



CONSUMERS' ONLINE PURCHASE INTENT:
AN APPLICATION OF HYBRID INTENTIONS MODEL
A CASE OF SENIOR STUDENTS IN THE ABAC SCHOOL OF MANAGEMENT

By
SANPETCH CHARTRUCKSA

A Thesis submitted in partial fulfillment
of the requirements for the degree of

Master of Business Administration

Graduate School of Business
Assumption University
Bangkok, Thailand

August 2004

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ABSTRACT

Even though the use of World Wide Web for online shopping in Thailand is still in its infancy, increasingly, Thais are shopping by using various means of electronics. In this research, the theory of planned behavior and technological acceptance model was applied to gain insight into online consumer's behavioral intention in Thailand. With new constructs, perceived ease of use and perceived usefulness were introduced to further analyze the behavior. The purpose of this study was to help predict the consumers' behavior with regard to online shopping. The systematic random sampling was used for collection of data research. The researcher utilized 380 sets of the self-administered questionnaire to collect information from the sample, which was a group of senior students who studied upper level courses in the ABAC School of Management. According to the result obtained from the analysis of data, it was found that only Attitude toward Online Purchase and Subjective Norms were the significant predictors of the respondents' online purchase intent. Other independent variables did not significantly explain the variation of the online purchase intent.

Thus, practical alternatives such as, the source credibility of social information to increase online purchase intent or designing marketing communication campaigns that raise the prestige associated with Internet shopping to increase identification should be developed and tested. Similar to the subjective norms, attitude towards online purchase intent can be managed by cultivating a positive attitude towards online purchase, for instance, creating positive site experience or evoking positive feelings during the shopper's visit so that higher intentions to purchase via Internet will be achieved.

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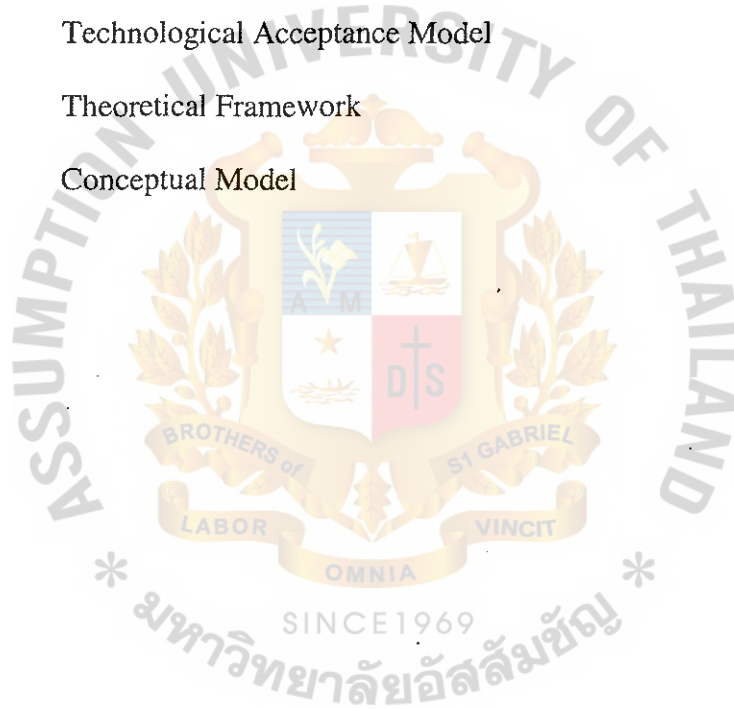
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CHAPTER 1

GENERALITIES OF THE STUDY

1. 1 Background relating to the topic and problem

Marketers were constantly searching for a “golden rule” for the use of Internet for online purchase. And why not? The future online shopping continued to look healthy in many countries (Taylor Nelson Sofres Interactive 2002). There were substantial increases in e-commerce activity in the year 2003 (Taylor Nelson Sofres Interactive 2002). Chalakornkul et al. (2002) reported that 28 million users made purchase online. 9 million of who purchased online at least once a month. 1 million users purchased online at least once a week. Business users represented 29% of the online population, with 27 million people making online purchases from work. Total online commerce in 2002 was approximately \$ 2.2 trillion. In addition, the number of Internet users would grow to 1 billion in 2005.

Forrester Research predicted that by 2004, online commerce would reach \$ 6.8 trillion. This huge amount comprised of the projection for both business-to-business and business-to-consumer transactions online. The analyst firm projected that while the United States and North America currently presided over the majority of online transactions, that would shift in the coming years as Asia nations became more active.

Tangkijvanich (1999) suggested that there would be 12 million Internet users in Thailand, which is 20 % of total population. Yet, despite the popularity and multi-functions of the Internet in many countries around the world, the penetration rate of the Internet users in Thailand was still very low; less than 2 percent of total population (Taylor Nelson Sofres Interactive 2002). The progress of e-commerce in Thailand was far behind other developed countries in the Asia pacific region such as Singapore, Taiwan, Korea, Malaysia, Japan and Australia (Taylor Nelson Sofres Interactive 2002).

The role of Internet purchase had been the focus of considerable research. Most of them tried to investigate online purchase behavior. A survey of Yahoo and ACNielsen revealed that attitudes toward online purchase among different age groups were primarily driven by product selection, comfort with online credit card use and customer service, with the youngest age group surveyed (ages 18-24) displaying higher confidence in all areas (Direct Marketing 2001). In addition, more of the Internet users intended to purchase online. In the General Social Survey, conducted in 2000, reported that people who used the Internet were more educated than those who don't. Men used Internet more than women in every age group. Moreover, searching for information on goods and services was by far the most popular activity. Security concerns influenced purchase and banking. Taylor Nelson Sofres Interactive (2002) highlighted that people are more involved in Internet purchase activities all over the world.

Besides, a mounting body of anecdotal evidence suggested that Internet was an effective communication technique for a wide range of products and services. Numerous empirical studies had attempted to explain the relationship between factors influencing Internet shopping and Internet purchase.

However, there was no report of companies, which, in real terms, had successful online businesses in Thailand. Hence, no one really knew the main factors motivating Thai consumers to buy products and services online. To be more specific, Thai online purchase intention and actual purchase have rarely been examined in the review of literature. Only few issues of Internet academic researches in Thailand were in focus such as, Internet adoption in Thailand (Tangkitvanich 1999), e-commerce in Thailand (Tangkitvanich 1998), The determinants of online shopping (e.g. Oo 2001; Kittiworakhun 2001; Sidhisoradej 2001; Pramongkit 2002), and comparative study of Thailand and US. (Muthitachareon and Palvia 2002). Consistent with this line of thinking, new paradigm of research for online purchase

should be developed. Based on considerable amount of literature, the use of conceptual frameworks (i.e., The hybrid of theory of planned behavior and technology acceptance model) and the exploration of important variables were recommended to understand more fully the conditions under which Thai consumer would perform actual online purchase or at least would intend to purchase online. This research addressed this question.

1.1.1 The Internet and Business Applications

Maeyer (1997) and Adam and colleagues (2002) specified that the Internet was the model for information highway of the future. It was relatively open, costs little, and provided information on everything imaginable. The Internet was said to be the most “democratic part of cyberspace” and was a linkage between the user and every other computer in the world, containing information on every existing subject.

Internet marketing was an increasingly important part of communication (Palumbo and Herbig, 1998). The Internet represents the new wave of technological communication that had, according to some analysts, become the next best communications medium, second only to telecommunication (Paul 1996; Adam et al., 2002). In the past, The Internet was widely used as a communication tool to promote corporate or product information to Internet users, rather than support direct sales (Hart, Doherty & Ellis-Chadwick, 2000).

The Internet presented a new paradigm for conducting business relations, and developing advertising strategies (Joines, Scherer, & Scheufele, 2003; Kotzab & Madlberger 2001; Hamill, 1997). Used properly, the Internet can be a powerful source of competitive advantage or can be undertaken to help stay competitive in global markets and an increasing number of companies were developed Internet-based strategies to support overall business development (Hamill 1997; Prescott and Slyke 1997; Adam et al. 2002; Drennan and McColl-Kennedy, 2003). The Internet was assumed to be an alternative distribution channel (Kotzab and Madlberger, 2001). Besides, Jayawardhena, Wright, and Masterson (2003)

argued that so revolutionary was the impact that it was seen not only as facilitating a new distribution channel, but also in creating a whole new marketplace where the meeting of supply and demand creates relative values in exchange. A certain number of retailers have already recognized the importance of this channel.

Over the last few years the popularity of the Internet has grown at an unbelievable rate as it changes its overall purpose from defense to commercial application (Palumbo and Herbig 1998). Commercial uses of the Net had become the fastest growing part of the World Wide Web (Hamill 1997). The world Internet economy had reached \$1 trillion in 2001 (Chalakornkul et al. 2002), and the Net represented a \$300 billion market (Paul 1996). Over 40 million companies and households around the world used the Internet as a link through e-mail, interactive advertisement, bulletin boards, research and online discussion groups, at its most basic level, the Internet served as a seemingly endless catalog of marketing messages and advertising in an interactive fashion (Korgaonkar and Wolin, 2002).

In the past, one would have to be a computer veteran to contemplate using the Internet for anything but e-mail, but today even small businesses are jumping on the bandwagon and were investing in their own personal gateway to marketing on the Internet. Marketing on the Internet had become such a strategic tool for businesses that marketing analysts have even called it a tool for “guerrilla marketing” (Tan, 1999). Even large computer software companies, like IBM, Apple, AT&T, Microsoft and Lotus Development were investing millions of dollars to develop new state-of-the-art tools and services aimed at helping companies expand electronic business through the Internet (Paul, 1996). Addyman (1994) and Rowley (1996) had summarized the resources available via the Internet as follows:

- e-mail – allowing users to send messages or files to one another
- news- to inform users of available information
- remote log in – allows users to log in remote sites

- ftp – (file transfer protocol) allows users to access and retrieve files at remote sites.

Rowley (1996) also suggested another concept underpinning the nature of information resources available on the Internet, which was:

- 1) Listservs and discussion groups
- 2) Subject databases
- 3) Community information
- 4) Government resources
- 5) Library catalogues
- 6) Commercial and business resources.

As a commercial and business resource, companies were quickly moving to use the Internet as a way of segmenting markets and doing something that ordinary promotional media cannot: reaching consumers across the country and around the world interactively and on demand (Ainscough and Luckett, 1996).

Recently, Eid and Trueman (2002) proposed that the Internet had a great impact on the marketing mix. The marketers should take into account the new factors (for instance, faster discovery of customer needs, greater customization of the product, increasing competition and standardization of prices, interactive communication with customers, high capabilities for order taking and giving information) if they wanted to strengthen their marketing effort. Consequently, a new marketing paradigm may have to be developed to explain the marketing in the electronic age (Hamill, 1997). The shifts in the marketing paradigm had urged the marketers to focus on seven directions namely: Time perspective; long-term focus, dominating-marketing function; relationship marketing, communication mode; many-to-many, value creation; information itself is value, competition base; strategic

positioning, market nature; efficient market, economic thinking; demand side (Eid and Trueman, 2002).

Thus, most companies, as observed, used the Internet to improve the marketing effort of their commercial businesses. Marketing professionals can use it to match and customize the resources of their firm to the needs of their customers (Heinen, 1996). Nowadays, marketers consider the Internet as an important medium to find new customers and continued relationships with current customers (Karakaya, 2001). It was assumed that the Internet did help marketers to get closer to their customers and add value to their products (Drennan & McColl-Kennedy, 2003).

It can be said that the Internet was also the tool used by direct marketers to help push the precision of market analysis further, and move in the direction of treating each consumer as an individual target. One recent development that might make it easier to profile customers on this basis were intelligent agents that, for example, created a profile of a customers' purchasing preferences on the basis of their previous choices and searched in an e-shopping environment. Intelligent agents can also create similar profiles of individuals' information interests, and thereby support their search for information on the Web. Product information was often delivered interactively to consumers, and consumers were sometimes prepared to participate in the personalization of these products. Search tools, and other aids assisted personalization. Through the use of the Internet, there was a better and a new sophisticated segmentation technique, which was called micro segmentation. With this method, customers were treated as individuals.

Furthermore, Kim (2002) argued that Internet shopping had been viewed as providing functional shopping, concentrating on repeat purchases and unglamorous staples such as CDs, books, towels and linens, computer hardware, and software, and most items from the supermarket or pharmacy. However, as technology improved daily, items previously thought

to be sellable only in a “touch and feel” environment (e.g. apparel, jewelry, grocery) were enjoying more widespread sales online. Cybermall was a new concept that users respond to (Palumbo and Herbig, 1998;). These virtual marketplaces consisted of individual Web sites linked under a general site. Cybermall was run much like the mall in a neighborhood. Basically, there were two types of cybermall: a) vertical, which consisted of “cyber-stores” selling the same type of product (for example, some malls had sites that sell only arts-and-crafts products), and b) horizontal, where the bookstore might be next to the jewelry store. There were numerous and widely varying predictions of the potential of doing business via the Internet, including the increasing numbers of people with Internet access, corporate websites, web spending by advertisers, and of total online shopping (Aldridge, Forcht and Pierson, 1997).

1.1.2 Internet situation in Thailand

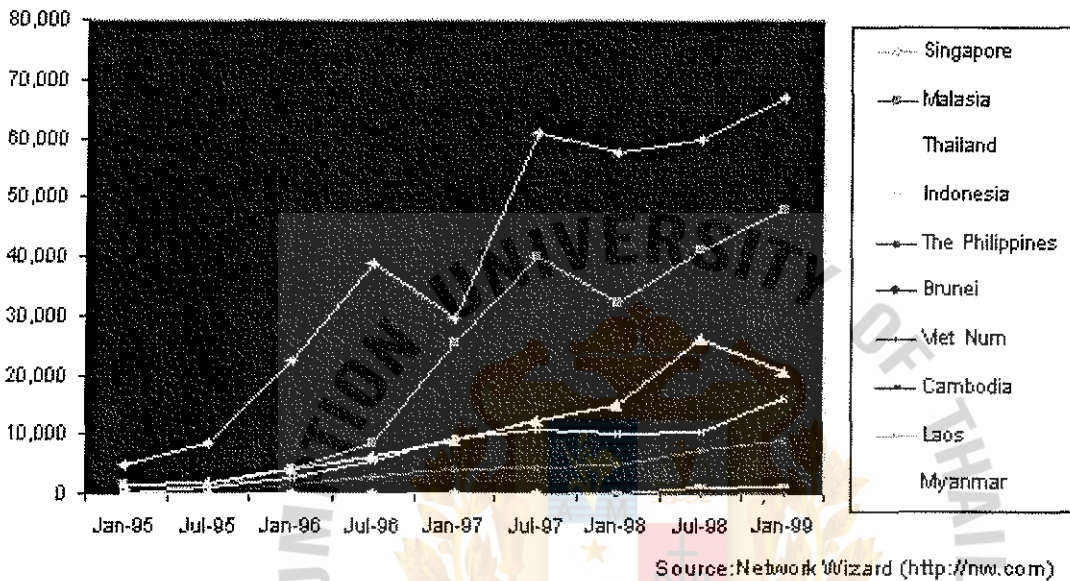
In 1999, the number of Internet users in Thailand was estimated to be around 600,000 people, which was deemed as 1% of the total population in Thailand (Tangkitwanich, 1999). According to NSO (National Statistical Office), Wekairungroj et al. (2001) revealed the imperative figure related to the internet usage in Thailand, from sampling 78,000 Thailand’s households (based on 16.1 Million households), were as follows:

- Proportion of households who have computers are 5.04%
- Proportion of households who use Internet are 3.04%
- No. of Internet users in Thailand are 5.64%
- Bangkok is the top ranked province where the proportion of households who have computers is 19%, households who use Internet is 14.66% and amount of Internet users is 16.00%

Even though the number of computer ownership was quite low (5.04%), there were a large number of the owners and users who had experienced the Internet (3.04% and 5.64%

respectively). There were about 20 percent of individual Internet users that had ever purchased online (Pramongkit et. al., 2002)

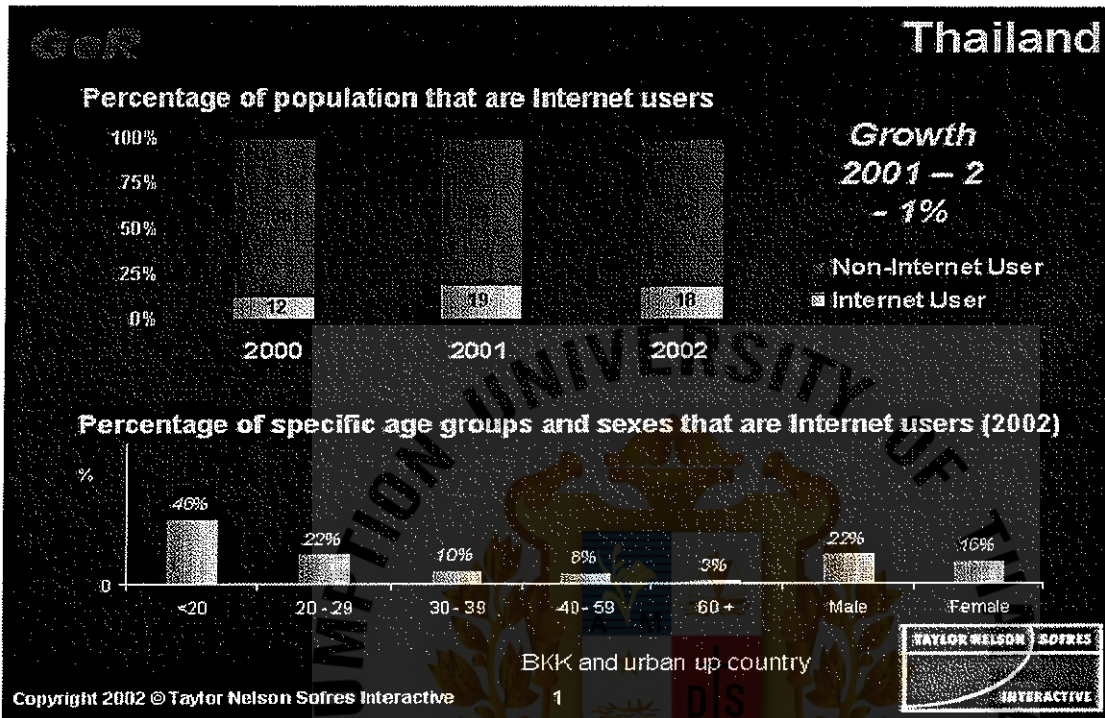
Thailand was considered as the country with moderate Internet use with one host for every 4,000-20,000 people compared with the countries with widespread Internet use such as, Singapore Malaysia, and Brunei (Digest Version focused on Thailand, 1999) (see Figure 1.1):



However, after the economic crisis in 1998, the Internet consumption rate in Thailand increased from 1999 to 2000 and 2000 to 2001 (Tangkitwanich, 1999). The survey conducted by Taylor Nelson Sofres Interactive in the year 2002 confirmed the growth rate of Internet use. The survey revealed that the percentage of total population who were Internet users had positively increased as follows: Year 2000 = 12%, Year 2001 = 19%, Year 2002 = 18% (see Figure 2). The majority of the Internet users in Thailand were male (male = 22%, female = 16%). The most popular place of use was at home. Thai Online Shoppers was approximately 3% of Internet users (See Figure 3 and 4). There were two reasons that can explain the low percentage of online purchase (Muthitachareon and Palvia, 2002). First, the Internet users might not see that the Internet could provide the discernable advantage of convenience over

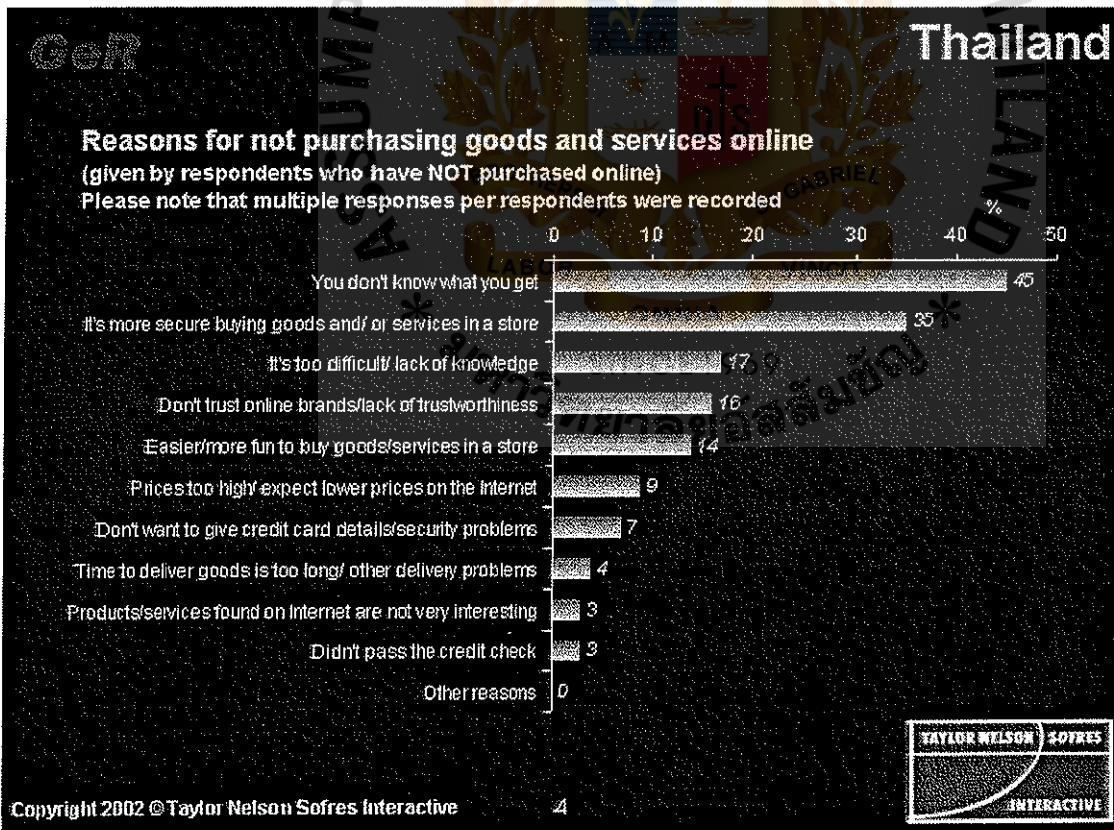
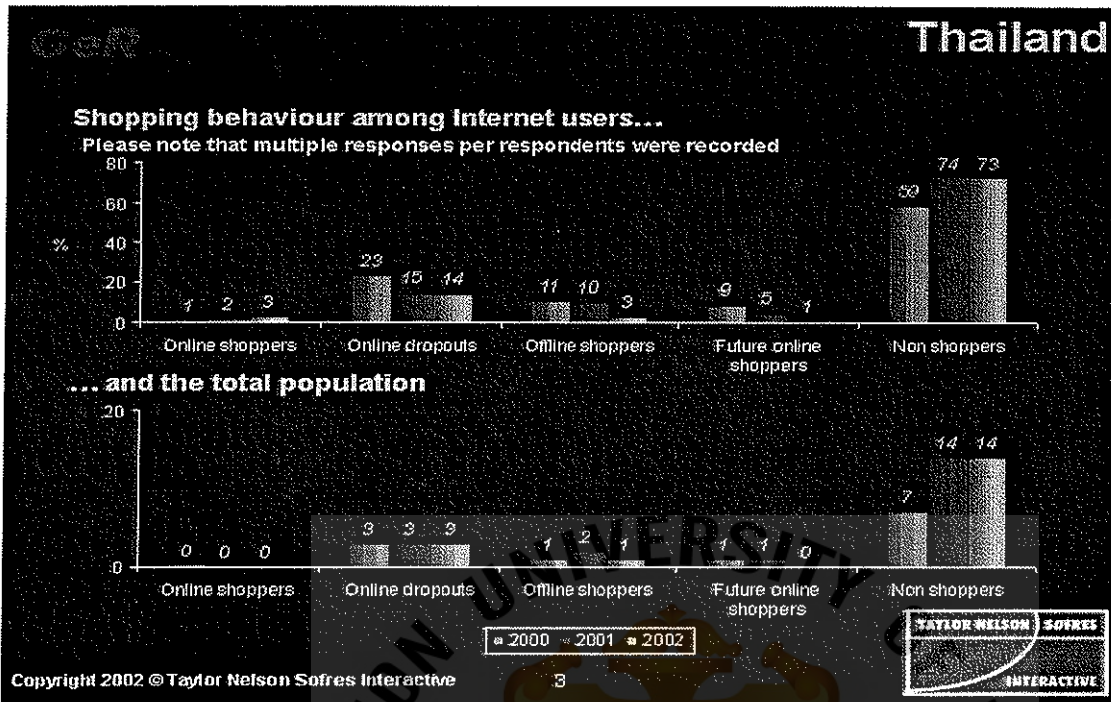
conventional stores in Thailand. And second, as the Internet shopping behavior is considered risk taking, the Internet users in Thailand were considered as less prone to risk taking.

