use the Internet/World Wide Web for personal reasons (including gathering product and service information and/or making purchases)?

- | | |
|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> Never | <input type="checkbox"/> Often |
| <input type="checkbox"/> Seldom | <input type="checkbox"/> Very often |
| <input type="checkbox"/> Somewhat | |

9. On your most recent vacation trip, did you use the Internet to gather travel-related information? (By travel-related information, I mean things like getting information on destinations or checking prices and schedules on the Internet.) Yes No

10. On your most recent vacation trip, how much of your travel planning did you do through the Internet?

- | | |
|--|--|
| <input type="checkbox"/> All of 100% of your travel planning was done on the Internet. | |
| <input type="checkbox"/> Most or 75% | <input type="checkbox"/> Some or 25% or less |
| <input type="checkbox"/> About half or 50% | <input type="checkbox"/> None or 0% |

11. If you did not do all or any of your travel planning on the Internet during the past vacation trip, what other sources for information about destinations, prices and schedules did you use for travel planning?

- Get information calling or visiting to travel agent/agency
- Get information calling or visiting direct to airline, hotel, or other travel company
- Get information calling or visiting to a city, state, or country tourism office
- Get information from travel guides, books or magazines
- Get information from TV, radio or newspaper
- Get information from friends, family or co-workers

12. On your most recent vacation trip, did you purchase travel-related products and service through the Internet? (Booking or paying for something like an airline ticket, hotel room, rental car or package tour) Yes No
(If yes, continue, otherwise skip to Q. 17.)

13. On your most recent vacation trip, what was the amount of money you paid for travel-related products and service over the Internet?

- | | |
|---|--|
| <input type="checkbox"/> Less than \$ 100 | <input type="checkbox"/> \$ 1,000 to less than \$ 2,500 |
| <input type="checkbox"/> \$ 100 to less than \$ 250 | <input type="checkbox"/> \$ 2,500 to less than \$ 5,000 |
| <input type="checkbox"/> \$ 250 to less than \$ 500 | <input type="checkbox"/> \$ 5,000 to less than \$ 10,000 |
| <input type="checkbox"/> \$ 500 to less than \$ 1,000 | <input type="checkbox"/> \$ 10,000 or more |

14. Why did you gather and/or purchase travel-related products and/or services on the Internet? (Check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Variety of choices | <input type="checkbox"/> No pressure from sales people |
| <input type="checkbox"/> Saving time | <input type="checkbox"/> Quality of information about purchase choices |
| <input type="checkbox"/> Convenience | <input type="checkbox"/> Can access to opinions of other customers |
| <input type="checkbox"/> Lowest price | <input type="checkbox"/> Easy handling of returns or refunds |
| <input type="checkbox"/> Ease of placing orders | <input type="checkbox"/> Ease of canceling orders |
| <input type="checkbox"/> Vendor s reliability | <input type="checkbox"/> Security of sensitive information |
| <input type="checkbox"/> Easy payment procedures | <input type="checkbox"/> Others (Specify _____) |

15. On your most recent vacation trip, how many of your travel-related reservations were made through the Internet? (By travel reservations, I mean actually booking or paying for something like an airline ticket, hotel room, rental car or package tour.)

- | | |
|---|--|
| <input type="checkbox"/> All of 100% of your travel reservations were made on the Internet. | |
| <input type="checkbox"/> Most or 75% | <input type="checkbox"/> Some or 25% or less |
| <input type="checkbox"/> About half or 50% | <input type="checkbox"/> None or 0% |

16. Thinking of the most recent time you used the Internet for gathering or purchasing travel-related products and service, were you satisfied with the experience?