Figure 1.2: Internet user profile



Source: Taylor Nelson Sofres Interactive (2002)

Figure 1.3 and Figure 1.4: Online shopper



Source: Taylor Nelson Sofres Interactive (2002)

In addition, Tangkitwanich (1999) attested the increase in Internet consumption rate in Thailand. The econometric model was used to predict the widespread use of the Internet. It was predicted that, in the year 2005, there would be approximately 2.78-3.21 million Internet users in Thailand, which was 4.29-4.94% of the total population. The expansion rate was about 30-40%, which was 4-5 times higher than the current number of the Internet users (See table 2.1). In this case, the amount of online shoppers in Thailand would rise up in accordance with the number of the Internet users. The result would prove that there were a lot of opportunities for the marketers to create the business and market with the Internet in the future.

Table 1.1: Growth of Internet Usage in Thailand (Year 2000-2005)

Year	2000	2001 (estimated)	2002 (estimated)	2003 (estimated)	2004 (estimated)	2005 (estimated)
Population (million)	62.41	62.91	63.43	63.96	64.49	65.02
Scenario 1: Economic expansion rate at 2% increase/ year						
No. of hosts (servers)	32,547	42,296	55,254	72,570	95,832	127,258
No. of users (person)	712,769	926,277	1,210,067	1,589,275	2,098,730	2,786,951
Rate of Usage (%)	1.14	1.47	1.91	2.48	3.25	4.29
Growth rate (%)		30.0	30.6	31.3	32.1	32.8
Scenario 2: Economic expansion rate at 4% increase/ year						
No. of hosts (servers)	32,547	42,406	55,839	74,342	100,116	136,441

No. of users (persons)	712,769	928,683	1,222,879	1,628,097	2,192,546	2,988,050
Rate of usage (%)	1.14	1.48	1.93	2.55	3.4	4.6
Growth rate (%)		30.3	31.7	33.1	34.7	36.3
Scenario 3: Economic expansion rate at 6% increase/ year						
No. of hosts (servers)	32,547	42,516	56,436	76,199	104,752	146,780
No. of users (person)	712,769	931,096	1,235,956	1,688,753	2,294,058	3,214,472
Rate of Usage (%)	1.14	1.48	1.95	2.61	3.56	4.94
Growth rate (%)		30.6	32.7	35	37.5	40.1

Source: Tangkitwanich (1999): Thailand Development and Research Institute

1.1.3. E-Commerce

E-commerce can be broadly defined as commercially purposive systems or processes of search, assessment and transactions, including post-transaction interactions, enabled and supported by information and communications technologies (Chaffey et al., 2000). In a variety of shapes and ratios, e-commerce featured physical and virtual constituents and its lifeblood were the communities of customers and suppliers interconnected and interacting to constitute markets and supply-demand chains within that network (Kinder, 2002). In order to understand more about e-commerce, other definitions should be examined. European Commission (2000) defined e-commerce as doing business electronically. It is based on the electronic processing and transmission of data, including text, sound and video. It

encompasses many diverse activities including electronic trading of goods and services, online delivery of digital content, electronic fund transfers, electronic share trading, electronic bills of lading, commercial auctions, collaborative design and engineering, online sourcing, public procurement, direct consumer marketing, and after-sales service. It involves both products (e.g. consumer goods, specialized medical equipment) and services (e.g. information services, financial and legal services); traditional activities (e.g. healthcare, education and new activities (e.g. virtual malls.)

Rayport and Jaworski (2002) formally defined electronic commerce (e-commerce) as technology-mediated exchanges between parties, individuals or organizations, as well as the electronically based intra-or interorganizational activities that facilitate the exchanges. To many people, the term e-commerce means shopping on the part of the Internet called the World Wide Web. However, e-commerce was much broader and encompassed many more business activities than just Web shopping. Rajput (2000) defined e-commerce as selling, buying, and conducting other ancillary activities through electronic channels. The ancillary activities encompassed a wide array of functions that included establishing the means to sell, establishing incentives to sell, and collaborating with staff, partners, and customers through electronic channels in an interactive and non interactive fashion. In addition, higher value items such as holidays and leisure travel had become more popular in 2002 and had contributed to the commercial growth of E-Commerce (Taylor Nelson Sofres Interactive, 2002)

Technological innovation had spawned new ways to transact business. Motivated by concerns for improvement in profitability, efficiency, speed, competitiveness, and customer relationship building, businesses had increasingly adopted technology-based systems to transact business with other businesses, private consumers and governmental agencies (Adam et al., 2002).

E-commerce had entered the realm of buzzwords associated with major industrial and business upheavals. Vijayarathy (2002) noted that electronic commerce began when digital technology was harnessed for business use in the early 1950s and had since been increasingly adopted by companies.

Of course, the technologies that enable electronic commerce had changed and improved dramatically in the past 50 years. Over this period, the breadth and depth of technology assimilation and use in businesses worldwide had also been staggering, starting with initial computing applications that were focused on supporting internal business operations, to today's networked environment that linked businesses and their customers. Universally, electronic commerce was known as the buying and selling of products and services over the Internet (Sidhisoradej, 2001).

Primarily, according to Rayport and Jaworski (2002), e-commerce systems fitted into four categories. First, business-to-business (B2B) e-commerce involved electronic transactions occurring online or via networks between different businesses. It was an e-commerce system that enabled an organization to transact with other organizations for its business activities. Business-to-business transactions accounted for most of today's e-commerce sales volume, because they generally involved high prices and large quantities. Second, business-to-consumer (B2C) e-commerce focused on direct transactions between businesses and end consumers. It was an e-commerce system that enabled an organization to sell goods and services through the Internet to public customers. Although B2C transactions were a smaller part of e-commerce than B2B transactions, they were capturing an ever-larger share of all retail sales. Third, consumer-to-consumer transactions (C2C) were of lower dollar amounts and accounted for a far smaller piece of the e-commerce pie than B2B and B2C. However, the success of eBay demonstrated that millions of people were using the Internet to

buy and sell personal items and services person-to-person. Consumer-to business transaction (C2B) was the fourth category.

In consumer-to business (C2B) transactions, the consumer, not the business, initiated and controlled the exchange. C2B transactions allowed consumers to band together for volume discounts on merchandise offered on Web sites and to post requests for items they want to purchase, so businesses can respond with specific offers.

Besides the above, Cordy (2003) identified five more possible types of e-commerce transactions based upon who initiated the transaction and the target of such exchange. They were business-to government transactions (B2G), consumer-to-government transactions (C2G), government to consumers transactions (G2C), governmental agencies to businesses transactions (G2B), and government-to-government transactions (G2G).

Despite the fall of dot.com companies in 2000, e-commerce had emerged as an entrenched part of, and in many instances the preferred way of transacting business. The Organization for Economic Cooperation and Development (OECD) forecasted global e-commerce to grow from US\$26 billion in 1997 to US \$1 trillion by 2003-2005. The OECD expected the value of e-commerce to equal 45 percent of the value of direct marketing sales in the United States by 2003-2005, and 15 percent of the value of total retail sales in the G-7 countries by the same date (Dunt and Harper, 2002). In Australia, the Australian Bureau of Statistics reported the value of e-commerce as A\$5.1 billion in 1999-2000 (Conners, 2000).

1.2 Statement of Problem

From the above, it was evident that the need existed to gauge the intentions of consumers with regard to shopping online. Both manufacturers and retailers attempted to anticipate desires and demands of consumers. The idea that consumption can be forecasted by behavioral intention held appeal for retailers. Before retailers considered investing in online stores, they needed an accurate idea of consumer trends in this market segment. It was important for the retailers to understand whether consumers accepted the online retailing format. Knowing this fact enabled the marketer to target the consumer effectively. The marketing mix and product mix for the online store can be better planned if the above facts and trends were better understood.

This study utilized the Hybrid Intention Model, which were an adaptation of Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM). Davis (1989) recommended that The Hybrid Intention Model might yield a better perspective on the determinants of Behavioral Intention. The Theory of Planned Behavior (TPB), is a theory designed to predict and explain human behavior in specific contexts. Here the context was the behavior of shopping, using the Internet as the retailing medium. The model claimed that people tended to perform behaviors that were predicted to be favorable and would avoid the ones that had an unfavorable prediction (Fishbein and Ajzen, 1975). TPB postulated that behavioral intention was the direct antecedent of the actual behavior. Behavioral Intention was defined as an individual's likelihood of engaging in the behavior of interest and it was a function of three components (1) Attitude, (2) Subjective Norm, and (3) Perceived Behavioral Control.

Technology Acceptance Model (TAM) posited two particular beliefs. Perceived usefulness and perceived ease of use were of primary relevance for computer acceptance behaviors. Perceived usefulness (U) was defined as the prospective user's subjective

probability that using a specific application system would increase his or her job performance within an organizational context. Perceived ease of use (EOU) referred to the degree to which the prospective users expected the target system to be free of effort. These are further discussed in the third chapter under conceptual framework.

1.2.1 Research Questions

A research question is the researcher's translation of the research problem into a specific needs inquiry. The following questions were posed in this study.

1. Are demographics associated with online purchase intent?
2. Are subjective norms associated with online purchase intent?
3. Is attitude toward behavior associated with online purchase intent?
4. Is perceived behavioral control associated with online purchase intent?
5. Is perceived ease of use associated with online purchase intent?
6. Is perceived usefulness associated with online purchase intent?
7. Are external variables (product types) associated with online purchase intent?

1.3 Purpose of Study

The purpose of this study was to predict the consumers' behavior in regards to online shopping. These predictions were based on the consumers' demographics and intentions. This study also identified individual demographic characteristics and other variables that distinguish those who have high intention from those who have low intention to utilize Internet Shopping. The effect of past purchases via Internet, computer expertise, hours spent online and money spent online were investigated in reference to future purchase intentions. The facilitators and inhibitors of online shopping in reference to consumers were also explored. The study concluded with an examination of the product categories and services that have the potential to be retailed online successfully.

1.3.1 Objectives

1. To investigate what demographic factors are related to online purchase intent?
2. To find relationship between important variables and behavioral intention.
3. To predict online purchase intent.

1.4 Limitations

1. The examination of behavioral intentions of shopping online was limited to the purchase of products and services; hence, it did not include the behavior of browsing for information or free use of these products and services online.
2. Because the present study was cross-sectional in nature, longitudinal trends, which would be most helpful in determining patterns with respect to consumer attitudes, behavioral intentions and so, forth, could not be identified.
3. The conceptual model may not have incorporated all relevant variables, especially other salient Internet attitudes such as Web Trust since it requires using other model such as the adoption of innovation, which is not the focus of this study.
4. The area of the research study was limited to Assumption University, thus the degree of generalization of the information beyond the specific context of study may be low.

1.5 Scope of the study

This study focused on B2C electronic commerce only. Thus, it may not be applied to B2B, or other types of electronic commerce. Online shopping via Internet was the only concern. This study concentrated on the Internet that was accessed through only personal computer – which was the most widely used method in Thailand at the moment -, regardless of location or ownership of the machine. This paper studied the behavior of Thai Internet users who were undergraduates of the business faculty at Assumption University, Bangkok, Thailand.

1.6 Significance of the Study

Internet is a relatively new retail shopping medium that affects manufacturers, retailers, and consumers. Although sales of products from the Internet accounted for only small percentage of total retail sales, millions of consumers shopped and purchased on the Internet. If Internet retailing proved to be a success and was accepted by the consumers, it would mean some changes in the way of doing business for the manufacturers and retailers. To remain competitive, these manufacturers and retailers must decide how to react to the new opportunities. Before making a large financial commitment it is important that all the implications of this change be understood. Apart from the technical support considerations, consumers' acceptance of this new technology may impact a business's success in online retailing. Online retailers would be successful only if they provided value to the consumers; hence, Internet marketers should understand the customers' expectations and intentions regarding Internet shopping. Research can help these online retailers to understand their customers, satisfy their needs and wants, and create value from them.

This research was expected to help marketers to better understand the customers' intentions concerning Internet shopping. It was hoped that the study would indicate the behavioral intentions of consumers toward Internet shopping and also identify the variables that predict behavioral intentions of consumers'.

1.7 Assumption University

Assumption University was initially originated from Assumption Commercial College in 1969 as an autonomous higher education institution under the name of Assumption School of Business. In 1972, with the approval of Ministry of Education, it was officially established as Assumption Business Administration College or ABAC. In May 1975, it was accredited

by the Ministry of University Affairs. In 1990, it was granted new status as “Assumption University” by the Ministry of University Affairs.

The University is a non-profit institution administered by the Brothers of St. Gabriel, a worldwide Catholic religious order, founded in France in 1705 by St. Louis Marie De Montfort, devoted to education and philanthropic activities. The congregation has been operating many educational institutions in Thailand since 1901.

The University is an international community of scholars, enlivened by Christian inspiration, engaged in the pursuit of truth and knowledge, serving the human society, especially through the creative use of interdisciplinary approaches and cybertechnology.

1.8 Definition of terms

Attitudes: a person’s overall evaluation of favorableness of the particular behavior (Fishbein 1976).

Behavioral intention: a plan to perform an action behavior (Fishbein 1976).

Electronic Commerce: Process of buying and selling or trading of good or service entirely or partly through electronic means, including mainly but not limited to Internet and computer network (Chaffey et al., 2000).

Electronic retailer – (E-retailer): Business organizations that do e-retailing business (Chaffey et al., 2000).

Electronic retailing – (E-retailing): Selling goods or services toward the final consumer for their personal, non-business used entirely or partly through electronic means, including mainly but not limited to Internet and computer network (Chaffey et al., 2000).

Internet: A network of computer networks. It consists of the infrastructure of network servers and communication links between them. It enables transfer of messages and transactions between connected computers and other Internet appliances, i.e. mobile phone, worldwide (Chaffey et al., 2000).

Internet user: Persons who use Internet intentionally, and regularly as part of their lifestyle.

Net: the acronym of Internet (Chaffey et al., 2000).

Online shopping: Process of purchase of products or service, entirely or partly, over electronic mediums, including Internet (Chaffey et al., 2000).

Perceived behavioral control: People's perception of the ease or difficulty of performing the behavior of interest behavior (Fishbein 1976).

Perceived ease of use (EOU) refers to the degree to which the prospective users expect the target system to be free of effort (Davis 1989).

Perceived usefulness (U) is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context (Davis 1989).

Subjective norm: consumers' perceptions of what they think other people want them to engage in the specific behavior (Fishbein 1976).

Web: the Short from of World Wide Web (Chaffey et al., 2000).

Website: The WWW page maintained by an organization or individual (Chaffey et al., 2000).

World Wide Web (WWW): A system and set of standard for storing and displaying information in a networked environment (Chaffey et al., 2000).

CHAPTER 2

LITERATURE REVIEW

2.1 Theoretical Perspective Online Purchase Intent

Perceptions about using the World Wide Web for purchasing products would lead to the formation of attitudes that influence intent to purchase products on the World Wide Web (Salisbury et. al., 2001). At this point, the related theories were delineated in order to understand how such attitudes could lead to intent to adopt an innovation such as Web shopping. In addition, based on several literature reviews, the strengths and weaknesses of each theory were discussed in order to see how well the theories could help predict and explain behavioral intention of the web shoppers.

2.1.1 Theory of Planned Behavior

Behavioral Intention

The theory of planned behavior postulated that behavioral intention was the direct antecedent of the actual behavior (B). In this study B was the intention to shop online in the next six months. Behavioral intention (BI) was defined as an individual's likelihood of engaging in the behavior of interest and was a function of three components: (a) attitude, (A_b), (b) subjective norm (SN_b), and (c) perceived behavioral control (PBC_b).

The attitudinal component of behavioral intention.

According to the model, a person's attitude towards performing a specific behavior (A_b) had an indirect relationship to behavior and was based on the summed set of underlying salient beliefs (bb_i) associated with the attitude and the evaluation (ev_i) of these beliefs by consumers. Symbolically, this could be expressed as:

$$A_b = \sum_{i=1}^n bb_i ev_i$$

where:

bb_i = belief that performing behavior B leads to consequence or outcome i

ev_i = consumer's evaluation of the outcome i

n = number of salient beliefs the person held about performing behavior B.

Subjective norm: the second component of behavior intention

The subjective norm (SN_b) represents the consumer's perceptions of what he/she thinks about what the referent wants him/her to do. It is a function of two subcomponents: the associative normative belief (nb_j), which reflect the consumer's perception of what the referent thinks about whether he/she should or should not perform behavior B; and the consumer's motivation to comply with the referent j (mc_j). These determinants of SN could be symbolically represented as:

$$SN_b = \sum_{j=1}^n nb_j mc_j$$

Where:

nb_j = normative belief

mc_j = motivation to comply with referent j

n = number of relevant referents

Perceived behavioral control: the third component of behavioral intention

Perceived control over behavior is based on the beliefs regarding the resources or opportunities an individual possesses and the obstacles or impediments he/she

anticipates. Perceived behavioral control can be determined from two subcomponents: (a) control belief (cb_k) – perceptions of obstacles or resources affecting behavior, and (b) perceived power (pp_k) – importance of these barriers or resources. Symbolically, this can be expressed as:

$$PBC_b = \prod_{k=1}^n cb_k pp_k$$

where:

cb_k = control belief

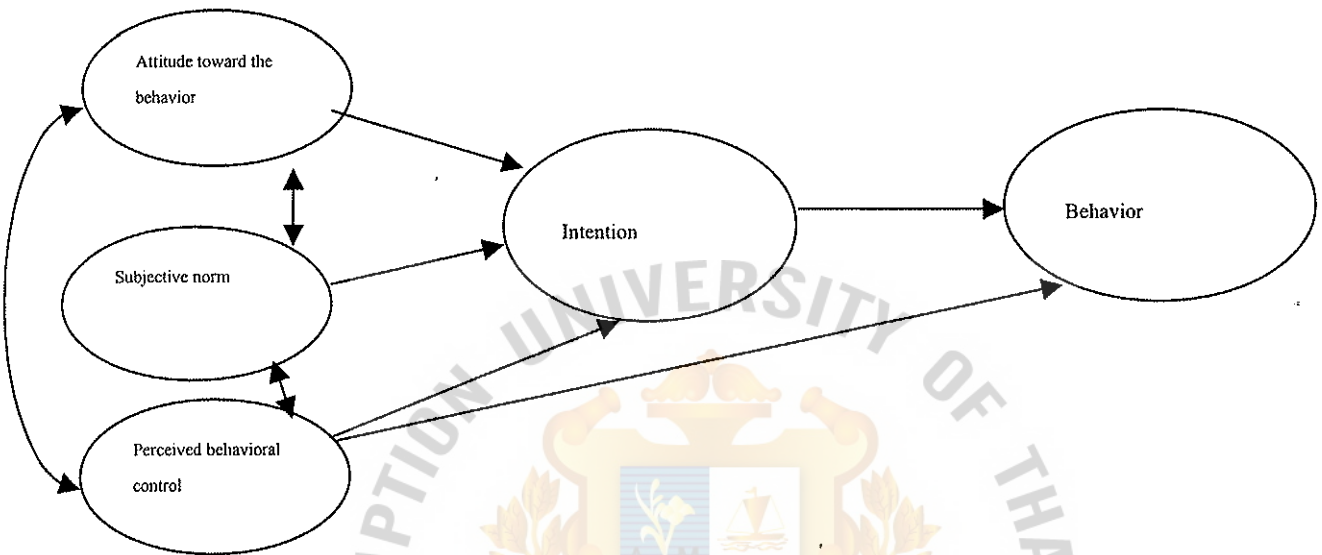
pp_k = perceived power

n = number of relevant referents.

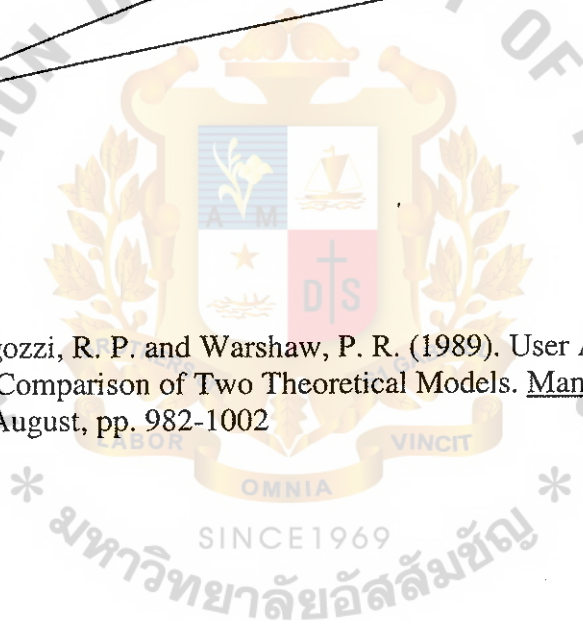
The perceived behavioral control, as the third component of behavioral intention, was added to behavioral intention because the Fishbein's model was not able to deal with behaviors over which individuals had incomplete volitional control (George 2002). The core concept of TPB, and Theory of Reasoned Action is the individual's intention to perform a given behavior. For TRA and TPB, attitude toward the target behavior and subjective norms about engaging in the behavior were thought to influence intention, but TPB included perceived behavioral control over engaging in the behavior as an additional factor influencing intention. According to TPB, an individual's performance of a certain behavior was determined by his or her intent to perform that behavior. Intent was itself informed by attitudes toward the behavior, subjective norms about engaging in the behavior, and perceptions about whether the individual was able to successfully engage in the target behavior (See Figure 2.5). According to Azjen (1985), an attitude toward a behavior was positive or negative evaluation of performing that behavior. Azjen compared perceived behavioral control

to Bandura's concept of perceived self-efficacy. As a general theory TPB did not specify the particular beliefs that are associated with any particular behavior (George 2002).

Figure 2.1: Theory of planned behavior



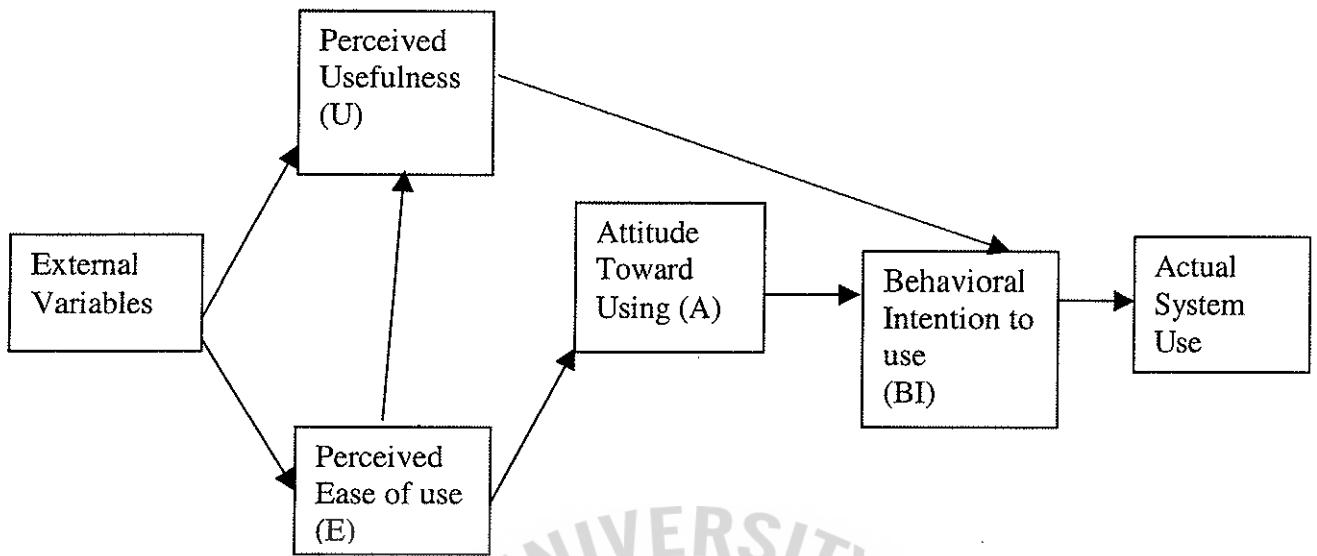
Source: Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. (1989). User Acceptance of Computer Technology: a Comparison of Two Theoretical Models. Management Science, Vol. 35 No. 8, August, pp. 982-1002



2.1.2 Technological Acceptance Model (TAM)

The Technological Acceptance Model (TAM), introduced by Davis (1986) was derived from the TRA and TPB. The theory was developed for modeling a user acceptance of information systems. It was used together with the other two theories (TRA and TPB). The goal of TAM was to provide an explanation of the determinants of computer acceptance that was general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, while at the same time, being both parsimonious and theoretically justified. Ideally, one would like a model that was helpful not only for prediction but also for explanation, so that researchers and practitioners were able to identify why a particular system may be unacceptable and pursue appropriate corrective steps. The issue of TAM, therefore, is to provide a basis for tracing the impact of external factors on internal beliefs attitudes, and intentions. TAM was formulated in an attempt to achieve these goals by identifying a small number of fundamental variables suggested by previous research dealing with the cognitive and affective determinants of computer acceptance (See Figure 2.2).

Figure 2.2: Technology Acceptance Model (TAM).