- | | |
|--|---|
| <input type="checkbox"/> Very satisfied | <input type="checkbox"/> Somewhat unsatisfied |
| <input type="checkbox"/> Somewhat satisfied | <input type="checkbox"/> Very unsatisfied |
| <input type="checkbox"/> Neither satisfied nor unsatisfied | |

17. Why didn't you purchase travel-related products and services on the web? (Check all that apply.)

- Never tried it
- Too complicated to place order
- Faster/easier to purchase locally
- Not familiar with vendor
- Didn't trust that my credit card number would be secure
- No receipt/documentation
- Difficult to judge the quality of a product/service
- Not enough information to make a decision
- Generally uncomfortable with the idea
- Heard it's not a reliable/secure trustworthy way to make purchase
- Had a bad experience in the past
- Didn't trust that my personal information would be kept private
- Didn't have a credit card
- Prefer to deal with people
- Difficult to find appropriate web sites
- Site didn't offer the option to purchase
- Others (Specify _____)

18. For the next vacation trip, how likely are you to use the Internet to gather and/or purchase travel-related products and services?

- | | |
|--|--|
| <input type="checkbox"/> Very likely | <input type="checkbox"/> Somewhat unlikely |
| <input type="checkbox"/> Somewhat likely | <input type="checkbox"/> Very unlikely |
| <input type="checkbox"/> Neither likely nor unlikely | |

19. How comfortable do you feel using computers, in general?

- | | |
|--|---|
| <input type="checkbox"/> Very comfortable | <input type="checkbox"/> Somewhat uncomfortable |
| <input type="checkbox"/> Somewhat comfortable | <input type="checkbox"/> Very uncomfortable |
| <input type="checkbox"/> Neither comfortable nor uncomfortable | |

20. How comfortable do you feel using the Internet?

- | | |
|--|---|
| <input type="checkbox"/> Very comfortable | <input type="checkbox"/> Somewhat uncomfortable |
| <input type="checkbox"/> Somewhat comfortable | <input type="checkbox"/> Very uncomfortable |
| <input type="checkbox"/> Neither comfortable nor uncomfortable | |

21. How satisfied are you with your current skills for using the Internet?

- Very satisfied — I can do everything that I want to do
- Somewhat satisfied — I can do most things I want to do
- Neither satisfied nor unsatisfied
- Somewhat unsatisfied — I can't do many things I would like to do
- Very unsatisfied — I can't do most things I would like to do

Part III — Demographic Characteristics

1. What is your age? _____

2. What is your sex? Male Female

3. What is your current marital status?

- | | |
|--|--|
| <input type="checkbox"/> Divorced | <input type="checkbox"/> Living with another |
| <input type="checkbox"/> Married | <input type="checkbox"/> Separated |
| <input type="checkbox"/> Single | <input type="checkbox"/> Widowed |
| <input type="checkbox"/> Never Married | <input type="checkbox"/> Others |

4. How many adults, age 18 and over, live in your household at the present time?
(Including yourself) _____

5. How many children, under age 18, live in your household at the present time? _____

6. What is the highest level of education you have completed?

- | | |
|--|---|
| <input type="checkbox"/> Grade School | <input type="checkbox"/> High School or equivalent |
| <input type="checkbox"/> Vocational/Technical School | <input type="checkbox"/> Some College |
| <input type="checkbox"/> College Graduate | <input type="checkbox"/> Master's Degree (MS) |
| <input type="checkbox"/> Doctoral Degree (PhD) | <input type="checkbox"/> Professional Degree (MD, JD, etc.) |
| <input type="checkbox"/> Others | |

7. What is your annual household income before taxes?

- | | |
|--|--|
| <input type="checkbox"/> Under \$10,000 | <input type="checkbox"/> \$ 10,000 - \$ 19,999 |
| <input type="checkbox"/> \$ 20,000 - \$ 29,999 | <input type="checkbox"/> \$ 30,000 - \$ 39,999 |
| <input type="checkbox"/> \$ 40,000 - \$ 49,999 | <input type="checkbox"/> \$50,000 - \$ 74,999 |
| <input type="checkbox"/> \$75,000 - \$ 99,999 | <input type="checkbox"/> Over \$100,000 |