Source: Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. (1989). User Acceptance of Computer Technology: a Comparison of Two Theoretical Models. Management Science, Vol. 35 No. 8, August, pp. 982-1002

TAM posited that two particular beliefs, which were perceived usefulness and perceived ease of use, are of primary relevance for computer acceptance behavior. Perceived usefulness (U) was defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance. Perceived ease of use (EOU) referred to the degree to which the prospective user expects the target system to be free of effort. Several studies have found variables similar to these to be linked to attitudes and usage. Similar to TRA, TAM postulated that computer usage was determined by BI, but differed in that BI was viewed as being jointly determined by the person's attitude toward using the system (A) and perceived usefulness (U):

$$BI = A + U$$

According to TAM, A was jointly determined by U and EOU. EOU was also hypothesized to have a significant effect on A. TAM distinguished two basic mechanisms by which EOU influences attitudes and behavior: self-efficacy and instrumentality. This can be expressed by:

$$A = U + EOU$$

Improvements in EOU may also be instrumental, contributing to increased performance. Effort saved due to improved EOU may be redeployed, enabling a person to accomplish more work for the same effort. To the extent that increased EOU contributed to improved performance, as would be expected, EOU would have a direct effect on U:

$$U = EOU + \text{External Variables}$$

Perceived ease of use (E) was also theorized to be determined by external variables:

$$EOU = \text{External variable}$$

2.1.3 The Drawbacks of Technological Acceptance Model

Existing empirical findings on TAM are not consistent and conclusive (Moore and Benbasat, 1991) For instance, some studies indicated that PEOU has no significant impact on TA, while others found that such an impact is significant (Vankatesh & Davis, 2000). It was found that the impact of PEOU on PU is stronger than that of PEOU on TA than PU (Davis, 1989). In addition, TAM did not incorporate the subjective norm, which was a key theoretical underpinning for the original development of TAM. Some of the antecedent constructs that should be included in the model such as image, relative advantage, result demonstrability, visibility and trialability, enjoyment, and voluntariness are largely missing from the original TAM. Thus, the reliance on TAM can at times be misleading (Davis 1989).

2.2 Related Studies regarding Important Variables affecting Online Purchase

Intent

Researchers identified the factors expected to influence electronic commerce activities. The key factors which customers were concerned about and which influenced online purchase were of the online payment security system, logistic (delivery) system, variety of payment method, existing location, integrity of information, privacy of customer information, accuracy of the content, non-repudiation for record checking, comparison of price and qualification and also variety of products (Pramongkit et al 2002) as well as other factors that influence attitudes and intention to shop online (i.e., reliability, tangibility, consumer risk, product value, shopping experience).

In fact, these factors were considered in light of the variables proposed by TPB and TAM. The following are related studies concerning the factors influencing online purchase intent. Some of the studies did not use the TAM or TPB directly to explain online behavior, but its results served as the lynchpin of this current study.

Demographic

Harden (1992) investigated consumers' attitudes regarding the use of electronic shopping for apparel information search or purchase. Participants in the study felt that electronic shopping was comparatively new and might not fit their lifestyle. It was also reported that consumers considered this form of shopping as lacking relative advantages and being too complex to use. These were found to be some of the reasons for slow diffusion of this shopping method. It was not easily available to try or observe.

A study by Kunz (1997) on Internet shopping, also found the demographic differences in terms of online shopping pattern. Men were more likely to purchase via

the Internet and those who intended to shop online are likely to be young. People living in large metropolitan areas were less likely to shop online as compared to those living in suburban areas of small metropolitan populations.

McMellon, Schiffman and Sherman (1997) also conducted research on the demographics influence. They investigated the senior (over 55 years old) consumers' online behavior. The study found that the two groups of seniors, technology lovers and technology users, significantly differ in terms of need for cognition and communication. Overall tech-lovers were more likely to be enjoying the online experience and were more active online than tech-users.

Schoenbachler and Gordon (2002) also indicated that a customer's demographic profile had some influence on motivation to buy online. Demographics such as age, education, income, occupation, and household size were predictors of Internet use, online shopping. Similarly, Burroughs and Sabherwal (2002) reported that overall, the level of e-commerce activities depended on household income and educational level.

Shim et al. (2001) studied the affect of information gathering on purchase intent. It was found that intention to use the Internet to search for information significantly led to Internet purchase intention as well as strongly links other predictors (i.e., attitude toward Internet shopping, perceived behavioral control, and previous Internet purchase experience) with purchasing intention. Internet purchase intention could also be directly and indirectly related to such antecedents as attitude toward Internet shopping and previous Internet purchase experience:

Moe and Fader (2001) separated an individual customer's buying behavior in online shopping into two separate behaviors which underlie purchasing, which are visiting, and conversion from being a mere browser to an actual buyer. They state that

those shoppers who make more frequent store visits are more likely to purchase in any given visit. Those who are visiting a store at an increasingly frequent rate also have higher conversion rates than those who are showing a slow down in their visit frequencies. They also create the framework characterizing store visits by different motivations and purchase timing and result in four online shopping strategies which are directed purchase visits, search/deliberation visits, hedonic browsing visits, and knowledge building visits. Hedonic browsing visits are store visits where the shopper enjoys the process and is not necessarily looking for anything specific. Instead, these visits are inherently valuable to the shopper as browsing experiences.

However, an immediate purchase may still occur as an "impulse" depending on what the individual encountered during the visit. Knowledge-building visits were also visits where the shopper enjoyed the process itself. Attitudes toward Internet Shopping among different age groups were primarily driven by product selection, comfort with online credit card use and customer service (Yahoo Inc. and AcNielsen 2001). Consumer researchers' growing interest in consumer experiences had revealed that many consumption activities produced both hedonic and utilitarian outcomes (Babin, Darden, and Griffin 1994). People formed hedonic and utilitarian value from shopping experience. Formerly, the utilitarian aspects of the new media were important predictors of online attitude, the more immersive, hedonic aspects of the new media play at least an equal role (Mathwick 2000; Childers et al. 2001). Several variables such as navigation, convenience, and substitutability for personal examination reflect perceptions of immersive, yet it can be said that the hedonic aspect such as enjoyment is the strongest predictor of online attitudes. This brings into consideration the notion that consumer's attitudes, expectations, and preferences for interactive shopping may differ from those held in the physical retail shopping

environment for identical products. Consumers may, in general, expect to find more enjoyment in interactive environments than they did when shopping in a physical environment. Koufaris (2002) examined how emotional and cognitive responses to visiting a Web-based store for the first time can influence online consumers' intention to return and their likelihood to make unplanned purchases. The results showed that enjoyment of the shopping experience.

A study of Korgaonkar and Wolin (2002) stressed how the attitude toward the web was formed and how it influenced web purchasing. The results suggested that consumer usage patterns of the Web (i.e. heavy, medium, and light Web users) be significantly related to Web advertising beliefs, attitudes toward Web advertising, shopping patterns, Web purchasing, and demographics. In sum, linking the study's results to the hierarchy of effects model suggested that, compared with lighter users, heavier users had stronger beliefs in terms of Web advertising's honesty, entertainment value, and informativeness and found Web advertising harder to understand and for more objectionable products. These beliefs likely lead to more positive attitude toward Web advertising, which in turn lead to more frequent Web purchasing, and higher dollars spent on these purchases. So, heavier users held stronger beliefs about and attitudes toward Web advertising, which likely lead to stronger purchase intent.

In addition, Harden also attested that Electronic online in-home shopping was not much discussed in the participants' social system. It implied that people in the social system might not approve the behavior of using online shopping to shop. This was the concept regarding subjective norms in TPB.

Web skills and positive challenges were positively related with shopping enjoyment and concentration of online consumers. The more confidence and

comfortable consumers felt with the Web site, the more likely it was that they would enjoy it (Koufaris, 2002).

La Rose and Eastin (2002) argued more on how comfortable and confident consumers feel with the Web site. They also labeled the concept as self-efficacy, which was also a significant predictor of online shopping behavior. Moreover, consumers who were familiar with computers, and seasoned Internet users often spearheaded the adoption of e-commerce. Some of them may even act as initiators. These findings agreed with discussions of Goldsmith (2002) that consumers who were more innovative and adventuresome and who wanted to try new types of technology, were the ones most likely to engage in e-commerce. In addition, compared to Internet users, non-users showed an aversion to technology (Trocchia and Janda 2000).

The causal analysis from Salisbury, Pearson, and Miller (2001) indicated that increased levels of perceived Web security would lead to greater intent to purchase products on the Web. They found that security is the driving influence in purchasing products on the Web. Customers would shop on the World Wide Web only if they feel that their credit card numbers and other sensitive information are safe, regardless of the objective security of the Web site. The incidents such as coverage of these issues by media sources, as well as negative online experiences, may decrease consumer confidence by highlighting the potential risks involved in online shopping and, thus, deter Internet users from making online purchases. Another research from Saban, McGivern, and Saykiewicz (2002) showed that even the weakest form of cybercrime can reduce the informational value of the Internet, repeat online purchases, thus eroding the attractiveness of the Internet as a viable marketing channel. Similarly, Burroughs and Sabherwal (2002) reported that overall, the level of e-commerce activities depended on by perceptions of Internet security

Yang and Jun (2002) attempted to address the influential online service quality attributes that achieved high levels of overall service quality perceived by Internet purchasers and nonpurchasers. They identified security as underlying service quality attributes perceived by Internet Purchasers as well as Internet non-purchasers. The two groups shared much common ground, considering the dimensions security. Both Internet purchasers and Internet non-purchasers required online companies with the ability to perform the promised service accurately and in a timely manner. They appeared to be worried about the risk associated with online purchase, especially with respect to secure credit card transactions and privacy of sensitive information. Trustfulness of Internet retailers was also a concern. Online shoppers are concerned about Web sites that don't provide clear and prominent statements about privacy and security matters. Lynch, Kent, and Srinivasan (2001) suggested that site quality, trust and positive effect toward it were critical factors that importantly influenced both the purchase intentions and loyalty of visitors to the site. Similarly, George (2002) and Gefen (2002) asserted that the trustworthiness of the Internet were associated with positive attitude toward Internet purchasing and strongly induced the intent to purchase. Kimery and McCord (2002) confirmed the importance of consumer trust for supporting the initial decision to purchase from an unfamiliar e-retailer.

Then, consumer's site commitment should be another factor that significantly influenced the actual purchase behavior (Park and Kim 2003). It was determined by information satisfaction and relational benefit (long-term benefit such as, the sense of reduced anxiety, trust, and confidence that customers experience. Information quality, user interface quality, and security perceptions instigated information satisfaction and relational benefit. Perceived security was a greater influence on intent to purchase using the Web than was the ease and utility of purchasing product (Salisbury et al.

2001). In sum, Trust is the antecedent of consumers' site commitment which indirectly affected online purchase intent.

Schoenbachler and Gordon (2002) also added that the multi-channel marketers with a retail presence were more attractive to customers because they had the five features Internet shoppers seek. The five features were the trust that the site would keep personal information private, a secure environment to purchase products that the site offered, the technical reliability of the site, the current of the content, and the timeliness of the delivery of the products ordered.

According to Kunz (1997): If consumers perceived the medium will 1) save them time, 2) be convenient to use/patronize, 3) provide merchandise with good value for the price and 4) merchandise of good quality, 5) involve low risk, 6) provide customer satisfaction, while 7) offering credit accounts and accepting charge cards, they will be more likely to choose that alternative shopping medium. In other words, consumers would shop online if they perceived the alternative shopping medium as easy, useful and controllable.

In a study by Morganorsky and Cude (2000), it was reported that convenience and saving time were the primary reasons for buying groceries online. The respondents commented that the real time savings was a result of not traveling to and from the store, rather than a decrease in shopping time. Shoppers who browsed and/or purchased on the Internet differed in their use of multi-channel options related to their perceptions of convenience (Kaufman-Scarborough and Lindquist 2003). The degree of convenience was subject to considerable reservations such as slowness, unreliability and after care (Dennis, Harris, and Sandhu 2002). The convenience factors discussed in various studies here also implied that perceived ease of use and usefulness were important factors influencing online purchase intent.

Burroughs and Sabherwal (2002) also reported that overall, the level of e-commerce activities depended on Internet use and Internet search, as well as the perceived quality of web vendors' sales processes.

Begin and Boisvert (2002) studied the factors influencing e-commerce activities at the individual level. They found out that what influenced the introduction of electronic commerce were individuals who reacted according to their perceptions of changes, together with their training, competencies and experience. That was, if consumers perceived electronic commerce or new information and communications technologies as a way of easing their shopping tasks, or as an opportunity to perform more interesting activities, they would more readily give their support and contribute positively to the changes.

In addition, Koufaris (2002) suggested that perceived usefulness of the Web site are important for a new customer's intention to return. The results obtained from these aforementioned studies also addressed the issue of perceived ease of use and usefulness.

The following studies also contributed to our review of literature. These studies could be linked to such variables focused in this study as demographics, attitude toward online purchase, subjective norms, perceived behavioral control, perceived ease of use and perceived usefulness.

A study conducted by the Brigham Young University Marriott School of Management ("Study profiles," 2001) profiled the shopping behavior of eight online consumer types: Shopping Lovers, Adventurous Explorers, Suspicious Learners, Business Users, Fearful Browsers, Shopping Avoiders, Technology Muddlers, and Fun Seekers. Shopping Lovers were people who shopped online frequently and told others about their experiences. Adventurous Explorers were people who found online

Business Users, Fearful Browsers, Shopping Avoiders, Technology Muddlers, and Fun Seekers. Shopping Lovers were people who shopped online frequently and told others about their experiences. Adventurous Explorers were people who found online shopping fun but could be more cultivated by merchants. Suspicious Learners were Web users who were open to online shopping, but whose lack of computer skills may inhibit them from carrying through. Business Users were highly computer literate professionals who used the Web for business and not for other activities such as shopping. They did not view online shopping as novel and were not usually champions of the practice. Fearful Browsers were people who know how to use the Web and shopping sites but had concerns about business practices such as credit card security, shipping and customer complaints. Shopping Avoiders had an appealing income level, but they did not like to wait for products to be shipped to them, and they favored seeing merchandise in person before buying. Technology Muddlers were people who, due to lower computer literacy, spent less time than any other segment online and showed little excitement about increasing their online comfort level. Fun Seekers were people who used the Web for entertainment but not for purchasing because of security and privacy issues and a relatively low income level. Online shoppers that represented the best opportunity for e-tailers include Shopping Lovers, Adventurous Explorers, and Suspicious Learners. Of the eight, Fearful Browsers represent the largest untapped opportunity for e-tailers to win online shopping converts, while Technology Muddlers and Fun Seekers should probably be avoided. In order to gain more insight of online shoppers, Kau, Tang, and Ghose (2003) introduced six clusters of online shoppers as follows: 1) On-off shopper, 2) Comparison shopper, 3) Traditional shopper, 4) Dual shopper, 5) e-Laggard, and 6) Information surfer. These clusters were developed based on gathering demographic

and psychographic information and they projected the holistic view of Internet users and shoppers. Their online shopping attitudes were varied by key variables such as navigation expertise and purchase experience. The clusters also differed in views about the physical product, including issues such as warranty, security, ability to feel and touch, and so on.

Wolfenbarger and Gilly (2001) claimed that both online and offline consumers shop differently depending on whether their motivations for searching are primarily experiential or goal directed, which were considered as functional or non-functional motives (Parsons 2002). Experiential behavior was especially likely in categories where shoppers had an ongoing, hobby-type interest. Their higher playfulness associated with experiential behavior resulted in a more positive mood, greater shopping satisfaction, and a higher likelihood of impulse purchasing compared to goal-focused shopping. Goal-oriented or utilitarian shopping had been described as task-oriented, efficient, rational, and deliberate. Goal-focused shoppers were transaction-oriented and desired to purchase what they want quickly and without distraction. These time-starved consumers were especially likely to be online shoppers. Goal-oriented shoppers were interested in e-tailing because of four specific attributes, which were convenience and accessibility, selection, availability of information, and lack of sociality. Importantly, shoppers frequently and explicitly associated these goal-oriented attributes with increased freedom and control.

However, Koufaris (2002) argued that online consumers were not purely utilitarian or goal-oriented, valuing only efficiency in shopping, but they can also enjoy shopping online enough to make them return. In conjunction with this research, Joines, Secherer, and Scheufele (2003) introduced motivational factors, which helped predict online shopping behavior as follows: 1) transactional privacy concerns, 2)

were found to be negatively related to percentage of time spent on product searches and online shopping, while economic motivations had a positive influence.

Ward and Lee (2000) explored the usefulness of branding on the World Wide Web. The results suggested that branding would encourage the consumers to accept Internet shopping. Balabanis and Reynolds (2001) and Schoenbachler and Gordon, (2002) examined online shopping sites set up by bricks-and-mortar retailers. Balabanis and Reynolds (2001) confirmed the influence of existing brand attitudes on the attitude formation of online shoppers. They found that consumers were biased in their assessment of web sites. Consumers were more comfortable with organizations that had strong off-line brands that they already knew and trust. Therefore, prior attitudes of consumers towards a brand would transfer into attitudes towards the web site associated with that brand. This study provided reassurance to multi-channel retailers who competed with an ever increasing number of e-brands.

Hence, more research was needed not only to examine the Internet's role and effectiveness as a new marketing medium, but also to study consumer behavior arising as a result of the change from in-store to virtual shopping.

2.3 Electronic Retailing

2.3.1 Historical Review

Electronic retailing involves the selling of goods and services to the consumer market via the Internet. Electronic retailing is also called e-tailing or e-retailing. According to Westland and Clark (1999), businesses began experimenting with selling goods and services over the Internet in 1994. Since then, a very large number of commercial web sites have emerged, but only few made money. In 1997, only nine percent of retail sites could process transactions online, and while over half of Internet users browsed the Internet in reaching a purchase decision, only 15 percent eventually

percent of retail sites could process transactions online, and while over half of Internet users browsed the Internet in reaching a purchase decision, only 15 percent eventually bought on-line. Moreover, two-thirds of potential buyers who got as far as putting items in a virtual shopping cart abandoned the process before checking out. Consequently, retail electronic commerce sites often failed to achieve a critical goal, which was retail electronic purchasing, despite a high volume of traffic.

Schneider and Perry (2000) claim that 1998 was the year e-commerce mainstreamed with a record-breaking \$13 billion in online revenues for North America retailers. The top ten publicly traded retailers, which accounted for half of the online revenues, grew 160 percent in 1998 and the revenue-per-order increased from \$216 in 1997 to \$629 (Burroughs and Sabherwal, 2002). In that year, Amazon.com broke through all slow retail periods and continued to grow at an amazing rate. Traditional retail establishments like the Gap, Sears, Macy's, Kmart, and Toys 'R' Us joined catalog companies like Lands' End with promotional attractions and creative Web sites to lure new Internet consumers and convince shoppers to return and spend even more of their holiday budgets online. Consumer confidence in the interactive media marketplace had surged since then. In 2000, Forrester Research had estimated Internet sales to be more than double that of 1999, \$45 billion, and overall retail sales in the U.S. totaled \$13 trillion (Wolfenbarger and Gilly, 2001). Also in this year, more than 50 percent of all U.S. households shopped over the Internet (Schneider and Perry, 2000).

However, beginning in April 2000, many new ventures in electronic commerce failed. They had seen their market valuations fall as investors had lost faith in the attractiveness of the market. Troubled with a lack of profitability, many retailers, such as valueamerica.com, pets.com, living.com and furniture.com, were forced to

Nowadays, e-tailing is a market practice that is still in its infancy. Forecasts suggested e-commerce would only ever reach penetration levels of 10-20 per cent of retail sales (Dunt and Harper, 2002). In addition, online retailing represented only 0.2% of the retail industry in Europe, showing it was still a relatively untapped market (Wong, Gandhi, Patel, and Shah, 2001). The low penetration of the Internet by retailers confirmed that the Internet in its current form was unlikely to replace the high street in the near future (Hart, Doherty, and Ellis-Chadwick 2000). It is interesting to know that four out of five of retail Web sites had offline business counterparts, either retail stores, catalog or direct marketing, and 54 percent of these had found a substantial two-way synergy between bricks-and-mortar and cyberspace (Kim 2002). Traditional retailers that had moved into e-commerce, such as Gap, Nordstrom, and Barnes & Noble, attracted twice the consumer click rate as do Web only retailers, despite the fact that Web only retailers spent nearly double the amount to acquire a new customer than multi-channel marketers spent on customer acquisition (Schoenbachler and Gordon, 2002). Tiernan (2000) argued that the greater part of B2C e-commerce comprises sales of intangible products, commodity items and branded merchandises. Top online shopping sites include books and music, computers, financial services, software, travel, and ticket event sales (Schneider and Perry, 2000). This was because they are product or service that had become standardized and well known. There was no need for physical inspection so there was no inherent disadvantage in purchasing online. Even though the dot.com failure in 2000, researchers suggested that retail businesses must still consider revising their practices to include or account for the potential role of the Internet. Amire (2000) estimated the U.S. domestic Internet universe at over \$21 billion and expected to increase to \$144 billion by 2003. Plus, the Internet use has grown and is making up 6

percent of retail purchasing in the US. In line with the previous research, the USA, for the third year running, was the nation with the greatest proportion of Internet Users who were online shoppers –at 32%- despite dropping by 1 percent. This compared with the static global average of 15% (Taylor Nelson Sofres Interactive 2002).

A new study of 4,000 Web users conducted by the Brigham Young's University Marriott School of Management (Study profiles, 2001) contended that Internet retailers can boost sales by retargeting their marketing, by addressing customer fear over credit card security and by making the experience less technologically challenging. Wang, Head, and Archer (2002) analyzed the unique characteristics of the Web for retail applications, examines its market effects, and presented two perspectives for business response strategies. They stated that the Web can either be used as a marketing tool or can be viewed as a new marketplace. By viewing the Web as a marketing tool, marketers incorporated the Web into their traditional strategies. Viewing the Web as a new marketplace, businesses emerged with new product or service designs, targeted customers, and strategies.

2.3.2 Electronic Retailing Drivers

Many more sectors of the economy engaged in some form of electronic business. Rajput (2000), Wong, Gandhi, Patel, and Shah (2001), and Dolbeck (2003) recognized some drivers of this matter. Rajput (2000) pointed out that the market drivers that pushed businesses to adopt e-tailing are new customer, partner, and regulatory business requirements, customer empowerment, competitive necessities, competitive advantage opportunities, one-to-one marketing (i.e., enterprises offer customized and personalized products and services to individual customers as opposed to aggregate markets), global competition, and branding. Wong, Gandhi, Patel, and Shah (2001) stated that the drivers of e-tailing were the technological,

customized and personalized products and services to individual customers as opposed to aggregate markets), global competition, and branding. Wong, Gandhi, Patel, and Shah (2001) stated that the drivers of e-tailing were the technological, organizational and governmental factors which encouraged e-tailing to boom. They were telecommunications advances following deregulation and increased competition, technological pushed that drove down the cost of hardware and software, and the infinity of cyberspace which gave everybody the opportunity to participate. On the consumer side, Fenech and O’Cass (2001) investigated the issues related to consumer characteristic of adopters and non-adopters of this Internet mediated environment or Web retailing. They found that Internet users’ attitude toward Web-retailing was strongly influenced by their shopping orientation, perceived Web security, perceived usefulness of Web retailing, shopping innovativeness, satisfaction with Web sites and how important it was for them to inspect product prior to purchase (negative relationship). However, contrary to expectations, price significance (importance) in buying does not appear to have a significant influence on attitude toward Web retailing. The results also indicated that attitude and perceived usefulness did predict adoption of the Web for retail usage. Dolbeck (2003) presented the growth of broadband access as another factor contributing to the raise in online shopping. Broadband connections allowed consumers to get online, find what they want, and get things done quickly. According to research company Dataquest Inc., 28 percent of US online households connected via broadband.

2.3.3 Benefits of Electronic Retailing

Researchers described the benefits of e-tailing in several respects. On the firm side, firms were interested in electronic commerce because it can help increase profits. E-commerce can increase sales and decrease costs (Adam et al. 2002). E-

and reliable (transactional) (Reynolds 1997; Adam et al. 2002). Also, organizations can truly sell products and services 24 hours a day. A firm can use electronic commerce to reach narrow market segments that are widely scattered geographically (Rowley 2000).

Firms were more likely to use the e-commerce in relationship management (Adam et al. 2002). Rajput (2000) also stated that an organization can deploy e-commerce systems to increase its customer base and retain customers by activating customer through e-marketing (e.g., enticing customers to bookmark a firm's Web site for future visits or convincing customers to open an online account) and retaining customers through various online strategies (e.g., offering customers personalized products and services or providing customers a simplified and pleasing interaction). Also, the Internet and the Web are particularly useful in creating virtual communities that became ideal target markets. In decreasing cost, Cisco Systems, for example, sold 72 percent of its computer equipment sales via the Web in 1998. Because no customer service representatives were involved in the sales, Cisco estimated that it avoided handling 500,000 calls per month, for an annual savings of over \$500 million (Tiernan, 2000). The Internet was often described as convenient for shopping (Dennis, Harris, and Sandhu 2002; Morganosky and Cude 2000). On the customer side, convenience and time saving, ease of purchase, simplified comparison shopping, online promotion and enhanced security contributed to the consumer's benefits (Schneider and Perry 2000; Balabanis and Reynolds 2001; Roberts, Xu, and Mettos 2003). Electronic commerce provided buyers with a wider range of choices than traditional commerce because they can consider many different products and services from a wider variety of sellers (Dennis, Harris, and Sandhu 2002; Phau and Poon 2002). This wide variety was available for evaluation 24 hours a day, everyday. One

of the most important elements of an e-commerce site's value to customers was the provision of pre-purchase sales information (Adam et al. 2002; Pramongkit et al. 2002; Dennis, Harris, and Sandhu 2002; Dennis, Harris, and Sandhu 2002). Electronic commerce provided buyers with an easy way to customize the level of detail in the information they obtained about a prospective purchase. Finally, Rayport and Jaworski (2002) presented the benefits of e-tailing to the economy. They claimed that e-tailing brought a new, highly dynamic, competitive marketplace to the customer and the firm. The core strategic decisions were now technology-based, which had been an increasing part of business strategy. This offered real-time competitive responsiveness because competitors were easy to find, track, and compare, which led to unprecedented speed in competitive responses.

2.3.4 Limitations of Electronic Retailing

Many studies pointed to a wide range of inhibitors that slowed down the growth of e-business. They encompassed the nature of the product, lack of key standards and regulations, lack of capital resource, skills shortage, customer's information privacy and security concerns, and the challenge of product and service fulfillment (Worzala et al., 2002).

In reference to the nature of the product, Begin and Boisvert (2002) stated in their research paper that made-to-measure products (e.g., industrial equipment), products associated with sensory experiences (e.g., musical instrument, fabric), perishable or hazardous products, and large or very heavy products (e.g., sailboat or car) posed obstacles to online sales. These products may require customer involvement in the definition of specifications. The transaction may begin with a visit via the Internet, but it cannot be completed without a physical meeting between the

involvement in the definition of specifications. The transaction may begin with a visit via the Internet, but it cannot be completed without a physical meeting between the buyer and the seller, at least for the first purchase when the customer had no personal experience with the product.

For the lack of key standards and regulations, the legal system often struggled with the inability of existing laws to deal adequately with issues presented by new technology. Cordy (2003) argued that the world of e-commerce had no territorial boundaries. However, the laws that governed rights and responsibilities of on-line transactions tended to be territorial. States and countries, and their courts, were limited in the extent to which they can enforce laws and render judgments against businesses outside their boundaries. Begin and Boisvert (2002) provided another perspective. They saw that national regulations may hinder commerce between countries. Legislation can also impede or even prohibit the circulation of some goods. In terms of overseas sales, legislative brakes can be rules on the transit of merchandise, customs procedures, prohibition of specific products, particular taxes, or restrictions on the exporting of currencies. Researchers believed that without certainty in the legal rules, electronic commerce would not reach its commercial potential.

Executives often cited lack of resources and a lack of technological skills as the reasons why they had not developed their e-commerce activities (Trocchia and Janda 2000; Wong, Gandhi, Patel, and Shah, 2001; Begin and Boisvert, 2002). From the standpoint of achieving security and establishing integration of a search engine and online catalogue, together with online payment functions, several companies hesitated to venture into this area owing to the investment required and the difficulty of anticipating the return on investment. Speed of the Internet and access costs, which were normally associated with consumers, were also a major financial issue for

businesses. If a business was to trade online then it would need to be connected to the Internet at all times to provide customer support 24 hours a day, 7 days a week, 365 days a year. This demanded resources that were not justifiable without a high volume of transactions.

Some companies complained of the difficulty in recruiting personnel who were competent in electronic commerce. The absence of solid expertise can prove to be an inhibitor to the development of e-commerce activities. A study investigated the level of e-commerce engaged in by manufacturing small and medium size enterprises located in the Central Highlands of Victoria, Australia indicated that smaller firms being less likely to adopt e-commerce. This was related to small firms' lack of the human resources needed to manage web-related tasks (Beveren and Thomson, 2002).

For privacy and security concern issues, government, industry organizations, and Internet users themselves had declared information privacy and security to be major obstacles in the development of consumer-related e-commerce (Miyazaki and Fernandez, 2001; Karakaya 2001; Worzala et al. 2002; Dennis, Harris, and Sandhu 2002). According to the survey conducted by Taylor Nelson and Sofres Interactive (2002), online security remained the biggest single concern for those Internet Users who had not yet shopped online. This was a biggest reason for not purchasing online. In addition, consumers rated comfort with using credit card online and disclosure of personal information as the biggest barriers to online purchasing (Yahoo Inc. and ACNielsen Corp. 2001) Customers stated that they did not want to give credit card details. Security concerns included hacking, viruses, denial-of-service attacks, and fraud. The online fraud can be anything from a stolen card number used at a Web site to a hacker breaching an online merchant's or merchant processor's database to steal account numbers and other confidential consumer information. According to the

Computer Security Institute's 2002 Computer Crime and security Survey, 90 percent of respondents who were computer security practitioners primarily in large U.S. corporations and government agencies had detected computer security breaches within the year 2000, and 80 percent reported financial losses because of them. Nearly half the respondents reported combined financial losses of more than \$455 million (Groves, 2003). In case of identity theft and other forms of credit and debit card fraud, a survey reveal that about 3% of all credit card transactions were conducted on the Internet and 2.1% of those were fraudulent (Punch, 2003).

Schoenbachler & Gordon (2002) stated that product and service fulfillment still remained a big challenge for online suppliers and most online consumers felt frustrated with the poor service reliability provided by virtual stores. Slow performance, content errors, and broken transactions were examples. Customer service was possibly the number one problem faced by consumers and online companies marketing their products (Karakaya 2001). The primary reasons resided in the lack of tight integration of Web sites with customer service operations and supply chain partners, and the lack of communication among different functional departments. In addition, Yang and Jun (2002) pointed out that Internet retailers often lacked real-time interaction with customers, compared with physical stores. For instance, e-mail was a very common means for online consumers to communicate with retailers; but a recent study showed that 42% of the top-ranked Web sites took longer than five days to respond to a customer's e-mail inquiry, never responded, or were not accessible by e-mail. Human contact, entertainment, and making the trip worthwhile were said to be the barriers to online retailers effectively competing with traditional retailers (Parson 2002).

2.4 Physical Shopping

today's consumer market, including the expanding number of dual-income and single-parent households and an increasing number of computer-literate consumers, had significantly altered consumer's expectations and demands during the shopping experience.

In the same view, Weeks, Brannon and Ulrich (1998) researched young adult female consumers of apparel in regards to their preference for non-store versus in-store shopping. Findings suggested that specialty stores were most preferred and television the least preferred shopping medium. Overall respondents preferred specialty in-store experience to non-store shopping. The sample respondents were found to be: (1) fashion opinion leaders, (2) highly interested in their clothing, (3) confident in their appearance, (4) price-conscious, and (5) not time-conscious. Convenience and familiarity with the shopping medium also had an effect on preference of in-store versus non-store shopping. The comments from the qualitative work of Dennis, Harris, and Sandhu (2002) supported previous findings that the most important issue affecting Internet shopping was shoppers' preferences for the experience of "real" shopping.

Dholakia (1999) argued that shopping for most purposes means physical visits to a shopping site. The site most frequently visited was either a supermarket or a shopping mall. In fact, going shopping was a major source of relaxation (Dholakia 1999). People went shopping for many reasons but those reasons boiled down to three motives based on factor analysis of Dholakia's study. These three motives have been labeled as:

1. "interaction with family"
2. "utilitarian"; and
3. "shopping as pleasure"

2. “utilitarian”; and
3. “shopping as pleasure”

Dholakia (1999) emphasized that shopping remains a gendered activity but it is not a pleasureless activity. Women and men reported enjoying shopping under different shopping sites. They still favored going shopping because of the reason of pleasure.

In line with Dholakia (1999), based on Tauber’s (1972) and Sheth (1983), Parsons (2002) concluded that there were two classes of motives underlying shopping patronage; functional and non-functional. Functional motives were principally to acquire the product for which needs were experienced. Non-functional motives were principally to provide satisfaction for various additional non-product-related needs or principally in service of needs unrelated to acquisition of the product. In other words, Dholakia’s utilitarian motives can also be deemed as the functional motives and shopping as pleasure and social motivation can be considered as non-functional motives.

Worzala et al. (2002) stressed that entertainment was the key attribute that will encourage consumers to go shopping. However, shopping context was also an important determinant and the favorable shopping experiences were varied by different shopping sites. More specifically, consumers wanted satisfaction from an enjoyable shopping experience, as well as convenience and excellent service, whether in the store, in the mall or over the Internet (Kim 2002). Still, the web shoppers had a strong preference for shopping in-store rather than online as more enjoyable and sociable (Dennis, Harris, and Sandhu 2002). Therefore, the issue of competition from Internet and Web-based shopping services was also raised up in his survey. The important question he pinpointed was that “will going shopping be replaced by the trips to cyberstores and cybermalls?” Practitioners over the past few years had

these switchers were motivated by non-functional aspects of shopping when it comes to malls, experiential stores such as Nike town, and other forms of store-based shopping (Parsons 2002). Dholakia concluded that, although Internet and Web-based shopping was increasing, it would have a limited role. He believed that the inconspicuous acts of online shopping would provide the appropriate motivation for “shopping as pleasure” but not for “social reinforcement” as well as “interactions with the family”. Jarvenpaa and Todd (1996-1997) supported that online shopping experience was found to be generally enjoyable.

In contrast, some of the research studies pinpointed that consumers might go shopping online because of other two motives as labeled by Dholakia (1999), which were “social reinforcement” and “interaction with the family”. Klobas and Clyde (2001) attested that social influence had a direct effect on the decision to use the Internet. Social influence included the effect of family and friend, employers, professional colleagues, the media and a general sense that, increasingly, “everybody” was expected to be able to use the Internet. This was also deemed as the environmental factor, which was significant to buyers, but it had less influence on buyers’ online purchase (Pramongkit et al 2002). Despite this fact, the data from research showed that social interaction likely influenced consumers to purchase online (Mutitachareon and Palvia 2002).

A survey conducted by Taylor Nelson Sofres Interactive (2002) confirmed that there was 15% of all Internet users still had bought goods or services outside the Internet as a direct result of information found online. Younger people’s offline spending was still not being influenced by information found online as much as some older Internet users, although there had been some improvement from 2001. In sum,

older Internet users, although there had been some improvement from 2001. In sum, shopping mall may still have the edge over Internet shopping on customer service, positive image and experiential shopping (Dennis, Harris, and Sandhu 2002).

It was estimated 18% of all Internet users plan to shop online in the future (Taylor Nelson Sofres Interactive 2002). Thus, in order to encourage more of online sales in the future, the marketers should integrate online and offline business models.

From the above discussion, it can be said that functional and non-functional motives could both influence consumer to shop online and there was a room for online shopping to satisfy the need for shopping. In addition, physical shopping and online shopping represented very different types of shopping experience. Hedonic and Utilitarian benefits were always used to predict the different consumer behaviors of online and physical shopping (Dholakia and Uusitalo 2002).

2.5 Online Shopping

Online shopping made it possible for consumers to shop 24 hours a day without having to leave home. Commonly, people can easily shop via hypermedia computer-mediated environments, of which the World Wide Web on the Internet was the first and current networked global implementation. America Online, CompuServe, Prodigy and the Microsoft Network were the examples of early commercial on-line services (Hoffman and Novak 1996; Palumbo and Herbig 1998). From a commercial perspective, The Web consists of visiting a series of Web sites to search for information and / or advertising about products and services or consumer content (possibly advertiser-supported) or place an order for a product. In general, if the consumers would like to look for the product they wanted to buy from the Web site, they would visit a site by directly entering its Web address in the browser or clicking a hypertext link leading to it from some other site. Once there, consumers navigated

through the site using a series of point-and-click motions with a mouse or entering textual information into pop-up windows and “fill-out forms” with keyboard strokes. From there, the consumer chose where to go next in the site. Often, the offerings were presented as a nonlinear graphical menu or map of choices to the consumer. Consumers may choose the menu to browse the product information and then evaluate it before making any decision to place an order or not. The navigation process continued, terminated only when the consumer jumped to another off-site hypertext linked within the Web or exits the Web navigation experience entirely.

Beside, traditional retail businesses today faced a critical decision to accept e-commerce or to retain their old business model and risk becoming obsolete and left behind by new, Web-based competitors. Moreover, today consumers had unprecedented power. They had their own databases and tracking technology that allowed them knowledge about products, inventories, profit margin and competitive offerings. Retail marketers who continued to use old business models and treat customers in old ways would likely fail. Moynagh and Worsley (2002) recently pointed out the recent trend in consumerism. They stated that consumers were frequently motivated by love and their needs, to express their identity, to build relationships, to obtain fulfillment, to rest and relax, to express their autonomy, and even to find a substitute for religion. Consumer power would grow, and brands would be under pressure from rising consumer expectations. Consumers would remain harder to reach. They would be busier, faced with more alternatives and have more media to choose from. Marketers were increasingly preoccupied with how to encourage consumers not to jump from brand to brand, but to remain loyal. Marketing would increasingly focus on enabling people to manage their choices. Consumers took controls over the market and forced suppliers and manufacturers moved from

mass production to mass customization. Recognizing customer empowerment compelled organizations to further scrutinize and analyze consumer behaviors, preferences, and needs in the online world. The new generation of consumers was identified as innovative Internet consumers (Goldsmith 2001). They were likely to spend more hours of Internet use, buy more over the Internet, and purchase from the Internet in the future. Understanding consumer motivations for shopping at a web site can provide direction for planning and implementing features and benefits that would increase customer satisfaction and loyalty for online stores.

Between 2001 and 2002, the proportion of Internet users that were shopping online had not increased. Nevertheless, an increase in number of people online had helped to ensure that E-Commerce was growing (Taylor Nelson Sofres Interactive, 2002).

2.5.1 Online Shoppers

Many recent studies had investigated the feasibility of electronic commerce from the manufacturer or the retailer's side (Berthon, Leyland & Watson, 1996; Breitenbach & VanDoren, 1998; Hoffman & Novak, 1996; Jones & Biasiotto, 1999; Murphy, 1998; Peterson, Balasubramanian & Bronnenberg, 1997; Reynolds, 1997). But relatively few had focused on this issue from the consumer's perspective. Burke (1997) (p. 353) stated, "A major part of the forecasting problem is that multiple constituencies are involved—consumers, manufacturers, retailers and technology firms ... One needs to examine the motivations and constraints of each group when building forecasts".

In the context of Internet commerce, existing customers were those who had utilized the Internet as a channel to purchase products and services. Potential

utilized the Internet as a source to search for information about desired products and services but had never purchased through the Internet.

As the matter of fact, Taylor Nelson Sofres Interactive (2002) reported that the popularity of online shopping, or Internet related shopping activity between 2001 and 2002 had not been really dynamic but the growth in Internet usage/ penetration means that more people (in real terms) are shopping online. A total of 52% of all Internet users had done none of the following: bought online, dropped out, bought offline or plan to buy online in the future, 28% of Internet users globally had either shopped online or plan to do so in the next 6 months. Similarly, Yahoo Inc. and AcNielsen Corp. also suggested that there were more than four out of ten Internet users who intended to purchase online more frequently in the near future. They would spend a large amount of money online.

2.6 Previous Studies with the Related Topic in the Thai Context

Usage of Electronic Shopping Mall

Nyi Nyi Oo (2000) focused on the factors influencing the usage of electronic shopping mall. The specific objectives of this research study were: (1) to assess the relationship between client's perceived security and the usage of electronic shopping malls, (2) to assess the relationship between the customer satisfaction and the usage of electronic shopping malls, (3) to assess the relationship between Internet access and the usage of electronic shopping malls, and (4) to find out the factors influencing the usage of electronic shopping malls

By using survey method to collect the data from the 250 respondents who were the Internet users form the university environment, she found that there was a

positive relationship between such independent variables as client's perceived security and customer satisfaction and dependent variables, usage of electronic shopping malls. It implied that the Thai Internet users would use the electronic shopping malls if their sensitive information were kept confidentially and they acquire information benefit.

Factors Influencing Online Shopping Behavior

Sidhisoradej (2001) identified factors that influence online shopping behavior. Base on the results obtained from Chi-Square Test and One-Way ANOVA, he attested that there were three groups of variables that positively influenced online purchase behavior. First group was demographic variables such as income, occupation, and English language skill. Second group was Internet usage variables such as Internet experience, ease of Internet access, hours spent online and Internet skills. Third group was other variables such as credit card possession, desktop PC possession, and notebook PC possession. It can be said that an individual who would shop online was the one who might have higher income level, professional work, better English skills, more Internet experience, easy Internet access, better Internet skill, more time to spend online, credit card, as well as computer.

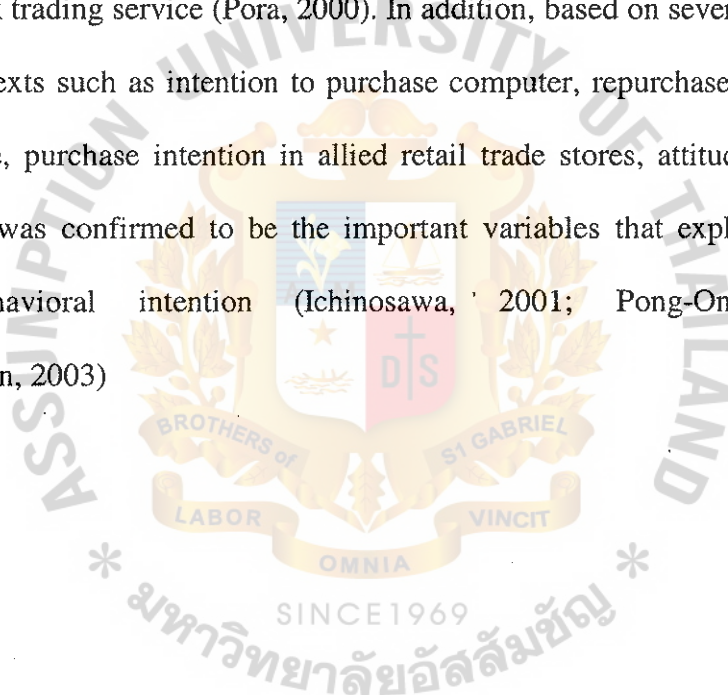
Kittivorakhun (2001) suggested six factors, which help explain online purchase, for instance, risk of security, price, time saving, shopping convenience, risk of privacy violation, and computer service. The respondents expressed most concern about risk of security when purchasing online.

Online purchase Intent

Online purchase Intent

Pongsinpan (2003) assessed the relationship between selected variables and intention to buy online. She found that attitude toward the Internet as an advertising medium, degree of involvement with the Internet, surfs the Internet for knowledge and awareness of new product and services, gender, household income level, opinion leadership were significantly correlated with intention to buy online.

The issues of security also played important role for intention to subscribe for Internet-based stock trading service (Pora, 2000). In addition, based on several studies from different contexts such as intention to purchase computer, repurchase intention of department store, purchase intention in allied retail trade stores, attitude toward purchase behavior was confirmed to be the important variables that explained the variance in behavioral intention (Ichinosawa, 2001; Pong-On, 2003; Dumrongkulkumjorn, 2003)



CHAPTER 3

RESEARCH FRAMEWORK

In this chapter, the research framework are displayed based on the theories discussed in chapter two. There are three sections in this chapter, first is the conceptual framework, the second section delineates the research hypotheses that were tested in this research, and the final section shows the operationalization of related variables that explicate all the component variables to be used in this study.

3.1 Theoretical Framework

The theoretical model was adapted from the theory of planned behavior (TPA) and the technology acceptance model (TAM), which were discussed in the previous chapter. The reason why the author used these two models was that, from the literature review, they were the most parsimonious concepts to date that can best explain online purchase intention. In addition, the determinants of behavioral intention from the two models contained stronger predictive power. Researchers working within the general framework of TAM had predicted user intentions with regard to a variety of technologies (Davis et al., 1989). Also TPA and TAM were used in many Internet related studies (Gefen 1998; Shim et al., 2001; Salisbury et al., 2001; Koufaris 2002; George 2002; Muthitachareon and Palvia 2002; Promongkit et al., 2002)

However, Davis et al. (1989) suggested that combining the beliefs of Theory of Reasoned Action and Technological Acceptance Model into a single analysis may yield a better perspective on the determinants of behavioral intention than that provided by either model by itself. Based on Davis et al. (1989), the hybrid intention model was developed for this study as a theoretical framework. The hybrid intention model used in this study was an adaptation of TPA and TAM. It was deemed appropriate to do so because the TPA and TAM

are extensions of TRA and there was no previous study, which used the hybrid intention model to investigate online behavioral intention. The proposed theoretical model is depicted in Figure 3.1

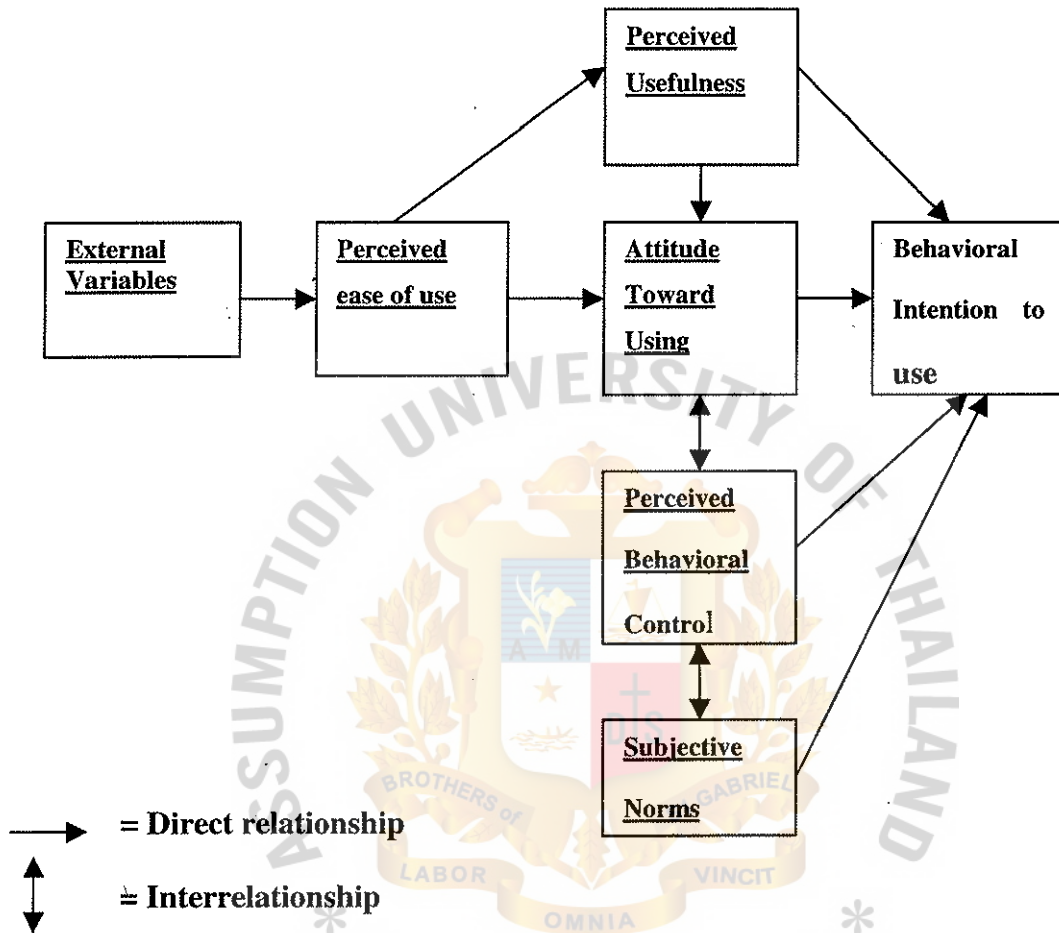


Figure 3.1: Theoretical Framework

Source: Developed for this research by the author and adapted from 1) Theory of Planned Behavior (Ajzen and Fishbein, 1985, 1991), and 2) Technological Acceptance Model (Davis et al., 1989)

3.2 Conceptual Model

Based on the above theoretical model the researcher has evolved a conceptual framework for this study. The independent variables were attitudes, subjective norm, perceived behavioral control, perceived ease of use, perceived usefulness, computer and Internet usage and demographic profiles. The dependent variable was online purchase intent. In this study, the factors under investigation were selected from the intensive literature

review. These factors were strong predictors of the online purchase intent. Computer and Internet usage were measured for web skill, time spent on the Internet. Previous purchases were also measured. Online purchase intent was measured for many product/service categories. Consumer demographic characteristics were measured for gender and income. The variables derived from TAM, such as perceived ease of use, perceived usefulness, and external variables were added to the conceptual framework in order to enhance the predictive power of the model (Davis 1989). In sum, the relationship between independent variables and dependent variables were studied by using the hybrid of the two models, which were TAM and TPA. The proposed conceptual model was depicted in Figure 3.2.