8. How would you classify yourself?

- | | |
|--|---|
| <input type="checkbox"/> Caucasian/White | <input type="checkbox"/> African American |
| <input type="checkbox"/> Indigenous of Aboriginal Person | <input type="checkbox"/> Asian/Pacific Islander |
| <input type="checkbox"/> Hispanic | <input type="checkbox"/> Latino |
| <input type="checkbox"/> Multiracial | <input type="checkbox"/> Others |

9. Which of the following categories best describes the industry you primarily work in?
(Check here if you are Retired or Unemployed)

- | | |
|---|--|
| <input type="checkbox"/> Agriculture, Forestry, Fishing and Hunting | <input type="checkbox"/> Mining |
| <input type="checkbox"/> Utilities | <input type="checkbox"/> Construction |
| <input type="checkbox"/> Computer and Electronics Manufacturing | <input type="checkbox"/> Other Manufacturing |
| <input type="checkbox"/> Wholesale | <input type="checkbox"/> Retail |
| <input type="checkbox"/> Transportation and Warehousing | <input type="checkbox"/> Publishing |
| <input type="checkbox"/> Software | <input type="checkbox"/> Telecommunication |
| <input type="checkbox"/> Broadcasting | <input type="checkbox"/> Information Services |
| <input type="checkbox"/> Other Information Industry | <input type="checkbox"/> Finance and Insurance |
| <input type="checkbox"/> Real Estate, Rental and Leasing | <input type="checkbox"/> Primary/Secondary Education |
| <input type="checkbox"/> Other Education Industry | <input type="checkbox"/> Health Care |
| <input type="checkbox"/> Arts, Entertainment, and Recreation | <input type="checkbox"/> Hotel and Food Services |
| <input type="checkbox"/> Government and Public Administration | <input type="checkbox"/> Legal Services |
| <input type="checkbox"/> Scientific or Technical Services | <input type="checkbox"/> Homemaker |
| <input type="checkbox"/> Military | <input type="checkbox"/> Religious |
| <input type="checkbox"/> Others (Specify _____) | |

10. Which of the following best describes the area you live in?

- | | | |
|--------------------------------|-----------------------------------|--------------------------------|
| <input type="checkbox"/> Urban | <input type="checkbox"/> Suburban | <input type="checkbox"/> Rural |
|--------------------------------|-----------------------------------|--------------------------------|

Thank you for completing this questionnaire. Your time is appreciated.
Please send it to SeongMin Cho, Department of Hospitality and Tourism Management,
Virginia Tech, Blacksburg, VA 24061

APPENDIX B

Early Respondents versus Late Respondents

Table B. 1

t-tests of selected variables by early respondents versus late respondents

	Respondents	N	Mean	SD	t-value	d.f.	Sig. (2-tailed)
Age	Early	165	63.51	8.24	0.463	194	0.644
	Late	31	62.77	7.34	°	°	°
Nights	Early	162	8.08	5.80	-1.596	191	0.112
	Late	31	10.00	7.71	°	°	°
Expenditure - Total	Early	157	\$2,114.24	\$2,099.94	-1.423	35.09	0.163
	Late	30	\$2,901.67	\$2,887.77	°	°	°
How long have you used the computer?	Early	165	7.76	6.25	-1.384	194	0.168
	Late	31	9.48	6.89	°	°	°

Table B. 2

Chi square test of Internet use by early respondents versus late respondents

		Respondents		Total
		Early	Late	
Do you use the Internet?	Yes	142(86.1%)	30(96.8%)	172
	No	23(13.9%)	1(3.2%)	24
Total		165	31	196
Pearson $\chi^2 = 2.788$ (d.f. = 1) Significance = .135				

Early Respondents versus Late Respondents

Table B. 3

Chi square test of gender by early respondents versus late respondents

		Respondents		Total
		Early	Late	
Gender	Male	113(68.5%)	20(64.5%)	133
	Female	52(31.5%)	11(35.5%)	63
Total		165	31	196
Pearson $\chi^2 = .188$ (d.f. = 1) Significance = .664				