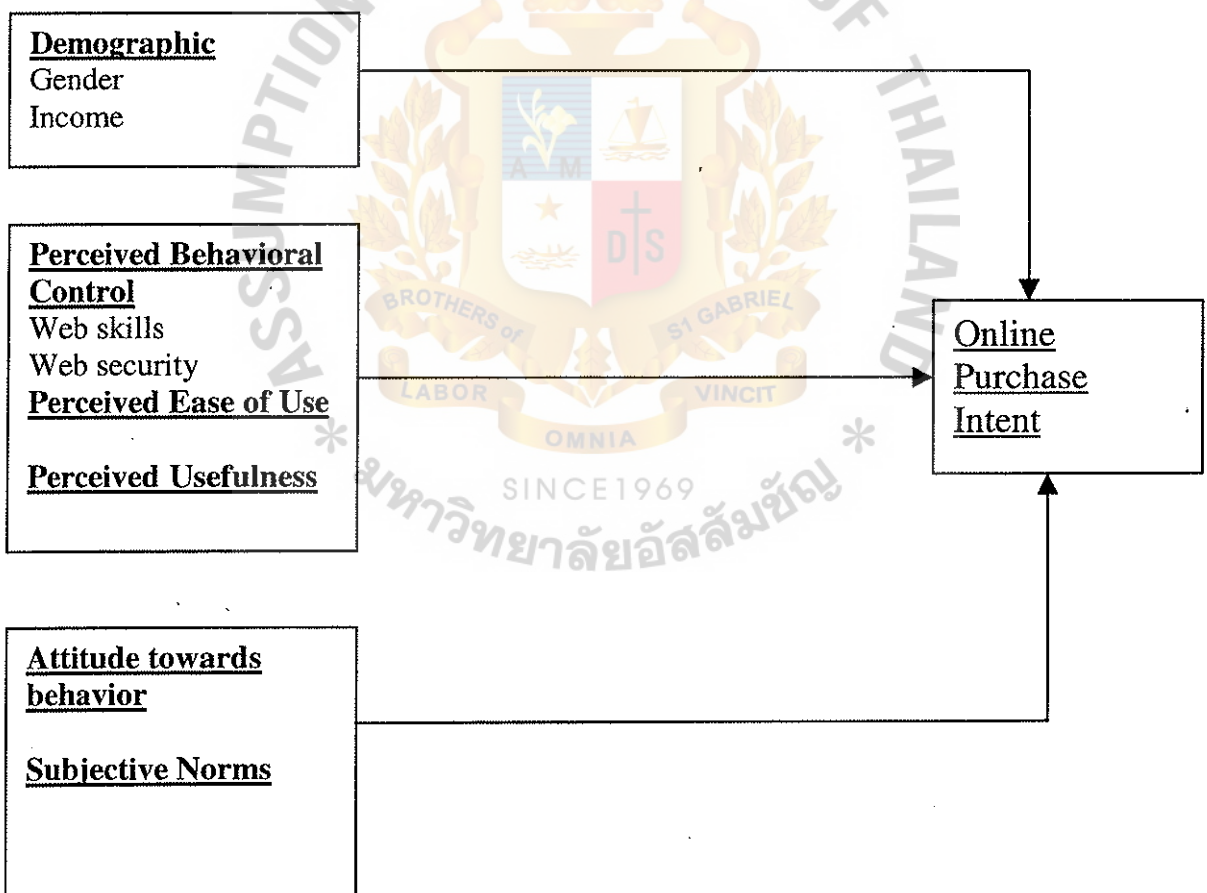


Figure 3.2: Conceptual Model (Research Framework)

3.2.1 Components of the model

Personal Characteristic: demographic

Demographics of Internet users and non-users showed marked differences (Katz and Aspden, 1997). Yet, several studies indicated that demographic variables were most likely correlated with intention to purchase online. The role of a specific demographic in predicting online shopping was not the major focus of this thesis. A given demographic variable was related to one facet of Internet shopping that did not mean it was related in that same manner to other facets of online shopping. There were only a few studies in Thailand that related demographic variables to online purchase intention, and these had not yet been thoroughly researched.

Gender

Gefen and Straub (1997) suggested that researchers should include gender in the study of any information system. Testing gender differences that might relate to beliefs and use of computer-based media, indicated that women and men differed in their perceptions but not use of e-mail (Gefen, 1997). An individual's gender had a significant effect on his or her purchase intention. A study on the recency of Web usage suggested that the long-time users compared to the recent, former, and nonusers of the Web were more likely to be male (Katz and Aspden, 1997). Males were more versatile, experienced, and comfortable in using the Web (Kau Tang and Ghose, 2003; Korgaonkar and Wolin, 2002). Males showed more variety in buying unpopular items (Blake, Neuendorf, and Valdiserri, 2003). In contrast, Karakaya (2001) argued that while the early shoppers on the Internet were mostly male, recent statistics showed that male and female shoppers and users were now almost evenly distributed. One of the key challenges of World Wide Web-based shopping was male-dominated user base although primary household shoppers were predominately female (Kwak, Fox, and Zinkhan, 2002). In sum, it seemed that men tended to have higher intention to purchase than women

did but with the recent information, it was rather unequivocal. Based on previous study, it was deemed imperative to study a direct linkage between gender differences and intention to purchase.

Income

Internet users were varied by level of household income (Katz and Aspen 1997). Level of income normally affected the online purchase decision (Wu 2002). Sultan and Henrichs (2000) reported that the majority of Internet users were wealthier and had a higher than average household income. Income determined the willingness to pay for Internet service fee (Sultan and Henrichs, 2000). Consumers with average income normally had a positive attitude toward online shopping (Wu 2002). Income differences determined the level of Internet Marketing Involvement (Wu 2002). It can be said that individuals with high Internet involvement was likely to spend more on the Internet. Morganosky and Cude (2000) argued that somewhat higher-income consumers might be more likely to shop online. Trocchia and Janda (2000) believed that individuals who possessed higher discretionary incomes may present a substantial opportunity for Internet marketers. Pramongkit et al. (2002) reported that Thai online purchasers had average power at income level above 10,000 baht, which can be considered as an opportunity for Thai online marketers.

Hence, the author believed that income level was a strong predictor of behavioral intention.

Attitude towards online purchasing

Marketers know there was a better chance of winning customers if they “feel good”. Many authors had commented on the range of affective experiences that may be felt during online interactions. A positive attitude toward online shopping reflected affect, or liking of the merchant and the characterization of purchasing from that merchant in optimistic and positive terms. A negative attitude reflected the opposite. Based on TPB and TAM, the

predominant antecedent of behavioral intentions was the actor's attitude toward that behavior (Fishbein 1976; Davis 1989). Online purchase behavior was varied by attitude (Kau, Tang, and Ghose, 2003). In terms of consumer behavior, the primary predictor of the decision to purchase was the consumer's attitude toward online purchasing (Fenech and O'Cass 2001; and Wu 2003;). It can be inferred that consumers who had positive attitudes toward online shopping tended to have higher intention to purchase online (Lynch, Kent, and Srinivasan 2001; George, 2002; Korgaonkar and Wolin 2002). Thus, attitudes towards online purchase intent were examined in this study.

Subjective Norms

Subjective norms were a function of normative beliefs, represents a person's perception of whether significant referent approved or disapproved of a behavior (Fishbein 1979). Consumers were normally influenced by people (sisters, friends, parents or others having similar interests) in a negative way, as well as in a constructive and beneficial way. They were concerned with opinions of people who were important to them. In this study, subjective norms show whether the specific referents think that an individual should shop using the Internet and also if an individual was motivated to comply with referents. In sum, subjective norms can be applied to online shopping in the way that people purchased the product online when they see their significant others did too, or approve the action. Internet shopping would also enhance the communications with others having similar interests (Parson 2002). If consumers knew that the others having similar interests in purchasing online, they would intend to purchase online too, or vice versa.

Perceived Behavioral Control

Perceived Behavioral Control refers to the ease or difficulty of performing the behavior and was assumed to reflect past experience as well as anticipated impediments and obstacles (Azjen 1991). When studying consumers' Internet purchasing behavior, researchers

should take perceived behavioral control into consideration in that Internet shopping did require skills, opportunities, and resources, and thus did not occur merely because consumers decided to act. Hence, the factors presented below were found to constrain online shopping intention based on the findings from of the previous studies.

Web skill

Internet shopping requires consumer resources such as skills in using a computer as well as access to a computer for shopping purposes (Dholakia and Uusitalo 2002). Web skills have a significant impact on the Web consumer (Koufaris 2002). As online consumers perceived their web skills to be higher, they would be more likely to have positive emotional and cognitive responses to the Web store they visited. Therefore, the consumers' skills to use the Internet were considered as one of the variables that can be used to determine the Perceived Behavioral Control and also acted as a good predictor for Internet purchase behavior (Kennedy and Deeter-Schmelz 2001; George 2002).

Web security

Perhaps one of the greatest barriers to virtual storefronts was the issue of online payment security (Karakaya, 2001). Security was another factor that has an impact on the intention to purchase online because the majority of consumers felt that online payment was not secure. The fraudulent use of consumers' credit card was still a concern of most online purchasers. Even the weakest form of cybercrime can reduce repeat online purchases and erode the attractiveness of the Web as a shopping medium. Security issues determine Web shoppers' characteristics (Kau, Tang, and Ghose, 2003; Promongkit 2002). Consequently, consumers did not intend to purchase online if the level of Web security was low. Thus, there would be a relationship between levels of perceived web security and level of intention to purchase products on the Web (Salisbury, Pearson, and Miller 2001; Roberts, Xu, and Mettos 2003).

Perceived ease of use

Davis (1989) attested that perceived ease of use would influence an individual's intent to utilize information technology. He defined ease of use as the degree to which a person believed that using a particular system would be free of effort. There are a variety of salient beliefs about Web shopping that are relevant. Drawing from previously established characteristics of innovating, the author believed one likely salient beliefs about adopting and innovation such as purchasing products on the World Wide Web were related to the experience of shopping on the World Wide Web, specifically its perceived ease of use (Jarvenpaa and Todd, 1997). Consequently, perceived ease of use was adopted. Applied to Web shopping these became perceived ease of navigation, or the degree to which navigating the World Wide Web is perceived to be free of effort (Davis et al., 1989). While the perceived ease of use construct was not originally developed for this context, it was relevant because it tapped into belief about ease of adopting an innovation, in this case Web shopping.

Besides, it is very interesting that perceived ease of use impacts on behavioral intention still remained unequivocal. Davis et al. (1989) confirmed that ease of use had a significant effect on behavioral intention but the direct effect of ease of use on behavioral intention disappeared as users learned to effectively operate the system. He explained that as online users progressed in system use, ease of use concern became less salient, and ease of use evolved into a more instrumental issue, reflecting considerations of how the relative effort of using the system would affect the overall performance impact the system offered.

However, he also added that with more complex or difficult systems, ease of use may have had a greater impact on intention. It can be said that, ease of use can be linked to behavioral intention in this study because the ease of use on web shopping was suspicious. This was consistent with previous findings regarding the influence of ease of a particular innovation on its subsequent adoption (Gefen 1998).

Perceived usefulness

Added to this conceptual model being studied was perceived usefulness. This independent factor was drawn from the TAM, which was an influential contribution to the enduring line of IT implementation and diffusion research (Davis 1986, 1989). Perceived usefulness was correlated with the system use, a relationship that seemed to explain fairly well why people accepted or rejected an information technology. Since online shopping was always associated with the web, which was deemed as one of the information technology, it can be said that perceived usefulness could help predict the level of intention to accept or reject online purchase system.

Applied to Web shopping, perceived usefulness was the extent to which using the Web would enhance one's shopping for products (Salisbury et al., 2001). Therefore, perceived usefulness of web shopping linked to purchase intent was drawn from previous theory and research in the innovation adoption research tradition. In sum, this linkage indicated that higher perceived utility with respect to Web shopping favorably influenced intent to purchase online. This was consistent with previous findings regarding the influence of ease of a particular innovation on its subsequent adoption. Recently, perceived usefulness was found to be an important predictor of web purchase (Childers et al., 2001; Fenech and O'Cass 2001).

Intention to purchase online

While actual purchase behavior is of keen interest to marketers and researchers, it is frequently not possible or practical to experimentally study actual consumer purchasing (Kimery and McCord 2002). Such was the case for this study, and as a result, intention to purchase was adopted as an acceptable proxy for actual online purchase behavior.

Hypotheses Development

A hypothesis (H) is an unproven statement or proposition about a factor or phenomenon that is of interest to researcher (Malhotra 2004). Often, a hypothesis is a possible answer to the research question because they are statements of relationships or propositions rather than merely questions to which answers are sought (Shao 2002).

The researcher classified research hypothesis into six constructs, which were as follows:

Group A: Demographics and Online Purchase Intent

Group B: Attitude towards behavior and Online Purchase Intent

Group C: Subjective Norms and Online Purchase Intent

Group D: Perceived Behavioral Control and Online Purchase Intent

Group E: Perceived Ease of Use/Perceived Usefulness and Online Purchase Intent

Group A: Demographics and Online Purchase Intent

Gender and Purchase Intent

H1 : There is no difference between gender and online purchase intent.

H1a: There is a difference between gender and online purchase intent.

Income

H2. : There is no difference between income and online purchase intent.

H2a: There is a difference between income and online purchase intent.

Group B: Attitude towards behavior and Online Purchase Intent

H3: There is no relationship between attitude and online purchase intent.

H3a: There is relationship between attitude and online purchase intent.

Group C: Subjective Norms and Online Purchase Intent

Subjective Norms

H4: There is no relationship between subjective norms and online purchase intent.

H4a: There is relationship between subjective norms and online purchase intent.

Group D: Perceived Behavioral Control and Online Purchase Intent

Web skills

H5: There is no relationship between Web skills and online purchase intent.

H5a: There is relationship between Web skills and online purchase intent.

Web security

H6: There is no relationship between Web security and online purchase intent.

H6a: There is relationship between Web security and online purchase intent.

Group E: Perceived Ease of Use/Perceived Usefulness and Online Purchase Intent

Perceived Ease of Use

H7: There is no relationship between perceived ease of use and online purchase intent.

H7a: There is relationship between perceived ease of use and online purchase intent.

Perceived Usefulness

H8: There is no relationship between perceived usefulness and online purchase intent.

H8a: There is relationship between perceived usefulness and online purchase intent.

3.3 Concepts and Variables Operationalization

The conceptual definitions specified the theoretical basis for the summated scale by defining the concept being represented in terms applicable to the research context. In academic research, theoretical definitions are based on prior research that defines the character and nature of a concept. A concept is a generalized idea of objects, attributes, occurrences, or process. In a managerial setting, specific concepts may be defined that relate to proposed objectives, such as image, value, or satisfaction. In either instance, creating a

summated scale is always guided by the conceptual definition specifying the type and character of the items that were candidates for inclusion in the scale. Concepts must be made operational in order to be measured. “Operational” means that the expression used must be definable in terms of observable, identifiable, and repeatable operations. Thus, an operational definition is one that specifies the operations that defined the word. Operational definitions not only allow one to say precisely what was meant by terms used, but these definitions also established a basis for objective tests for the outcomes of the proposed study (Parasuraman et al., 2004)

Concept	Conceptual Definition	Operational components	Type of scale
Demographic -Gender	Classification of sex	- Male or female	Nominal Scale
Demographic -Age	The number of years that one has lived.	- Duration of life specific to one person	Ordinal Scale
Demographic -Personal Allowance	The amount of money students receive from their parents or guardians	Individual average income per month.	Ordinal Scale
Places to use Internet	The location where one access to the Internet	Home School/University Internet Shop	Nominal Scale
Attitude towards behavior	Individual's attribution of	- The idea of Internet shopping is appealing to me	Interval Scale

	generalized positive characteristics to purchase from the Internet	<ul style="list-style-type: none"> - I like the idea of using the Internet store to purchase things I want. - Shopping online is a good idea 	
Subjective Norms	The degree to which individuals are motivated by their significant others to use the Internet for various goals.	<ul style="list-style-type: none"> - I have the opportunity to talk with others about their interests via the Internet. - Internet shopping offers time and place for social interaction. - The patronage of Internet shopping reflects a desire to be with your peer group or a reference group to which I aspire to belong. - I need the approval from my referents (i.e., important friends, family, etc.) when I use the Internet for shopping. 	Interval Scale
Perceived Behavioral Control -Web Skill	The level of navigation expertise.	<ul style="list-style-type: none"> - I am extremely skilled at using the Internet. - I consider myself knowledgeable about good search techniques on the Internet. - I know somewhat less about using the Internet than most users. - I know how to find what I am looking for on the 	Interval Scale

		Internet.	
Perceived Behavioral Control -Web security	The extent to which one believes that the Internet is secure for transmitting sensitive information.	<ul style="list-style-type: none"> - I would feel secure sending sensitive information across the World Wide Web. - The World Wide Web is a secure means through which to send sensitive information. - I would feel totally safe providing sensitive information about myself over the World Wide Web - Overall, The World Wide Web is a safe place to transmit sensitive information. 	Interval Scale
Perceived Ease of Use	The degree to which individual perceives the use of Internet as easy.	<ul style="list-style-type: none"> - Navigating pages on the World Wide Web is easy for me. - I find my interaction with pages on the World Wide Web clear and understandable. - It is easy for me to become skillful at navigating pages on the World Wide Web. - Overall, I find pages on 	Interval Scale

		the World Wide Web easy to navigate.	
Perceived Usefulness	The degree to which individual perceives the use of Internet as useful.	<ul style="list-style-type: none"> - Using the World Wide Web would enable me to accomplish my tasks more quickly. - Using the World Wide Web would make it easier for me to carry out my tasks. - I would find the World Wide Web useful. Overall, I would find using the World Wide Web to be advantageous. 	Interval Scale
Behavioral Intention - Purchase Intent	Consumer's willingness to buy from Internet.	<ul style="list-style-type: none"> - I would use the World Wide Web for purchasing a product. - Using the World Wide Web for purchasing a product is something I would do. - I could see myself using the World Wide Web to buy a product. 	Interval Scale

CHAPTER 4

RESEARCH METHODOLOGY

An overview of research methodology is discussed in this chapter. This chapter describes an investigation of the joint influence of attitude toward behavior, subjective norms, perceived behavioral control, perceived ease of use and perceived usefulness on online purchase intent. The method used to analyze the data collected helped answer the research questions proposed in this study. The first section is on the research methods used. The second section explains respondents and sampling procedure. The third section elaborates on the Instrument and Questionnaire Development. The fourth section determines Data collections / Gathering Procedures and the last section dealt with the Statistical Treatment of Data.

4.1 Research Method used

A descriptive research using survey method design involves the collection of information from any given sample of population elements only once (Parasuraman et al., 2004). The survey technique involved a structured questionnaire given to respondents and was designed to elicit specific information. Thus, the questioning of respondent was used in order to obtain data. The survey technique is a convenient, easy and fast for a researcher to collect data.

4.2 Respondents/Sampling Procedure

4.2.1 Respondents/Sampling Design

The details of target respondents were as follows:

Target population: All senior students in the ABAC School of Management. The reason why university students were deemed appropriate subjects for this study because they were generally consistent with, online shopping demographics (Direct Marketing 2001; Taylor

Nelson Sofres Interactive 2002). Senior Students of ABAC School of Management were regarded as regular Internet users, which helped the researcher to see their pattern of purchase intention. In addition, a younger age group was an important target group, which was considered to be high value market. These were respondents most likely to be involved in Internet exchanges.

Sampling frame: Research sampling frame were senior students recruited from upper-level business courses in various majors in order to have more diversity in the sample.

Sample: the sample was drawn from a total of 4,659 senior students, which is shown in Table 4.1. Total population is 4,659

Table 4.1 Total population of ABAC School of Management senior students currently studying in Assumption University.

<i>ID. No.</i>	<i>No. of Students</i>
<i>Over 431-xxxx</i>	3,158
<i>431-xxxx</i>	1,127
<i>432-xxxx</i>	284
<i>Total</i>	4,569

Source: Assumption University Registration office, November 19, 2003

4.2.2 Determining Sample Size

The total number of senior students from 9 majors of ABAC School of Management amounts to 4,659 persons (Assumption University Registration Office 2003). Based on these numbers, the researchers required the sample size of 5% for tolerable error, therefore the appropriate number of sample size should be 356 as shown in Table 4.2.

Table 4.2 Theoretical Sample sizes for Different Sizes of Population and a 95 percent level of certainty

Population/ Sampling frame	Required Sample for Tolerable Error			
	5%	4%	3%	2%
100	79	85	91	96
500	217	272	340	413
1,000	277	375	516	705
5,000	356	535	897	1622
50,000	381	593	1,044	2,290
100,000	382	596	1,055	2,344
1,000,000	384	599	1,065	2,344
25,000,000	384	600	1,067	2,400

Source: Gary Anderson, Fundamental of Educational Research, 1996, P. 202

Given that the primary objective of the study was to assess the relationships between variables of theoretical significance, students were considered appropriate subjects. In addition, student samples had been used previously in studies involving Internet shopping (Goldsmith 2002; Kimery and McCord 2002). Therefore, using a student sample improved comparability with previous findings.

4.2.3 Sampling procedure

Sampling method: Probability sampling method was used in this study. Because samples were selected by chance, it was possible to determine the precision of the sample estimates of the characteristics of interest. Specifically for this study, systematic random sampling was used. It is a sampling technique in which a sample is drawn by arbitrarily choosing a beginning point in a list and then sequentially selecting every k th element from

the list (Maholtra 2004). Maholtra (2004) suggested that, for a systematic sample, the items in the population must be ordered. Beside, the selection procedure depends on the number of items included in the population and the size of sample, the number of items in the population was first divided by the number desired in the sample. The quotient was k , indicating whether every tenth, eleventh, or perhaps hundredth element in the population was to be selected. The first item of the sample was selected at random. The rest of the sample was chosen by selecting every k th element from the ordered population list until the sample size was reached. A systematic sample was relatively easy to implement and may yield the same precision as a simple random sample (Parasuraman et al., 2004).

Therefore, the sample was chosen from every 3rd senior student in each section of upper-level business courses (60/20 is 3) in order to reach the maximum, $n = 384$. Small Business and Marketing Management were the upper-level business courses selected in this study because the students in these courses tended to be familiarize with Internet marketing. In addition, they also a possessed tool to buy online which was the Debit card issued by Bank of Sri Ayudhaya as well as joint credit card with their parents The sampling procedure is shown in Table 4.3

Table 4.3 sample selection

Course No.	Course Title	Section	No. of Samples (60/3)
BP 4904	Small Business Management	1	20
BP 4904	Small Business Management	2	20
BP 4904	Small Business Management	401	20
BP 4904	Small Business Management	402	20
BP 4904	Small Business Management	403	20
BP 4904	Small Business Management	404	20

BP 4904	Small Business Management	405	20
BP 4904	Small Business Management	406	20
BP 4904	Small Business Management	407	20
BP 4904	Small Business Management	408	20
BM 4804	Marketing Management	1	20
BM 4804	Marketing Management	2	20
BM 4804	Marketing Management	401	20
BM 4804	Marketing Management	402	20
BM 4804	Marketing Management	403	20
BM 4804	Marketing Management	404	20
BM 4804	Marketing Management	405	20
BM 4804	Marketing Management	406	20
BM 4804	Marketing Management	407	20
BM 4804	Marketing Management	408	20
BM 4804	Marketing Management	409	20
BM 4804	Marketing Management	410	20
		Total	400

4.3 Research Instrument/Questionnaire

This study utilized self administered questionnaire to collect information from samples. The respondent was the one who fills in the information asked. In structured data collection, a formal questionnaire is prepared and the questions are asked in prearranged order. It was the most popular data-collection method (Maholtra 2004). The questionnaire was simple to administer. Parasuraman et al. (2004) suggested that the data obtained is reliable because the responses are limited to the alternatives stated. The use of fixed-response

questions reduced the variability in the results that may be caused by differences in interviewers. Finally, coding, analysis and interpretation of data were relatively simple. Survey instruments used in this study were primarily synthesized and adapted from previously validated survey instrument. Questionnaire was divided into 7 parts.

4.4 Pretesting

Pretesting referred to the testing of the questionnaire on a small sample of respondents to identify and eliminate potential problem (Malhotra 2004). As a general rule, a questionnaire should not be used in the field survey without adequate pretesting. It was indispensable because even the most diligent questionnaire designer may make mistakes that can be detected only through an external evaluation. According to Parasuraman et al. (2004), all aspects of the questionnaire should be tested, including question content, wording, sequence, form and layout, question difficulty, and instructions. In addition, the respondents in the pretest was similar to those who were included in the actual survey in terms of background characteristics, familiarity with the topic, and attitudes and behavior of interest in this study. In other words, respondents for the pretest and for actual survey should be drawn from the same population. Thus, the researcher approached 30 students in an upper-level course, Small Business class in order to ask them to fill in the questionnaires. The responses obtained from the pretest was coded and analyzed by SPSS program to check reliability by using the coefficient alpha or Cronbach's alpha. Cronbach's alpha was the average of all possible split-half coefficients resulting from different ways of splitting the scale items (Alan 2002). This coefficient varies from 0 to 1, and a value of 0.6 or less generally indicated unsatisfactory internal consistency reliability. The result of Cronbach's alpha for items used are presented as follows:

Independent variables

Attitude toward behavior (Cronbach's alpha = 0.7992)

Subjective Norms (Cronbach's alpha = 0.6592)

Perceived Behavioral Control

Web skill (Cronbach's alpha = 0.7604)

Perceived web security (Cronbach's alpha = 0.9502)

Perceived ease of use (Cronbach's alpha = 0.7181)

Perceived usefulness (Cronbach's alpha = 0.8131)

Dependent variable

Behavioral Intention (Cronbach's alpha = 0.8692)

All item used are reliable because Cronbach's alpha for all items checked were higher than 0.60.

Undoubtedly, it was necessary for the researcher to make changes to the questionnaire based on the findings during the pretest. At this point, a researcher administers the questionnaire to targeted respondents, codes the information, tabulates the data, and runs appropriate statistical tests to look for relationships and differences among variables.

4.5 Collection of Data/ Gathering Procedure

The researcher collected both secondary data and primary data. Secondary data was any data originally generated for some purpose other than the present research objectives. The information from primary data can be rapidly and inexpensively obtained. Most of the secondary data used in this research was gathered from the journals, articles, textbooks, thesis and the report from the company, which were acquired prior to the primary data.

Primary data was collected via structured interviews with self-administered or close-formed questionnaires. The researcher originated primary data for the specific purpose of the research problem. Self-administered questionnaire is easy to obtain information from and be interpreted. In addition, it was less time consuming method in collecting information. Subjects were told that the study involved their reactions to online shopping. After being

seated in a spacious classroom, every 3rd student received the questionnaire. Proctors monitored subjects' compliance with instructions and care was taken to ensure that there was adequate spacing between the subjects. The data of respondents' who violated the instructions were discarded. After about 10 minutes (a pretest indicated that ten minutes was sufficient to complete the task), respondents were asked to return questionnaire.

4.6. Statistical Treatment of Data

Data collected was checked for completeness and validity. The data was analyzed in a readable and easily interpretable form. Using SPSS, the author analyzed the data using the following procedure.

The reliability of data obtained was tested by internal consistency methods. Cronbach's alpha test was used.

Frequency Table and Cross-Tabulation were used to study and identify demographic profile.

Frequency distribution was used to determine whether variables were appropriate for further analysis by running frequency distributions on all the variables. Frequency tables were particularly appropriate for examining data on nominal and ordinal scaled variables since they normally had only a limited set of discrete-response categories (Maholtra 2004).

Moreover, frequency tables offered some very specific benefits. First, they are very helpful in detecting certain types of coding errors. Second, frequency tables can provide valuable insights through comparisons with other relevant distributions. They can be especially helpful in understanding the composition of the respondent group and in looking for evidence of nonresponse error. Third, frequency tables can suggest potentially useful variable transformation.

In summary, frequency tables, while not as sophisticated as other data analysis techniques, can be just as insightful. Indeed, using complex techniques to analyze data

without first understanding what the data look like may produce meaningless results and lead to erroneous conclusions. Even such a simple thing as computing the mean value for a variable, without having a good idea about the variable's response distribution, can be meaningless.

For association between perceptual constructs and behavioral intention, ANOVA was used since perceptions were collected measure in interval scales, as commonly used in psychometric constructs (Parasuraman, 2004)

Analysis of Variance (ANOVA) was often the preferred method to test whether there was a significant difference among means of two or more independent samples. It was applicable whenever a study involves an interval or ratio-scaled dependent variable. ANOVA was a powerful tool in analyzing different types of scientific problems as well as problems in marketing research.

Beside, Pearson correlation coefficient was used to identify correlation between Attitudes, Subjective Norms, Perceived Behavioral Control, Perceived ease of use, and Perceived Usefulness constructs and Behavioral Intention. Pearson correlation coefficient, r , is the most widely used statistic, summarizing the strength of association between two metric variables, say X and Y . It was an index used to determine whether a linear, or straightline, relationship exists between X and Y . It indicated the degree to which the variation in one variable, X , is related to the variation in another variable, Y .

From a sample of n observations, X and Y , the Pearson correlation coefficient, r , can be calculated as:

$$r_{xy} = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{(n-1)S_x S_y}$$

Where r_{xy} = the correlation coefficient between X and Y

n = the sample size

\bar{x} = the sample means of variable x

\bar{y} = the sample means of variable y

x_i = values for any sample unit i

y_i = values for any sample unit I

s_x = standard deviations of variable x

s_y = standard deviations of variable y

Pearson correlation coefficients can range from +1 to -1. The sign of a correlation coefficient indicates the direction of association, whereas its magnitude indicates strength of association (Maholtra, 2004). The statistical treatment of data is displayed in table 4.4

Assumptions of using ANOVA

The test procedures of Analysis of Variance in this study are valid only if it is assumed that the dependent variable is normally distributed and that variances are equal for all treatment groups. In addition to these assumptions the following are also necessary:

1. The observations must be independent
2. ANOVA can construct a linear relationship only between the dependent measures.
3. The dependent variables should not have high multicollinearity because this indicates only redundant dependent measures and decreases statistical efficiency
4. The data for outliers should be examined and eliminated from the analysis, if at all possible, because their impact will be disproportionate in the overall results.

Multiple Regression Analysis

In order to investigate the model proposed in this study, the researcher used Multiple Regression Analysis. This is useful when more than one independent variable is likely to be associated with a dependent variable and ascertaining the contribution of all such independent variables in accounting for variation in the dependent variable is necessary (Hair et. al., 1998). A multiple regression equation can be presented with k independent variables as follows:

$$Y_i = a + b_1x_{1i} + b_2x_{2i} + \dots + b_kx_{ki}$$

Where Y_i is the predicted value of the dependent variable for some unit i ; $x_{1i}, x_{2i}, \dots, x_{ki}$ are values on the independent variables for unit i ; b_1, b_2, \dots, b_k are the regression coefficient (slopes) for the corresponding independent variables; and a is the Y-intercept representing the prediction for Y when all independent variables are set to zero. The slopes b through b_k have the same interpretation as in simple regression analysis. For instance, b represents the change in Y per unit change in X , assuming the values of all other variables remain the same. The Y-intercept and slopes are determined by using a least squares procedure. Clearly, we need objective criteria for evaluating the goodness of regression equation. One such criterion is called the coefficient of determination, denoted by R^2 . The coefficient of determination is a global measure of how much better predictions of the dependent variable made with the aid of the regression equation are than those made without it.

Assumption in Using Regression Analysis

The researcher should acknowledge the following assumptions before using multiple regression analysis.

1. Regression Analysis is capable of capturing only linear associations between dependent and independent variables
2. A regression equation with a significant R^2 value does not necessarily imply a cause-and-effect association between the independent and dependent variables. The researcher, not the regression technique, specifies which is the dependent and which is the independent variable.
3. A regression equation may not yield a trustworthy prediction of the dependent variable when the value of the independent variable at which the prediction is desired is outside the range of values used in constructing the equation.
4. A regression equation based on relatively few data points cannot be trusted. Sample size and the number of data points available are especially critical in multiple regression analysis. Including too many independent variables when the sample size is small will lead to an artificially high R^2 -value. A rule of thumb is to have at least 10 sample units for every independent variable included in the equation.
5. The ranges of data on the dependent and independent variables can affect the meaningfulness of a regression equation. The ranges for both variables must be sufficiently wide if the regression equation is to be useful. Deriving a meaningful regression line when data on either variables span only a narrow range will be difficult.

Table 4.4 Summary of statistical tests used for Data Analysis

Independent Variables	Itemized scales	Dependent Variables	Statistical procedure
Attitude toward behavior	1. The idea of Internet shopping is appealing to me 2. I like the idea of using the Internet store to purchase things I want. 3. Shopping online is a good idea	Behavioral Intention	Pearsons Correlation Coefficient Multiple Regression Analysis
Subjective Norms	1. People I know encourage me to shop online 2. My friends think it is cool to shop online 3. People I know would support me when I want to shop online 4. People I know buy online	Behavioral Intention	Pearsons Correlation Coefficient Multiple Regression Analysis
Web skill	1. I am extremely skilled at using the Internet. 2. I consider myself knowledgeable about good search techniques	Behavioral Intention	Pearsons Correlation Coefficient Multiple Regression

	<p>on the Internet.</p> <p>3. I know somewhat less about using the Internet than most users.</p> <p>I know how to find what I am looking for on the Internet.</p>		Analysis
Web security	<p>1. I would feel secure sending sensitive information across the World Wide Web.</p> <p>2. The World Wide Web is a secure means through which to send sensitive information.</p> <p>3. I would feel totally safe providing sensitive information about myself over the World Wide Web</p> <p>4. Overall, The World Wide Web is a safe place to transmit sensitive information</p>	Behavioral Intention	<p>Pearsons</p> <p>Correlation</p> <p>Coefficient</p> <p>Multiple Regression</p> <p>Analysis</p>
Perceived Ease of Use	<p>1. Navigating pages on the World Wide Web is easy for me.</p> <p>2. I find my interaction with pages on the World</p>	Behavioral Intention	<p>Pearsons</p> <p>Correlation</p> <p>Coefficient</p> <p>Multiple Regression</p>

	<p>Wide Web clear and understandable.</p> <p>3. It is easy for me to become skillful at navigating pages on the World Wide Web</p> <p>4. Overall, I find pages on the World Wide Web easy to navigate.</p>		Analysis
Perceived Usefulness	<p>1. Using the World Wide Web would enable me to accomplish my tasks more quickly.</p> <p>2. Using the World Wide Web would make it easier for me to carry out my tasks.</p> <p>3. I would find the World Wide Web useful.</p> <p>4. Overall, I would find using the World Wide Web to be advantageous.</p>	Behavioral Intention	<p>Pearsons Correlation Coefficient</p> <p>Multiple Regression Analysis</p>
Demographics	<p>Gender, What is your allowance per month?</p> <p>What is your monthly household income from all sources before taxes?</p>	Behavioral Intention	Descriptive and ANOVA

CHAPTER 5

DATA ANALYSIS AND RESEARCH RESULTS

The purpose of this chapter is to delineate the analysis of all data gathered from the respondents in order to gain insight into online consumer behavior, especially online purchase intent. The goal of this study was to find the association between each important independent variable derived from the Theory of Planned Behavior and Technological Acceptance Model such as demographics, subjective norms, attitude toward behavior, perceived behavioral control, perceived ease of use, perceived usefulness and the dependent variable, online purchase intent.

Three hundred and eighty students enrolled in upper-level undergraduate courses at ABAC School of Management, Assumption University participated in the study. Of the total 374 respondents who submitted complete surveys, approximately, 58.8 percent of the subjects were female and 41.2 percent were males. Parametric test is applied in this research. Subjects completed the survey independently, during various classroom sessions. The procedure involved systematically assigning subjects to fill out a self-administered questionnaire. Of all those distributed, 98.42% of the questionnaires were valid and used for analysis.

At first, the descriptive statistics were presented. Computing Cronbach's alpha assessed internal consistency of multi-item scales developed to gather data and the reliability of the data. Then, an ANOVA framework was used to examine the relationship between selected demographic variables, which are sex and income on the dependent variable online purchase intent.

In addition, Pearsons product-moment correlations were computed to test the hypothesized relationship (H3 to H8) of the independent variables and dependent variable. This technique was conducted to obtain the direction and statistical significance of the relationship.

5.1 Descriptive Statistics of Demographics and Other Variables

Table 5.1 Demographic Characteristics of the Respondents and other variables

Variables	Frequency (N = 374)	Percent
Sex		
Male	154	41.2%
Female	220	58.8%
Age		
18-20 years	49	13.1%
21-23 years	283	75.7%
24-26 years	40	10.7%
27-29 years	2	0.5%
Monthly Allowance		
Less than 5,000 Baht	118	31.6%
5,000 – 10,000 Baht	190	50.8%
Over 10,000 Baht	65	17.6%
Weekly Hours spent on Internet		
5 hours or less	122	32.6%
6 – 10 hours	96	25.7%
11 – 15 hours	69	18.5%
16 – 20 hours	37	9.9%
21 – 25 hours	23	6.1%
More than 25 hours	27	7.2%
Number of Internet Purchase		
0 – 1 times	275	73.5%
2 – 3 times	56	15.0%
4 – 5 times	19	5.1%
6 – 7 times	5	0.8%
More than 8 times	19	5.1%

Consumer Demographics

A demographic profile of the respondents, summarized in Table 5.1, indicates that 75.7% of the respondents were 21 to 23 years of age. More of the respondents were female, 58.8% versus 41.2%. The personal monthly allowance indicated by the respondent was 5001 – 6000 Baht for about 50.8% of respondents, followed by the group of less than 5,000 Baht for 31.6% of respondents. The majority of respondents in this survey were 21 to 23 years of age.

Other External Variables

Other External Variables are also summarized in Table 5.1. As is evident from Table 5.1, a little over 50% of the respondents indicated that they spent less than 5 hours or 6 – 10 hours a week online. Some 18.5% spend 11-15 hours while only about 7.2% spend more than 25 hours online.

On the contrary, there were quite a few numbers of respondents who indicated that they had purchased online over 8 times (5.1%). Responses indicated that 15% had purchased online 2-3 times, 5.1% purchased 4-5 times, and only 0.8% purchased 6-7 times. Most of the respondents had experienced Internet purchase at least once (73.5%).

5.2 Reliability of Data

Simple summary statistics for the six major constructs in this study are presented in Table 5.2 This table shows the mean, standard deviation, and inter-item reliability (Cronbach's alpha) estimate for each scale.

Table 5.2 Summary Statistics for model variables

Measure	Mean	SD	Pretest(α)	Cronbach's alpha (α)
Web Skill	4.38	1.15	.7604	.8697
Web Security	3.51	1.25	.9502	.8990
Perceived Ease of Use	4.40	1.12	.7181	.8954
Perceived Usefulness	5.28	1.18	.8131	.9176
Attitude Toward Online Purchase	4.05	1.36	.7992	.9201
Subjective Norms	3.21	1.33	.6532	.8556
Online Purchase Intent	3.42	1.46	.8692	.9426

The reliability estimates for the data from the pretest fall well above the generally accepted minimum value of .70, with the exception of subjective norms ($\alpha = .6592$), indicating that the items for each construct are internally consistent (Nunnally 1978).

Reliability and item-total correlation for each construct are displayed in table 5.3. The reliability and item-total correlation value of all constructs range from 0.63 to 0.88, which are considered high because all of them are higher than 0.4 value suggested by Parasuraman (2004). Parasuraman (2004) argued that the items composed in each construct strongly measures the same characteristic and would not be deleted if the item-total correlation value for each item is higher than 0.4.

Accordingly, construct 1; Perceived Behavioral Control was composed of two indirect measures of web skill and web security.

Factor 1; web skill was composed of four items pertaining to the search techniques on the Internet, subjects' skill at using the Internet, degree of knowledge, and know-how. The item-total correlation value ranged from 0.64 to 0.79, which meant that none of the items was deleted. The Cronbach's alpha was 0.87, which explained that the items used are highly consistent and also measure the same characteristic.

Factor 2; web security was composed of four items of secure means to send sensitive information, web safety, a safe place to transmit sensitive information, and perceived security. The item-total correlation value ranged from 0.76 to 0.80, which meant that none of the items was deleted. The Cronbach's alpha was 0.90, which resulted in high consistency among the items and the items effectively measure the construct.

Construct 2; perceived ease of use was composed of four items i.e., of ease of navigation, interaction with pages, and ease of acquiring navigating skill. The item-total correlation value ranged from 0.74 to 0.80, which meant that none of the items was deleted. The Cronbach's alpha was 0.90, which mean that the items used are highly consistent and also measure the same characteristics of the construct.

Construct 3, perceived usefulness was composed of four items concerning task accomplishment, usefulness, and advantage of use. The item-total correlation value ranged from 0.75 to 0.86. Therefore, none of the items was deleted. The Cronbach's alpha was 0.92, which mean that the items used are highly consistent and also measure the same characteristics of the construct.

Construct 4;attitude towards online purchase intent was composed of four items concerning likeness of online shopping. The item-total correlation value ranged from 0.76 to 0.84. Therefore, none of the items was deleted. The Cronbach's alpha was 0.92, which mean that the items used are highly consistent and also measure the same characteristics of the construct.

Construct 5;subjective norm was composed of four items concerning approval and support from referents. The item-total correlation value ranged from 0.63 to 0.75. Therefore, none of the items was deleted. The Cronbach's alpha was 0.86, which mean that the items used are highly consistent and also measure the same characteristics of the construct.

Construct 6;online purchase intent was composed of four items. The item-total correlation value ranged from 0.81 to 0.87, which were the highest among the others. Therefore, none of the items was deleted. The Cronbach's alpha was 0.95, which mean that the items used are internally consistent and measure the same characteristics of the construct.

Table 5.3 Reliability and Item-Total Correlation

Multi-items scale	Constructs						
	Web Skill ($\alpha = .87$)	Web Security ($\alpha = .90$)	PEOU ($\alpha = .90$)	PU ($\alpha = .92$)	Attitude towards online purchase intent ($\alpha = .92$)	Subjective norms ($\alpha = .86$)	Online purchase intent ($\alpha = .95$)
I consider myself knowledgeable about good search techniques on the internet.	.79						
I am extremely skilled at using the Internet.	.75						
I know somewhat more about using the Internet than most users.	.71						
I know how to find what I am looking for on the Internet.	.64						
I would feel totally safe providing sensitive information about myself over the World Wide Web.		.75					
The World Wide Web is a secure means through which to send sensitive information.		.79					
Overall, the World Wide Web is a safe place to transmit sensitive information.		.80					
I would feel secure sending sensitive information across the World Wide Web.		.76					
Navigating pages on the World Wide Web is easy for me.			.74				
I find my interaction with pages on the World Wide Web is easy for me.			.74				
It is easy for me to become skillful at navigating pages on the World Wide Web.			.80				
Overall, I find pages on the World Wide Web easy to navigate.			.80				
Using the World Wide Web would enable me to accomplish my tasks more quickly.				.75			
Using the World Wide Web would make it easier for me to carry out my tasks.				.83			
I would find the World Wide Web useful.				.86			
Overall, I would find using the World Wide Web to be advantageous.				.81			
I like the idea of using the Internet store to purchase things I want.					.76		
Shopping online is a good idea.					.84		
Shopping online would be fun for its own sake.					.84		
Shopping online would make me feel goods					.82		
People I know encourage me to shop online.						.75	
My friends think it is cool to shop online.						.68	
People I know would support me when I want to shop online.						.75	
People I know buy online.						.63	
I would use the World Wide Web for purchasing a product.							.87
Using the World Wide Web for purchasing a product is something I would do.							.87
I could see myself using the World Wide Web to buy a product.							.88
I will purchase online the next time I need a product.							.83
I will definitely try Internet shopping.							.81

Table 5.4 Summary statistics for web skill

Measure	Mean	SD
Web Skill Score	4.38	1.15
I am extremely skilled at using the Internet	4.58	1.43
I consider myself knowledgeable about good search techniques on the Internet	4.31	1.33
I know somewhat more about using the Internet than most users	3.77	1.32
I know how to find what I am looking for on the Internet	4.84	1.37

Web skill was assessed on a 7-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions as shown in Table 5.4 Web skill mean was equal to 4.38 and standard deviation was equal to 1.15. Most questions were rated slightly above 4, which mean that the respondents rather neither agreed nor disagreed about their possession of Web skill. The results also revealed that the respondents were uncertain that they were extremely skilled at using the Internet, or had good search techniques on the Internet. Only the question, 'I know somewhat more about using the Internet than most users' was rated slightly lower than 4 (mean = 3.77), which mean that they tend not to be more knowledgeable about using the Internet than most users. It can be interpreted that they need to acquire additional skills in order to develop fluency in surfing the Web.

However, only the question 'I know how to find what I am looking for on the Internet' were rated close to slightly agree (4.84). It can be interpreted that they did possess some search skill to find what they wanted on the Web.

In general, respondents did not feel so confident about their Web skill.

Table 5.5 Summary statistics for web security

Measure	Mean	SD
<i>Web Security Score</i>	<i>3.51</i>	<i>1.25</i>
I would feel secure sending sensitive information across the World Wide Web	3.69	1.48
The World Wide Web is a secure means through which to send sensitive information	3.72	1.43
I would feel totally safe providing sensitive information about myself over the World Wide Web	3.33	1.43
Overall, the World Wide Web is a safe place to transmit sensitive information	3.30	1.38

Web security was assessed on a 7-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions as shown in Table 5.5. Web security score overall mean was at 3.51 (Standard deviation = 1.25) on the 7-point scale, which suggested that respondents perceived that the World Wide Web were relatively not secure. The mean score of each item indicated the Web security evaluation of respondents as follows, the subjects slightly disagreed that they would feel secure sending sensitive information across the World Wide Web, they felt slightly insecure about sending sensitive information through the World Wide Web, and they did not feel totally safe providing sensitive information about themselves over the World Wide Web.

Also, they slightly disagreed that the World Wide Web is a safe place to transmit sensitive information.

In sum, the subjects perceived that the security of the Web was relatively low.

Table 5.6 Summary statistics for perceived ease of use.

Measure	Mean	SD
<i>Perceived Ease of Use Score</i>	4.40	1.12
Navigating pages on the World Wide Web is easy for me	4.33	1.35
I find my interaction with pages on the World Wide Web is easy for me	4.47	1.24
It is easy for me to become skillful at navigating pages on the World Wide Web	4.31	1.31
Overall, I find pages on the World Wide Web easy to navigate	4.49	1.25

Perceived ease of use was assessed on a 7-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions. The mean and standard deviation of perceived ease of use construct was shown in table 5.5. Web security score mean was equal to 4.40 (Standard deviation = 1.12) and considered as slightly neutral on a 7-point scale. The respondents tend to neither agree nor disagree that navigating the World Wide Web is easy in terms of skill required for navigating pages on World Wide Web and interaction with the web.

In sum, the subjects almost agreed that navigating the World Wide Web was easy.

Table 5.7 Summary statistics for perceived usefulness.

Measure	Mean	SD
<i>Perceived Usefulness</i>	<i>5.28</i>	<i>1.18</i>
Using the World Wide Web would enable me to accomplish my tasks more quickly	5.19	1.37
Using the World Wide Web would make it easier for me to carry out my tasks	5.06	1.31
I would find the World Wide Web useful	5.49	1.31
Overall, I would find using the World Wide Web to be advantageous	5.37	1.29

Perceived usefulness was evaluated on a 7-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions. The mean and standard deviation of perceived usefulness construct was shown in table 5.7. Perceived Usefulness score mean was at 5.28 (Standard deviation = 1.18) and considered as relatively high on a 7-point scale. The four items' means showed that the respondents tend to slightly agree that using the World Wide Web is very useful and advantageous.

More specifically, they slightly agreed that using the World Wide Web would help them accomplish the tasks at hand faster and easier.

In sum, perceived usefulness of the Internet by respondents is relatively high.

Table 5.8 Summary statistics for Attitude towards Online Purchase.

Measure	Mean	SD
<i>Attitude Toward Online Purchase Score</i>	4.05	1.36
I like the idea of using the Internet store to purchase things I want	4.01	1.55
Shopping online is a good idea	4.32	1.55
Shopping online would be fun for its own sake	4.10	1.46
Shopping online would make me feel goods	3.77	1.46

The respondents were requested to indicate their Attitude towards online purchase on a 7-point scale anchored 'strongly disagree' to 'strongly agree'. The mean and standard deviation of Attitude towards online purchase construct was shown in Table 5.8. Attitude towards online purchase score mean was at 4.05 (Standard deviation = 1.36) and considered as no predisposition on a 7-point scale. Accordingly, the respondents reported that they neither agreed nor disagreed that they like the idea of using the Internet store to purchase things. Moreover, they perceived that shopping online is a good idea and fun.

Yet, only the question 'Shopping online would make me feel good' was rated at 3.77, which was below 4 point. It can be interpreted that respondents might not feel good about shopping online.

Ultimately, the respondents tend not to be favorably predisposed toward online purchase.

Table 5.9 Summary statistics for Subjective Norms.

Measure	Mean	SD
<i>Subjective Norm Score</i>	3.21	1.33
People I know encourage me to shop online	3.05	1.60
My friends think it is cool to shop online	3.39	1.55
People I know would support me when I want to shop online	3.24	1.60
People I know buy online	3.14	1.72

The subjective norms score mean was equal to 3.21 (SD = 1.33), which is slightly low on the 7-point scale and the lowest among the six constructs. The respondents tend to slightly disagree that their referents would encourage them to shop online (mean = 3.05). In addition, they affirmed that their referents would rather not buy online (mean = 3.14). They also perceived that their friends might think that to shop online was not cool (mean = 3.39) and might slightly not support them to shop online (mean = 3.24).

In sum, it is rather hard to gain support from their significant others for online purchase.

Table 5.10 Summary statistics for Online Purchase Intent.

Measure	Mean	SD
<i>Online Purchase Intent Score</i>	3.42	1.46
I would use the World Wide Web for purchasing a product	3.32	1.60
Using the World Wide Web for purchasing a product is something I would do	3.49	1.59
I could see myself using the World Wide Web to buy a product	3.48	1.59
I will purchase online the next time I need a product	3.16	1.59
I will definitely try Internet shopping	3.67	1.66

The subjects were required to indicate their online purchase intent on a 7-point scale anchored 'strongly disagree' to 'strongly agree'. The mean and standard deviation of online purchase intent construct was shown in table 5.10. Online purchase intent score mean was at 3.42 (Standard deviation = 1.46) and considered as slightly neutral on a 7-point scale. Most questions were rated approximately at 3.5. Accordingly, the respondents slightly disagreed that they would intend to use the Internet store to purchase things. Also, they slightly disagreed on trying Internet Shopping. Intent to use Internet for future purchase remained unexpected (mean = 3.16).

Ultimately, online purchase intent is relatively low.

5.3 Hypothesis Testing

In order to explore the hypotheses, a series of Pearson product-moment correlation and an Analysis of Variance (also independent sample test) were conducted. Independent sample test was used to test the first hypothesis (see table 5.11 and 5.12). An Analysis of Variance was computed to test hypothesis 2 (see table 5.13 and 5.14). Pearson product-moment correlation was conducted to test for hypothesis 3 to hypothesis 8 (see table 5.16 and 5.17).