Table B. 4

Chi square test of education by early respondents versus late respondents

		Education				Total
		<Some college	Some college	College graduate	>Grad graduate	
Respondents	Early	17 (8.7%)	26 (13.3%)	45 (23.0%)	77 (39.3%)	165 (84.2%)
	Late	2 (1.0%)	8 (4.1%)	6 (3.1%)	15 (7.7%)	31 (15.8%)
Total		19 (9.7%)	34 (17.3%)	51 (26.0%)	92 (46.9%)	196 (100%)
Pearson $\chi^2 = 2.564$ (d.f. = 3) Significance = .464						

Early Respondents versus Late Respondents

Table B. 5

Chi square test of income by early respondents versus late respondents

		Income						Total
		< \$29,999	\$30,000- \$39,999	\$40,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	> \$100,000	
Respondents	Early	7 (4.1%)	14 (8.3%)	13 (7.7%)	45 (26.6%)	17 (10.1%)	45 (26.6%)	141 (83.4%)
	Late	0 (0.0%)	2 (1.2%)	1 (0.6%)	11 (6.5%)	3 (1.8%)	11 (6.5%)	28 (16.6%)
Total		7 (4.1%)	16 (9.5%)	14 (8.3%)	56 (33.1%)	20 (11.8%)	56 (33.1%)	169 (100%)
Pearson $\chi^2 = 3.283$ (d.f. = 5) Significance = .656								

Table B. 6

Chi square test of occupation by early respondents versus late respondents

		Respondents		Total
		Early	Late	
Occupation	Retired	86(52.1%)	16(51.6%)	102
	Working	79(47.9%)	15(48.4%)	94
Total		165	31	196
Pearson $\chi^2 = .003$ (d.f. = 1) Significance = .959				

Early Respondents versus Late Respondents

Table B. 7

Chi square test of lodging by early respondents versus late respondents

		Respondents		
		Early	Late	Total
Lodging	Hotel/Motel/B&B	90(54.5%)	15(48.4%)	105(53.6%)
	Friends/Relatives Home	45(27.3%)	4(12.9%)	49(25.0%)
	RV or Tent	5(3.0%)	2(6.5%)	7(3.6%)
	Condo/Time Share	16(9.7%)	6(19.4%)	22(11.2%)
	Ship	7(4.2%)	4(12.9%)	11(5.6%)
	Cabin	2(1.2%)	0(0.0%)	2(1.0%)
Total		165(100%)	31(100%)	196(100%)
Pearson $\chi^2 = 9.228$				
(d.f. = 5)				
Significance = .100				

Table B. 8

Chi square test of transportation by early respondents versus late respondents

		Respondents		
		Early	Late	Total
Transportation	Own Auto/Truck	100(60.6%)	16(51.6%)	116(59.2%)
	Rental Car	18(10.9%)	0(0.0%)	18(9.2%)
	Camper/RV	3(1.8%)	2(6.5%)	5(2.6%)
	Ship/Boat	9(5.5%)	4(12.9%)	13(6.6%)
	Airplane	31(18.8%)	8(25.8%)	39(19.9%)
	Bus	4(2.4%)	1(3.2%)	5(2.6%)
Total		165(100%)	31(100%)	196(100%)
Pearson $\chi^2 = 8.830$				
(d.f. = 5)				
Significance = .116				

Early Respondents versus Late Respondents

Table B. 9

Chi square test of travel party by early respondents versus late respondents

	Respondents		
	Early	Late	Total
Travel party Alone	19(11.5%)	2(6.5%)	21(10.7%)
Family members	67(40.6%)	14(45.2%)	81(41.3%)
Group tour	7(4.2%)	1(3.2%)	8(4.1%)
Couple	51(30.9%)	12(38.7%)	63(32.1%)
Friends and relatives	21(12.7%)	2(6.5%)	23(11.7%)
Total	165(100%)	31(100%)	196(100%)
Pearson $\chi^2 = 2.192$			
(d.f. = 4)			
Significance = .701			