Group A: Demographics and Online Purchase Intent

Gender

H₁₀: There is no difference between gender and online purchase intent

H_{1a}: There is a difference between gender and online purchase intent

Table 5.11 Test of Group Means

Group Statistics					
	sex	N	Mean	Std. Deviation	Std. Error Mean
Online Purchase Intention Score	male	154	3.8506	1.41576	.11409
	female	220	3.1164	1.41392	.09533

Table 5.12 Independent Sample T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Online Purchase Intention Score	Equal variance assumed	.000	.996	4.940	372	.000	.7343	.14864	.44201	1.02656
	Equal variance not assumed			4.939	329.137	.000	.7343	.14867	.44182	1.02675

Gender was expected to influence online purchase intent. So, it is important to know whether there is a significance differences in means of online purchase intent, between male and female. The Independent sample test comparing the means of online purchase intent score of the two groups of gender (male and female) produced a significant result. As shown in table 5.11, the t-test generated a t statistics of 4.94 and p-value of 0.00, which is less than $\alpha = 0.05$. These means confirm that male subjects tend to have higher online purchase intent than female subjects do, even though they indicated slight disagreement to purchase online (see table 5.12).

Consequently, hypothesis_{1a} is supported. The null hypothesis is rejected.

Income

H₂₀: There is no difference between income and online purchase intent.

H_{2a}: There is a difference between income and online purchase intent.

It was believed that income differences affect the online purchase decision. Normally, higher income group tends to possess higher intention to shop online. To examine this possibility, an ANOVA was conducted using respondents' different income level and online purchase intent score. According to table 5.14, there were three income groups to be tested as follows: first group, less than 5,000 Baht, second group, 5,000 – 10, 000 baht, and third group, Over10,000. The ANOVA test comparing means of each group.

The results do not support this reasoning ($F = 1.952$, $p = 0.143$, not significant). In this case, the researcher would conclude that the income and online purchase intent are not significantly related. Thus, Hypothesis 2_a is not supported. The null hypothesis is not rejected.

Table 5.13 Analysis of Variance

ANOVA

Online Purchase Intention Score					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.293	2	4.147	1.952	.143
Within Groups	786.034	370	2.124		
Total	794.328	372			

Table 5.14 Online Purchase Intent Score

Online Purchase Intention Score		
Scheffe ^{a,b}		
allowance	N	Subset for alpha = .05
less than 5000	118	3.3034
5000 - 10000	190	3.3958
over 10000	65	3.7385
Sig.		.102

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 103.014.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Subsequently, Pearson product-moment correlations were computed to test hypothesis 3 – Hypothesis 8. In this analysis, all constructs showed significant correlation as shown in table 5.15, with the correlation coefficients ranging from 0.198 for perceived usefulness, to 0.66 for Attitude towards online purchase.

Table 5.15 Correlation Matrix

	Online Purchase Intention Score	Attitude Toward Online Purchase Score	Subjective Norm Score	Web Skill Score	Web Security Score	Perceived Ease of Use Score	Perceived Usefulness
Online Purchase Intention Score	1	.660** (.000)	.658** (.000)	.258** (.000)	.246** (.000)	.292** (.000)	.198** (.000)
Attitude Toward Online Purchase Score		1	.607** (.000)	.325** (.000)	.299** (.000)	.369** (.000)	.304** (.000)
Subjective Norm Score			1	.139** (.007)	.244** (.000)	.162** (.002)	.041 (.432)
Web Skill Score				1	.289** (.000)	.660** (.000)	.483** (.000)
Web Security Score					1	.354** (.000)	.165** (.001)
Perceived Ease of Use Score						1	.634** (.000)
Perceived Usefulness							1

Group B: Attitude toward online purchase and Online Purchase Intent

H3₀: There is no relationship between attitude toward online purchase and online purchase intent.

H3_a: There is relationship between attitude toward online purchase and online purchase intent.

Hypothesis 3₀ is the test for a significant correlation between attitude toward online purchase and online purchase intent. Since the value $r = 0.66$, it indicates that there is a moderate level of relationship between attitude toward online purchase and online purchase intent. The p-value associated with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. In conclusion, the alternative hypothesis was supported.

Group C: Subjective Norms and Online Purchase Intent

H4₀: There is no relationship between subjective norms and online purchase intent.

H4_a: There is relationship between subjective norms and online purchase intent.

Hypothesis 4₀ is the test for a significant correlation between subjective norms and online purchase intent. Since the value $r = 0.658$, it indicates that there is a moderate level of relationship between subjective norms and online purchase intent. The p-value consistent with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. Hence, the result supported the alternative hypothesis.

Group D: Perceived Behavioral Control and Online Purchase Intent

H5₀: There is no relationship between Web skills and online purchase intent.

H5_a: There is relationship between Web skills and online purchase intent.

Hypothesis 5₀ is the test for a significant correlation between Web skills and online purchase intent. Since the value $r = 0.258$, it indicates that there is a low level of relationship between Web skills and online purchase intent. The p-value consistent with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. Thus, the alternative hypothesis was supported.

H6₀: There is no relationship between Web security and online purchase intent.

H6_a: There is relationship between Web security and online purchase intent.

Hypothesis 6₀ is the test for a significant correlation between Web security and online purchase intent. Since the value $r = 0.246$ indicating that there is a low level of relationship between Web security and online purchase intent. The p-value consistent with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. Thus, the alternative hypothesis was supported.

Group E: Perceived Ease of Use/Perceived Usefulness and Online Purchase Intent

H7₀: There is no relationship between Perceived Ease of Use and online purchase intent.

H7_a: There is relationship between Perceived Ease of Use and online purchase intent.

Hypothesis 7₀ is the test for a significant correlation between Perceived Ease of Use and online purchase intent. Since the value $r = 0.292$ indicating that there is a low level of relationship between Perceived Ease of Use and online purchase intent. The p-value consistent with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. Thus, the alternative hypothesis was supported.

Thus, the result is consistent with previously developed theory of TAM.

H8₀: There is no relationship between Perceived Usefulness and online purchase intent.

H8_a: There is relationship between Perceived Usefulness and online purchase intent.

Hypothesis 8₀ is the test for a significant correlation between Perceived Ease of Use and online purchase intent. Since the value $r = 0.198$ indicating that there is considerably a low level of relationship between Perceived Ease of Use and online purchase intent. The p-value associated with the test of significant is 0.00, which is less than the set criterion $\alpha = 0.05$. The null hypothesis was rejected at 5% level of confidence. Thus, the alternative hypothesis was supported. Hence, perceived usefulness was positively correlated to online purchase intent.

5.4 Further Model Analysis

Table 5.16 Model summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.736 ^a	.542	.534	.99052	.542	70.321	6	357	.000

a. Predictors: (Constant), Subjective Norm Score, Perceived Usefulness, Web Security Score, Web Skill Score, Attitude Toward Online Purchase Score, Perceived Ease of Use Score

b. Dependent Variable: Online Purchase Intention Score

Table 5.17 ANOVA

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	413.962	6	68.994	70.321	.000 ^a
	Residual	350.263	357	.981		
	Total	764.225	363			

a. Predictors: (Constant), Subjective Norm Score, Perceived Usefulness, Web Security Score, Web Skill Score, Attitude Toward Online Purchase Score, Perceived Ease of Use Score

b. Dependent Variable: Online Purchase Intention Score

Table 5.18 Coefficients

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.215	.286		-.753	.452			
	Web Skill Score	.061	.062	.048	.979	.328	.263	.052	.035
	Web Security Score	.000	.047	.000	.006	.995	.253	.000	.000
	Perceived Ease of Use Score	.060	.074	.047	.817	.415	.279	.043	.029
	Perceived Usefulness	.008	.060	.007	.139	.889	.183	.007	.005
	Attitude Toward Online Purchase Score	.403	.053	.376	7.608	.000	.659	.374	.273
	Subjective Norm Score	.448	.051	.410	8.856	.000	.652	.424	.317

a. Dependent Variable: Online Purchase Intention Score

As seen in the first part of the analysis, all of the null hypotheses are rejected indicating that there are significant interrelationships among the independent variables. The correlation matrix reported earlier may not sufficiently explain the model for predicting online purchase

intent from other independent variables. It is also quite essential to examine the relative importance of each independent variable on the dependent variable. A multiple regression analysis was conducted to answer these questions. Based on the model summary, it is found that when all independent variables are included into the model, the coefficient of determination, r^2 , of the model is 0.54, meaning that these 7 independent variables explain 54% of the total variation in the online purchase intent. It was also revealed that attitude toward online purchase and subjective norm are the strongest predictor among all variables because their p-value coefficients are statistically significant at $\alpha = 0.05$ level. At this point, it seems that an overall fit of the model by the inclusion of all variables proposed is not a good regression model. Only attitude toward online purchase and subjective norms should be chosen to fit the model for better prediction model.

Therefore, the stepwise regression was conducted to select variables for inclusion in the regression model that starts by selecting the best predictor of the dependent variable (see Appendices). Based on the t test for individual, $H_0: \beta_1 = 0.00$, it was found that only Attitude toward Online Purchase Intent and Subjective Norms are significant at $\alpha = 0.05$ level. Other independent variables do not significantly explain the variation of the online purchase intent. Consequently, the best model can be presented in the form of the equation using BETA coefficient as follow:

Online Purchase Intent = 0.405 (Attitude Toward Online Purchase Intent) + 0.412 (Subjective Norms)

In sum, the inclusion of Attitude toward Online Purchase Intent and Subjective Norms were reported to strongly enhance the prediction of the model with the coefficient of determination $r^2 = 0.537$. The BETA coefficients indicated that subjective norms is relatively

more important than attitude toward online purchase intent when they are used in predicting online purchase intent.



CHAPTER 6

SUMMARY OF FINDINGS, DISCUSSION, RECOMMENDATION, AND CONCLUSION

This chapter is comprised of seven parts. The first part presents the summary of findings. The results obtained from this study are discussed in the second part. The third part focuses on the managerial implication and related recommendation. The fourth part builds on the theoretical perspectives. The study's limitations and conclusion are delineated in the fifth and sixth part respectively. The last part included in this thesis presents the idea for further research.

6.1 Summary of Findings

The study was designed to test hypotheses regarding the correlations between the set of integrated independent variables and online purchase intent. Study results confirm prior research regarding theory of planned behavior and technological acceptance model. Results obtained from this study indicate that there is a positive relationship between online purchase intent and each independent variables such as demographics, attitude towards online purchase intent, subjective norms, perceived behavioral control, perceived ease of use, perceived usefulness. In addition, it was found that all of the integrated independent variables vehemently predict online purchase intent. Eight hypotheses proposed in this study were supported by the data as seen in (appendices).

However, multiple regression analysis was used to further assess the model and stepwise regression was then used to exclude the variables that cannot explain the variance in the online purchase intent. Multiple Regression Analysis revealed that the research model can explain 54.2% of the variance in intention to purchase, which has a substantial improvement over model performance of TPB and TAM alone reported by other related studies Salisbury et al., (2001); 19%, Chau (2001); 40%, augmented TAM (system specific; 50%). According to

the Stepwise Regression. The researcher found that the best predictors, which moderately affect online purchase intent, are attitude towards online purchase intent, subjective norms and perceived ease of use, respectively.

6.2 Discussion

The detailed discussion of each variable is as follow.

Demographics

As reported in earlier studies (Dholakia and Uusitalo, 2002), the influence of gender on online purchase has been noticed. Pertaining to the postindustrial economies of the west, followed by the east, the women have become the primary shopper for the household (Kwak et al., 2002). Therefore, it seems that women should also do more online purchase than men. Contrary to this assumption, the study revealed that male subjects tend to have higher online purchase intent than female subjects do ($t = 4.94, p = 0.000$). The study seems to suggest that male-female differences that exist in the perception of store shopping may exist in online shopping, which concur with the result of the earlier study (Kunz, 1997; Gefen and Straub 1997; Katz and Aspden; 1997; Blake et al., 2003). The line of reasoning here is that men might be more versatile, experienced and comfortable in using the Web (Kau Tang and Ghose, 2003; Korgaonkar and Wolin, 2002)

In case of income, the results obtained from this study do not support the hypothesis. Income differences do not affect the online purchase decision. The results do not support this reasoning ($F = 1.952, p = 0.143$). It can be explained that higher income group tends not to possess higher intention to shop online. This result does not corroborate with prior research (Katz and Aspen, 1997; Trocchia and Janda, 2000; Morganosky and Cude, 2000; Sultan and Henrichs, 2000; Pramongkit et al., 2002; Wu 2002). The related explanation is that the respondents' level of intention to purchase does not depend on the level of income. Perhaps,

those who are not in higher income level would spend more money online or people who possess the same wealth may possess different level of spending online, and vice versa.

Attitude toward online purchase intent

Attitude toward online purchase intent was found to have significant positive impacts on online purchase intent but the respondents tend not to be favorably predisposed toward online purchase. This results obtained from correlation analysis indicates that attitude toward online purchase intent is highly related to consumer's intention to purchase ($r = 0.66, p < 0.01$). This result is in line with the prior research reported by Kimmerly and McCord (2002), and Lynch et al. (2001).

In addition, attitude toward online purchase is among the strongest explanatory predictors for online purchase intent as a result of the assessment of stepwise regression. This finding suggests the importance of developing a positive attitude toward online purchase. It is probably true that if an individual does not like the idea of using the Internet store to purchase things in general, or else shopping online is not conceived as a good idea, fun and entertaining, this negative attitude may already preclude him/her from online purchase intent.

Subjective Norms

The impact of social influence on online purchase intent is especially interesting since the Subjective Norms scale was considered as weak from a psychometric standpoint as compared to other measures recommended for Theory of Planned Behavior (Davis, 1989). Contrary to the aforementioned fact, Subjective Norms is statistically significant ($r = 0.658, p < 0.01$). It implies that subjective norms is crucial in encouraging consumers to shop online and to repurchase products from that website. However, the respondents perceived that it is rather hard to gain support from their significant others for online purchase.

Perceived Behavioral Control

Web skill: According to web skill total mean score, respondents perceived that they possessed some level of web skill. Yet, they consider that they also need to acquire additional skill so as to adapt to changes in Web technology. There is considerably low level of correlation between Web skill and Online Purchase Intent ($r = 0.258, p < 0.01$). Results obtained from the study are contrary to the previous studies. It can be said that the respondents would feel their Web skill progressed with the more they use the Internet.

Web security: As a result of the study, the subjects perceived that the security of the Web was relatively low which generally conform to the given results in the prior study (Vijayasathy and Jones, 2000). However, the finding that Web security as perceived behavioral control enhances intent to purchase is important ($r = 0.246, p < 0.01$). The marketing practitioners who followed the trend of Internet commerce should pay attention to this factor. Apparently, whether or not the customers will do the Internet shopping relies on the feeling about their information on credit card numbers and other sensitive information are safe.

Perceived Ease of Use.

It is of particular interest that research findings show a significant relationship between perceived ease of use and online purchase intent. It is revealed that perceived ease of use correlated with online purchase intent ($r = 0.292, p < 0.01$), even though the level of relationship is quite low. Comparing to the other independent variables, perceived ease of use may not be as critical as expected.

Another interesting result is that perceived ease of use has a positive impact on online purchase intent only if it is incorporated with attitude toward online purchase intent and subjective norm according to the stepwise regression, but it lacks explanatory power when it is solely used to predict online purchase alone. Perhaps, an individual may find navigation

pages on the Internet store is easy when the pages on the World Wide Web are favorable and make an individual feel good. Also, an individual might need confirmation from their friend about the ease of use to access Internet store.

Yet, there are some problems regarding the aforementioned findings. The results from the study did not conform with the prior study. Actually, the perceived ease of use should be less important than perceived usefulness (Davis, 1989). In this case, it was found that perceived ease of use is far more effective to explain the variance of online purchase intent. It could be explained that Thai consumers pay more attention to how easy the Internet use is than its usefulness.

Perceived Usefulness

Perceived usefulness appear to be interesting. At first, the linkage between the perceived usefulness and online purchase intent is statistically significant ($r = 0.198$, $p < 0.001$), although noticeably smaller than would be expected given the correlation noted in prior studies ($r = 0.46$; Davis 1989). A plausible explanation is that in order to increase the online purchase intention, which relates closely to the actual purchase, it is important that the Internet should be perceived as useful.

However, some interesting findings are worth noting. As further analyzed by the multiple regression analysis, perceived usefulness has no significant impact on online purchase intent. Perceived usefulness does not enhance the model prediction, which did not concur with the prior research. Davis (1989) attested that perceived usefulness has a strong direct relationship with online purchase intent. It can be said that perceived usefulness slightly influences online purchase intention. In other words, Thai consumer's intent to purchase online is not strongly based on it.

In short, TAM model focuses on usage intention of the technology, as opposed to purchase intent. In an online shopping context, usage intention is broader in scope than

purchase intention. This is because a person may use an online store not only to purchase but also to learn about products and services. Hence, respondents do not intend to purchase items at the online store, even though they perceive the store as useful.

Another line of reasoning is that the less significant relationship between perceived usefulness and online purchase intent could be attributed to another mediating construct, intent to gather information on the Web. These may bear further investigation.

Based on the cultural perspectives, the additional line of reasoning is that Thai consumers prefer conventional shopping to Internet shopping (Muthitachareon and Palvia, 2002). It means that E-commerce in Thailand, while modestly expanding, is still in its infancy as compared to other developed countries (Taylor Nelson Sofres, 2002). One of the reasons is that Thai consumers can find various kinds of stores that are open even all night. As a result, they might not perceive the Internet as useful. In conclusion, the usefulness aspects of the Internet stores are overshadowed by the prevailing business practices and people adaptation to these practices.

6.3 Managerial Implications and Recommendation

This finding is of particular importance to merchants who are new to the Internet as a channel of distribution, as well as to existing online merchants who wish to exploit a larger or more diversified consumer market. For those companies making calculated efforts to target global buyers, the results reveal common themes in online consumer perceptions and buying patterns of Thai (less than 25 years old) consumers' purchase intent. The implications of this study are noteworthy for academics and practitioners alike.

As reported in earlier studies, the influence of gender on online purchase has been noticed. The study reports that men do online purchase more than women. As the role of male and female changes this result will be less significant in the future.

Based on the research results, the most important variables, which significantly impact online purchase intent, are subjective norms and attitude toward online purchase intent. Marketing practitioners should most likely focus on improving these two variables in order to increase online purchase intent.

According to subjective norms, it implies that Thai consumers can be encouraged to buy online because of social influence. They use the Internet to buy the product if their significant others support them and also shop online. They also rely more on social information in forming intent to purchase. Practical alternatives such as, the source credibility of social information to increase online purchase intent or designing marketing communication campaigns that raise the prestige associated with Internet shopping to increase identification should be developed and tested. More specific, marketing practitioners can make society feel that online shopping is in trend which everyone should follow, or it is cool to buy online, If people gain status and acceptance from other people surrounding them when they buy online, they will intend to buy. Web store should be designed to create a new culture of shopping.

Similar to the subjective norms, attitude towards online purchase intent can be managed in general in a way that management can cultivate a favorable culture towards using Internet for shopping. Top management can also provide positive support to consumers in online purchase. By cultivating a positive attitude towards online purchase, in general, it will help successful implementation of different online purchases, as end users are more likely to perceive those e-retailers as useful and easy to use, and hence have higher intentions to use them. Positive site experience, evoking positive feelings during the shopper's visit may be the competitive advantage vendors are looking for, deliver potential advantages over other alternative shopping formats such as retail stores. In order to make the online shopping more fun and make Thai consumers feel good, just as the traditional high street store uses window

displays and fascia design to attract the customer, so should Web sites. Also, attractive sound and pictures design, video, color, humor, music, games, animation, and all of other aspects of interactive networked multimedia should be used to engage with the customers. And, marketers can go still further creating product links, images and ideas that would be extremely difficult to achieve in a real store.

For Web skill, we should provide on-the-shop training program in order to improve skill related to navigation. Detailed instructions should be given on the Web in order to guide the consumers to accurately find the product. Also marketers should update the customer with the latest technology that will make their Internet life easier such as new search engine technology.

Earlier research studies (Vijayasathy and Jones, 2000) identify security as a big consumer concern. Also, the results obtained from this study directionally supported that web security has a positive impact on online purchase intent. If consumers feel that it is not safe to provide sensitive information over the World Wide Web, they will not purchase online. In other words, they basically do not feel that online payment is safe. The marketing practitioners, especially the Web page designers must pay more attention to on the security measure. E-retailers needs to consider two factors that might help alleviate the problem of web security. These factors are trust from the consumer and protection of the captured information. The e-retailers should display information messages about the measures taken to safeguard against fraud any time the customer is at a screen in which they are being asked to provide sensitive information. The Web sites can encourage the customers to click on a link to their secure server to finalize their purchases. Third party assurance might be another option. Customer-service guarantees and Third-party certifications of a site's security, former customer testimonial may be the most important improvement a site administrator can make.

Pertaining to perceived usefulness, the results obtained from the study confirms that the consumers will intend to shop online if the Internet helps the consumers to accomplish shopping task more quickly and make one's shopping task easier, even though the magnitude of the relationship is quite low. Thus, the Internet should provide the shopper advantages in some form. The practitioners should focus on creating a relative advantage for the consumer who uses the Internet medium versus other modes of shopping. This can be achieved by offering consumers lower prices and bargain prices, more enticing promotions and deals, greater product variety and unlimited selections, quicker and more comprehensive comparisons, better sales and post sales support, and especially reduced shopping effort.

Although many previous studies have found that usefulness is more important than ease of use, the results from this study confirm the importance of the influence of perceived ease of use on online purchase. The relevant managerial implication is that creative promotional programs should be implemented to create an environment that facilitates the prospects to visits a set of specific site and then intend to purchase online. Therefore, e-retailers should continue to put a disproportionate amount of emphasis on ease of use, for instance, in developing a good user-interface, appropriate navigational structure, and other elements of human-computer interaction. Meeting shopper expectations for price, selection and convenience, a virtual shopping directory that classifies the retailers according to the products offered would make buyer perceive online shopping easier. Another interesting idea to increase the ease of use to consumers is providing features like express checkouts and recommender systems.

Ultimately, online purchase intent of the respondents tends to be low. This can also be explained by the low level of diffusion of E-commerce in Thailand.

6.4 Theoretical Contribution

Despite a large volume of literature discussing the web-based shopping behavior, there is a scarcity of empirical research related to online behavior of Thai consumers. On the theoretical front, this study makes several contributions to the literature. First, it advances the literature by applying the selected theories, which are TPB and TAM to the Thai context. Derived from the selected theoretical models, the research has identified eight relevant constructs that may influence intent to purchase products on the World Wide Web and then develops a model to examine the relationships between these constructs and online purchase intent of Thai consumers. Initial effort indicates that there is a correlation between all eight constructs proposed and the online purchase intent of Thai consumers. The study also highlights that the two constructs derived from TAM, which are Perceived Ease of Use and Perceived Usefulness are weakly correlated with the online purchase intent. In addition, these two constructs lack of predictive power and are later excluded from the model. This result is inconsistent with the previous studies, which highly rate these two constructs as very sophisticated in explaining online purchase intent. It implies that TAM might not be the appropriate model for the study of Thai online behavior at this time, even though TAM is the latest model used in various studies related to online shopping behavior around the world.

Second, the study also highlighted the more important variables that will help explain the online purchase intent are the two constructs derived from TPB, Attitude toward Online Purchase Intent and Subjective Norms. There is a moderate level of relationship between these two variables and online purchase intent. In addition, these two variables are found to be the best predictors of online purchase intent of Thai consumers as well as the salient beliefs about Web-based shopping.

However, the incorporation of the two theoretical models which help form the hybrid intention model really improve the predictive power of the use of each model alone to explain the behavior in Thai context.

In sum, this study confirms that the hybrid intention model proposed is sophisticated for studying in Thai context.

6.6 Conclusion

This study sought empirical support for a research model that augmented the well-known Technological Acceptance Model by incorporating the variables from the Theory of Planned Behavior, which are perceived behavioral control, attitude towards online purchase, and subjective norms. Empirical evidence supporting the proposed model was found. The overall model explained half of the variances in behavioral intention (54.2%). This figure is relatively high compared to other related studies. However, the result obtained from the multiple regression analysis might be affected by multicollinearity, which lowered the coefficient of determination of some dependent variables such as Web security, Web skill, PEOU, and PU. This may bear further investigation.

In order to ensure that the full potential of the Internet as a commercial medium is realized, it is imperative to gain insight into not only why consumers choose to shop and make purchases from Internet merchants, but also why other potential shoppers choose to stay away. Also, the marketing practitioners should focus on improving the lacking attributes proposed in the recommendation part so as to make E-Commerce more attractive to consumers in Thailand.

Consequently, the diffusion of E-commerce in Thailand will later be improved.

6.7 Further research

To extend our knowledge in terms of consumer shopping behavior patterns, it is deemed appropriate to study who tends to purchase what on Internet. Much of this should be

done in conjunction with an industry market-research program. Larger and more diverse sample sizes should be used for the future study in order to be more generalized.

In addition, to resolving questions regarding PEOU and online purchase intent, goals for future study focus on identifying whether PU as a mediating variable for PEOU and online purchase intent better help predict online purchase intent. It is possible that the impact of PU tested in this study have been diminished somewhat by the fact that Thai consumers do not intend to purchase online, yet they find the Internet store useful. (Consumers' increased experience with online shopping and better understanding of technology supporting the Internet). It is worth checking whether perceived ease of use help improve the perception of online purchase in terms of usefulness.

There has also been some research on the antecedents of the two belief variables in TAM. Our study did not consider any of these variables and we urge other researchers to do so. Future work may include other "external" factors in the model. In marketing, there have been studies on a variety of individual characteristics such as motivation and knowledge as well as broad range of environmental variables including family, culture, and social class. These might be interesting external factors included for model study. Findings from such a research study, coupled with the finding from this research, will help marketers to devise marketing strategies to inform and attract customers to their e-businesses.

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Online Shopping Survey

The MBA program at Assumption University is conducting a survey on consumers' attitudes and intention regarding Internet shopping. This research will help online retailers to better understand the current trends in online consumer behaviors. Since you are an important consumer, we are requesting you to participate in this study by filling out the questionnaire provided. Thank you for agreeing to participate in this study. We are interested in your responses to the online shopping. This survey will take approximately 10 minutes of your time. Please answer the following items as honestly and as accurately as you can. Your responses will be kept in strict confidentiality.

1. Please indicate the extent to which you agree or disagree with the following statements.

Items	Strongly Disagree 1	2	3	4	5	6	Strongly agree 7
1.1 I am extremely skilled at using the Internet.							
1.2 I consider myself knowledgeable about good search techniques on the Internet.							
1.3 I know somewhat more about using the Internet than most users.							
1.4 I know how to find what I am looking for on the Internet.							
1.5 I would feel secure sending sensitive information across the World Wide Web.							
1.6 The World Wide Web is a secure means through which to send sensitive information.							
1.7 I would feel totally safe providing sensitive information about myself over the World Wide Web.							
1.8 Overall, the World Wide Web is a safe place to transmit sensitive information.							
1.9 Navigating pages on the World Wide Web is easy for me.							
1.10 I find my interaction with pages on the World Wide Web clear and understandable.							
1.11 It is easy for me to become skillful at navigating pages on the World Wide Web.							
1.12 Overall, I find pages on the World Wide Web easy to navigate.							
1.13 Using the World Wide Web would enable me to accomplish my tasks more quickly.							

Items	Strongly Disagree 1	2	3	4	5	6	Strongly agree 7
1.14 Using the World Wide Web would make it easier for me to carry out my tasks.							
1.15 I would find the World Wide Web useful.							
1.16 Overall, I would find using the World Wide Web to be advantageous.							
1.17 I like the idea of using the Internet store to purchase things I want.							
1.18 Shopping online is a good idea.							
1.19 Shopping online would be fun for its own sake.							
1.20 Shopping online would make me feel good.							
1.21 People I know encourage me to shop online.							
1.22 My friends think it is cool to shop online.							
1.23 People I know would support me when I want to shop online.							
1.24 People I know buy online.							

2. Please indicate the extent to which you agree or disagree with the following statements.

Items	Strongly Disagree 1	2	3	4	5	6	Strongly agree 7
2.1 I would use the World Wide Web for purchasing a product.							
2.2 Using the World Wide Web for purchasing a product is something I would do.							
2.3 I could see myself using the World Wide Web to buy a product.							
2.4 I will purchase online the next time I need a product.							
2.5 I will definitely try Internet shopping.							

3. Additionally, we also ask that you provide us with some personal information about yourself.

3.1 Approximately how many times have you purchased something online within the last 2 years?

- 0 times
- 1-2
- 3-4
- More than 4 times

3.2 What range is your personal monthly allowance?

- 1,000 baht or less
- 1,001 – 2,000 Baht
- 2,001 – 3,000 Baht
- 3,001 – 4,000 Baht
- 4,001 – 5,000 Baht
- 5,000 – 6,000 Baht
- 6,001 – 7,000 Baht
- 7,001 – 8,000 Baht
- 8,001 – 9,000 Baht
- 9,001 – 10,000 Baht
- More than 10,000 Baht

3.3 What is your sex?

- Male
- Female





SPSS RESULTS

Tables 5.1 CROSSTAB DESCRIPTIVES

sex * age range Crosstabulation

			age range				Total
			18-20 years	21-23 years	24-26 years	26-28 years	
sex	male	Count	13	112	28	1	154
		Expected Count	20.2	116.5	16.5	.8	154.0
	female	Count	36	171	12	1	220
		Expected Count	28.8	166.5	23.5	1.2	220.0
Total		Count	49	283	40	2	374
		Expected Count	49.0	283.0	40.0	2.0	374.0

sex * Weekly Hours Spent on Internet Crosstabulation

			Weekly Hours Spent on Internet					Total	
			5 hours or less	6-10 hours	11-15 hours	16-20 hours	21-25 hours		over 25 hours
sex	male	Count	42	29	37	19	9	18	154
		Expected Count	50.2	39.5	28.4	15.2	9.5	11.1	154.0
	female	Count	80	67	32	18	14	9	220
		Expected Count	71.8	56.5	40.6	21.8	13.5	15.9	220.0
Total		Count	122	96	69	37	23	27	374
		Expected Count	122.0	96.0	69.0	37.0	23.0	27.0	374.0

sex * No. of Internet purchases Crosstabulation

			No. of Internet purchases					Total
			0-1time	2-3 times	4-5 times	6-7 times	over 8 times	
sex	male	Count	98	27	12	3	13	153
		Expected Count	113.1	23.0	7.8	1.2	7.8	153.0
	female	Count	177	29	7	0	6	219
		Expected Count	161.9	33.0	11.2	1.8	11.2	219.0
Total		Count	275	56	19	3	19	372
		Expected Count	275.0	56.0	19.0	3.0	19.0	372.0

sex * personal monthly allowance Crosstabulation

			personal monthly allowance										Total	
			1000 baht or less	1001-2000 baht	2001-3000 baht	3001-4000 baht	4001-5000 baht	5001-6000 baht	6001-7000 baht	7001-8000 baht	8001-9000 baht	9001-10000 baht		over 10000 baht
sex	male	Count	14	5	5	12	8	24	14	8	7	23	34	154
		Expected Count	12.8	5.8	5.8	8.7	15.3	22.8	17.0	10.8	7.5	20.7	26.9	154.0
	female	Count	17	9	9	9	29	31	27	18	11	27	31	218
		Expected Count	18.2	8.2	8.2	12.3	21.7	32.2	24.0	15.2	10.5	29.3	38.1	218.0
Total		Count	31	14	14	21	37	55	41	26	18	50	65	372
		Expected Count	31.0	14.0	14.0	21.0	37.0	55.0	41.0	26.0	18.0	50.0	65.0	372.0

sex * access Internet most Crosstabulation

			access Internet most			Total
			home	school	Internet shop	
sex	male	Count	119	25	9	153
		Expected Count	114.9	30.8	7.4	153.0
	female	Count	161	50	9	220
		Expected Count	165.1	44.2	10.6	220.0
Total		Count	280	75	18	373
		Expected Count	280.0	75.0	18.0	373.0

ONLINE PURCHASE INTENTION GROUP LEVEL

Descriptives

Online Purchase Intention Score

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	190	2.2358	.68698	.04984	2.1375	2.3341	1.00	3.20
2.00	185	4.6411	.94181	.06924	4.5045	4.7777	3.40	7.00
Total	375	3.4224	1.45768	.07527	3.2744	3.5704	1.00	7.00

ANOVA

Online Purchase Intention Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	542.287	1	542.287	801.385	.000
Within Groups	252.404	373	.677		
Total	794.692	374			

Crosstab

		sex		Total
		male	female	
Purchase Intention Level 1.00	Count	57	133	190
	Expected Count	77.9	112.1	190.0
2.00	Count	96	87	183
	Expected Count	75.1	107.9	183.0
Total	Count	153	220	373
	Expected Count	153.0	220.0	373.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	19.435 ^b	1	.000		
Continuity Correction ^a	18.518	1	.000		
Likelihood Ratio	19.610	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	19.383	1	.000		
N of Valid Cases	373				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 75.06.

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.223			.000
N of Valid Cases		373			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Crosstab

		age range				Total	
		18-20 years	21-23 years	24-26 years	26-28 years		
Purchase Intention Level	1.00	Count	25	149	15	1	190
		Expected Count	24.9	143.8	20.3	1.0	190.0
	2.00	Count	24	134	25	1	184
		Expected Count	24.1	139.2	19.7	1.0	184.0
Total		Count	49	283	40	2	374
		Expected Count	49.0	283.0	40.0	2.0	374.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.220 ^a	3	.359
Continuity Correction			
Likelihood Ratio	3.246	3	.355
Linear-by-Linear Association	1.227	1	.268
N of Valid Cases	374		

a. 2 cells (25.0%) have expected count less than 5. The minimum expected count is .98.

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.092			.359
N of Valid Cases		374			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Crosstab

			Weekly Hours Spent on Internet					Total	
			5 hours or less	6-10 hours	11-15 hours	16-20 hours	21-25 hours		over 25 hours
Purchase Intention Level	1.00	Count	78	44	35	17	7	9	190
		Expected Count	61.5	49.3	35.1	18.8	11.7	13.7	190.0
	2.00	Count	43	53	34	20	16	18	184
		Expected Count	59.5	47.7	33.9	18.2	11.3	13.3	184.0
Total		Count	121	97	69	37	23	27	374
		Expected Count	121.0	97.0	69.0	37.0	23.0	27.0	374.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.647 ^a	5	.003
Continuity Correction			
Likelihood Ratio	17.944	5	.003
Linear-by-Linear Association	12.914	1	.000
N of Valid Cases	374		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.32.

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.212			.003
N of Valid Cases		374			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Crosstab

		No. of Internet purchases					Total	
		0-1time	2-3 times	4-5 times	6-7 times	over 8 times		
Purchase Intention Level	1.00	Count	163	19	6	0	1	189
		Expected Count	139.2	29.0	9.7	1.5	9.7	189.0
	2.00	Count	111	38	13	3	18	183
		Expected Count	134.8	28.0	9.3	1.5	9.3	183.0
Total		Count	274	57	19	3	19	372
		Expected Count	274.0	57.0	19.0	3.0	19.0	372.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.904 ^a	4	.000
Continuity Correction			
Likelihood Ratio	41.592	4	.000
Linear-by-Linear Association	33.739	1	.000
N of Valid Cases	372		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.48.

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.300			.000
N of Valid Cases		372			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Crosstab

		personal monthly allowance											Total
		1000 baht or less	1001- 2000 baht	2001- 3000 baht	3001- 4000 baht	4001- 5000 baht	5001- 6000 baht	6001- 7000 baht	7001- 8000 baht	8001- 9000 baht	9001- 10000 baht	over 10000 baht	
Purchase Intention Level	1.00 Count	15	8	5	12	21	24	23	13	11	27	30	189
	Expected Count	16.3	7.1	7.1	10.2	18.8	27.9	20.8	13.2	9.1	25.4	33.0	189.0
2.00	Count	17	6	9	8	16	31	18	13	7	23	35	183
	Expected Count	15.7	6.9	6.9	9.8	18.2	27.1	20.2	12.8	8.9	24.6	32.0	183.0
Total	Count	32	14	14	20	37	55	41	26	18	50	65	372
	Expected Count	32.0	14.0	14.0	20.0	37.0	55.0	41.0	26.0	18.0	50.0	65.0	372.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.028 ^a	10	.813
Continuity Correction			
Likelihood Ratio	6.063	10	.810
Linear-by-Linear Association	.003	1	.953
N of Valid Cases	372		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.89.

Symmetric Measures

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.126			.813
N of Valid Cases	372			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Crosstab

			access Internet most			Total
			home	school	Internet shop	
Purchase Intention Level	1.00	Count	136	43	11	190
		Expected Count	142.6	38.2	9.2	190.0
	2.00	Count	144	32	7	183
		Expected Count	137.4	36.8	8.8	183.0
Total	Count	280	75	18	373	
	Expected Count	280.0	75.0	18.0	373.0	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.600 ^a	2	.272
Continuity Correction			
Likelihood Ratio	2.613	2	.271
Linear-by-Linear Association	2.505	1	.113
N of Valid Cases	373		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.83.

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.083			.272
N of Valid Cases		373			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Descriptive Statistics

	Mean	Std. Deviation	N
Online Purchase Intention Score	3.4192	1.45097	364
Web Skill Score	4.3867	1.14844	364
Web Security Score	3.5048	1.24447	364
Perceived Ease of Use Score	4.3984	1.12140	364
Perceived Usefulness	5.2816	1.17365	364
Attitude Toward Online Purchase Score	4.0488	1.35357	364
Subjective Norm Score	3.1902	1.32834	364

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Subjective Norm Score, Perceived Usefulness, Web Security Score, Web Skill Score, Attitude Toward Online Purchase Score, Perceived Ease of Use Score		Enter

a. All requested variables entered.

b. Dependent Variable: Online Purchase Intention Score

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.736 ^a	.542	.534	.99052	.542	70.321	6	357	.000

a. Predictors: (Constant), Subjective Norm Score, Perceived Usefulness, Web Security Score, Web Skill Score, Attitude Toward Online Purchase Score, Perceived Ease of Use Score

b. Dependent Variable: Online Purchase Intention Score

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	413.962	6	68.994	70.321	.000 ^a
	Residual	350.263	357	.981		
	Total	764.225	363			

a. Predictors: (Constant), Subjective Norm Score, Perceived Usefulness, Web Security Score, Web Skill Score, Attitude Toward Online Purchase Score, Perceived Ease of Use Score

b. Dependent Variable: Online Purchase Intention Score

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.215	.286		-.753	.452			
	Web Skill Score	.061	.062	.048	.979	.328	.263	.052	.035
	Web Security Score	.000	.047	.000	.006	.995	.253	.000	.000
	Perceived Ease of Use Score	.060	.074	.047	.817	.415	.279	.043	.029
	Perceived Usefulness	.008	.060	.007	.139	.889	.183	.007	.005
	Attitude Toward Online Purchase Score	.403	.053	.376	7.608	.000	.659	.374	.273
	Subjective Norm Score	.448	.051	.410	8.856	.000	.652	.424	.317

a. Dependent Variable: Online Purchase Intention Score

STEPWISE REGRESSION

Variables Entered/Removed^d

Model	Variables Entered	Variables Removed	Method
1	Attitude Toward Online Purchase Score		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Subjective Norm Score		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Perceived Ease of Use Score		Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Online Purchase Intention Score

Model Summary^d

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.659 ^a	.435	.433	1.09232	.435	278.500	1	362	.000
2	.731 ^b	.535	.532	.99249	.100	77.490	1	361	.000
3	.735 ^c	.540	.537	.98782	.006	4.420	1	360	.036

a. Predictors: (Constant), Attitude Toward Online Purchase Score

b. Predictors: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score

c. Predictors: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score, Perceived Ease of Use Score

d. Dependent Variable: Online Purchase Intention Score

ANOVA^d

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	332.298	1	332.298	278.500	.000 ^a
	Residual	431.927	362	1.193		
	Total	764.225	363			
2	Regression	408.628	2	204.314	207.418	.000 ^b
	Residual	355.597	361	.985		
	Total	764.225	363			
3	Regression	412.942	3	137.647	141.063	.000 ^c
	Residual	351.284	360	.976		
	Total	764.225	363			

a. Predictors: (Constant), Attitude Toward Online Purchase Score

b. Predictors: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score

c. Predictors: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score, Perceived Ease of Use Score

d. Dependent Variable: Online Purchase Intention Score

STEPWISE REGRESSION

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	.557	.181		3.083	.002			
	Attitude Toward Online Purchase Score	.707	.042	.659	16.688	.000	.659	.659	.659
	Subjective Norm Score								
	Perceived Ease of Use Score								
2	(Constant)	.221	.169		1.308	.192			
	Attitude Toward Online Purchase Score	.447	.048	.417	9.229	.000	.659	.437	.331
	Subjective Norm Score	.435	.049	.398	8.803	.000	.652	.420	.316
	Perceived Ease of Use Score								
3	(Constant)	-.121	.234		-.518	.605			
	Attitude Toward Online Purchase Score	.410	.051	.382	7.958	.000	.659	.387	.284
	Subjective Norm Score	.445	.049	.408	9.011	.000	.652	.429	.322
	Perceived Ease of Use Score	.105	.050	.081	2.102	.036	.279	.110	.075

a. Dependent Variable: Online Purchase Intention Score

Excluded Variables^d

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Web Skill Score	.052 ^a	1.249	.212	.066	.893
	Web Security Score	.054 ^a	1.292	.197	.068	.904
	Perceived Ease of Use Score	.046 ^a	1.086	.278	.057	.869
	Perceived Usefulness	-.012 ^a	-.285	.776	-.015	.913
	Subjective Norm Score	.398 ^a	8.803	.000	.420	.630
2	Web Skill Score	.080 ^b	2.100	.036	.110	.887
	Web Security Score	.027 ^b	.714	.476	.038	.898
	Perceived Ease of Use Score	.081 ^b	2.102	.036	.110	.860
	Perceived Usefulness	.056 ^b	1.462	.145	.077	.877
	Subjective Norm Score					
3	Web Skill Score	.049 ^c	1.013	.312	.053	.545
	Web Security Score	.002 ^c	.057	.955	.003	.809
	Perceived Ease of Use Score					
	Perceived Usefulness	.013 ^c	.270	.787	.014	.568
	Subjective Norm Score					

a. Predictors in the Model: (Constant), Attitude Toward Online Purchase Score

b. Predictors in the Model: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score

c. Predictors in the Model: (Constant), Attitude Toward Online Purchase Score, Subjective Norm Score, Perceived Ease of Use Score

d. Dependent Variable: Online Purchase Intention Score

STEPWISE REGRESSION

Casewise Diagnostics^a

Case Number	Std. Residual	Online Purchase Intention Score
158	-3.119	2.00
196	3.137	5.00
346	3.453	5.00

a. Dependent Variable: Online Purchase Intention Score

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.0222	6.4599	3.4279	1.07109	368
Residual	-3.0810	3.4110	.0058	.98319	368
Std. Predicted Value	-2.247	2.851	.008	1.004	368
Std. Residual	-3.119	3.453	.006	.995	368

a. Dependent Variable: Online Purchase Intention Score



Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Subjective Norm Score, Attitude Toward Online Purchase Score(a)		Enter

a All requested variables entered.

b Dependent Variable: Online Purchase Intention Score

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	420.413	2	210.206	212.393	.000(a)
	Residual	362.231	366	.990		
	Total	782.644	368			

a Predictors: (Constant), Subjective Norm Score, Attitude Toward Online Purchase Score

b Dependent Variable: Online Purchase Intention Score

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.215	.168		1.275	.203
	Attitude Toward Online Purchase Score	.437	.048	.405	9.054	.000
	Subjective Norm Score	.451	.049	.412	9.199	.000

a Dependent Variable: Online Purchase Intention Score

Reliability

****Method 2(covariance matrix)will be used for this analysis ****

RELIABILITY ANALYSIS - SCALE (ALPHA)

	Mean	Std Dev	Cases
1. WEBSKL1	4.5802	1.4115	374.0
2. WEBSKL2	4.3209	1.3175	374.0
3. WEBSKL3	3.7727	1.3198	374.0
4. WEBSKL4	4.8449	1.3689	374.0

N of Cases = 374.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	17.5187	21.1190	4.5955	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	4.3797	3.7727	4.8449	1.0722	1.2842	.2095

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6264	.5476	.7430	.1954	1.3568	.0048

Item-total Statistics

	Mean	Scale if Item Deleted	Scale Variance if Item Deleted	Scale if Item Deleted	Corrected Item-Squared Total Correlation	Alpha Multiple Correlation	Alpha if Item Deleted
WEBSKL1	12.9385	11.8548	.7466	.5962	.8234		
WEBSKL2	13.1979	12.1055	.7938	.6431	.8051		
WEBSKL3	13.7460	12.7047	.7092	.5070	.8386		
WEBSKL4	12.6738	12.9067	.6444	.4244	.8643		

Reliability Coefficients 4 items

Alpha = .8697

Standardized item alpha = .8702

Reliability

*****Method 2(covariance matrix)will be used for this analysis *****

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

	Mean	Std Dev	Cases
1. WEBSEC1	3.6925	1.4624	374.0
2. WEBSEC2	3.7193	1.4307	374.0
3. WEBSEC3	3.3262	1.4314	374.0
4. WEBSEC4	3.3075	1.3851	374.0

N of Cases = 374.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	14.0455	25.2070	5.0207	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	3.5114	3.3075	3.7193	.4118	1.1245	.0505

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6906	.6324	.7579	.1255	1.1984	.0023

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
WEBSEC1	10.3529	14.5239	.7510	.5878	.8788
WEBSEC2	10.3262	14.5421	.7898	.6382	.8641
WEBSEC3	10.7193	14.4706	.7978	.6614	.8612
WEBSEC4	10.7380	15.0893	.7619	.6146	.8744

Reliability Coefficients 4 items

Alpha = .8990 Standardized item alpha = .8993

Reliability

****Method 2(covariance matrix)will be used for this analysis ****

RELIABILITY ANALYSIS . SCALE (ALPHA)

	Mean	Std Dev	Cases
1. PEOU1	4.3369	1.3498	374.0
2. PEOU2	4.4733	1.2440	374.0
3. PEOU3	4.3182	1.3131	374.0
4. PEOU4	4.4947	1.2507	374.0

N of Cases = 374.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	17.6230	20.2730	4.5026	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	4.4057	4.3182	4.4947	.1765	1.0409	.0083

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.6830	.6424	.7609	.1185	1.1844	.0015

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
PEOU1	13.2861	11.6579	.7370	.8433	.8777
PEOU2	13.1497	12.2456	.7443	.5547	.8740
PEOU3	13.3048	11.4618	.7971	.6494	.8543
PEOU4	13.1283	11.8387	.7982	.6502	.8546

Reliability Coefficients 4 items

Alpha = .8954 Standardized item alpha = .8961

Reliability

*****Method 2(covariance matrix)will be used for this analysis *****

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

	Mean	Std Dev	Cases
1. PU1	5.1877	1.3867	373.0
2. PU2	5.0751	1.3033	373.0
3. PU3	5.5040	1.2964	373.0
4. PU4	5.3700	1.2878	373.0

N of Cases = 373.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	21.1367	22.1506	4.7064	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
	5.2842	5.0751	5.5040	.4290	1.0845	.0362

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
	.7375	.6584	.8122	.1538	1.2336	.0030

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
PU1	15.9491	12.9033	.7516	.5734	.9144
PU2	16.0617	12.7301	.8303	.6940	.8864
PU3	15.6327	12.5879	.8568	.7521	.8774
PU4	15.7668	12.9858	.8088	.6884	.8939

Reliability Coefficients

4 items

Alpha = .9176

Standardized item alpha = .9183

Reliability

*****Method 2(covariance matrix)will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

	Mean	Std Dev	Cases
1. ATTPUR1	4.0081	1.5556	370.0
2. ATTPUR2	4.3405	1.5470	370.0
3. ATTPUR3	4.1162	1.4599	370.0
4. ATTPUR4	3.7730	1.4585	370.0

N of Cases = 370.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	16.2378	29.2170	5.4053	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
4.0595 3.7780 4.3405	.5576	1.1594	.0556			

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
.7440 .6706 .8113	.1407	1.2099	.0027			

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
ATTPUR1	12.2297	17.0175	.7626	.5094	.9152
ATTPUR2	11.8973	16.2821	.8444	.7297	.8664
ATTPUR3	12.1216	17.0265	.8398	.7458	.8886
ATTPUR4	12.4649	17.1600	.8218	.6948	.8945

Reliability Coefficients 4 items

Alpha = .9201 Standardized item alpha = .9206

Reliability

*****Method 2(covariance matrix)will be used for this analysis *****

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

	Mean	Std Dev	Cases
1. SUBNORM1	3.0480	1.6064	375.0
2. SUBNORM2	3.3867	1.5538	375.0
3. SUBNORM3	3.2427	1.5013	375.0
4. SUBNORM4	3.1360	1.7150	375.0

N of Cases = 375.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	12.8133	28.4410	5.3330	4

Item Means	Mean	Minimum	Maximum	Range	Max/Min	Variance
3.2033 3.0480 3.3867	.3387	1.1111	.0213			

Inter-item Correlations	Mean	Minimum	Maximum	Range	Max/Min	Variance
.6017 .4909 .6859	.1949	1.3971	.0043			

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
SUBNORM1	9.7653	16.2015	.7469	.5649	.7955
SUBNORM2	9.4267	17.2399	.6810	.4898	.8235
SUBNORM3	9.5707	16.9034	.7521	.5740	.7957
SUBNORM4	9.6773	16.7272	.6253	.4011	.8500

Reliability Coefficients 4 items

Alpha = .8556

Standardized item alpha = .8580

Reliability

***** Method 2 (covariance matrix) will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

		Mean	Std Dev	Cases
1.	PURINT1	3.3182	1.6002	374.0
2.	PURINT2	3.4866	1.5988	374.0
3.	PURINT3	3.4733	1.5902	374.0
4.	PURINT4	3.1604	1.5895	374.0
5.	PURINT5	3.6738	1.8651	374.0

N of Cases = 374.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	17.1123	53.2635	7.2982	5

Item Means	Mean	Minimum	Maximum	Range	MaxMin	Variance
3.4225 3.1604 3.6738	.5134	1.1624	.0374			

Inter-item Correlations	Mean	Minimum	Maximum	Range	MaxMin	Variance
.7795 .7283 .8468	.1185	1.1628	.0017			

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
PURINT1	13.7941	34.3784	.8659	.7799	.9306
PURINT2	13.6257	34.4118	.8686	.7856	.9308
PURINT3	13.6390	34.2742	.8840	.7863	.9281
PURINT4	13.9519	35.0540	.8332	.7076	.9371
PURINT5	13.4385	34.6169	.8101	.6630	.9415

Reliability Coefficients 5 items

Alpha = .9462

Standardized item alpha = .9465

