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#### AN EXAMINATION OF A MULTIDIMENSIONAL MODEL

### OF CUSTOMER SATISFACTION WITH INTERNET PURCHASING

by

Kathleen VanScoyoc B.S. December 1978, Old Dominion University M.B.A. December 1983, Old Dominion University

A Dissertation submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

#### DOCTOR OF PHILOSOPHY

#### BUSINESS ADMINISTRATION

#### MARKETING

#### OLD DOMINION UNIVERSITY December 2000

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### ABSTRACT

# AN EXAMINATION OF A MULTIDIMENSIONAL MODEL OF CUSTOMER SATISFACTION WITH INTERNET PURCHASING

#### Kathleen VanScoyoc

The World Wide Web and Internet have altered the customer-firm relationship by creating a new retailing format and service enterprise. It is rapidly growing as a competitive distribution medium in which customer satisfaction will be a major success factor in the development and maintenance of this new retailing format. Despite its growing importance as a new shopping medium, little empirical research has been conducted that examines the relationship between Internet shopping, customer satisfaction, company image, and future online purchasing. Research is needed to develop theoretical models that will systematically explain and predict behavior related to Internet shopping.

The purpose of this dissertation research was to examine how consumers become satisfied with an Internet purchasing experience, how company image is impacted by the shopping experience, and how satisfaction and company image affect future purchase behavior. Specifically, the constructs of information quality, ease of use, value, and expectation congruency were examined to determine their influence on satisfaction and company image in the context of shopping over the Internet. In order to assess the various relationships that exist in the proposed model of customer satisfaction with Internet purchasing, a structural modeling approach was employed. In addition, analysis of variance test of significance was conducted to determine if there were any differences in the mean ratings of satisfaction with an Internet purchase among different groups of consumers.

Overall, the results of testing the model in this study support the assertion that a positive and direct relationship exists between customer satisfaction and the intention to continue shopping at a firm's Web site. The results also provide evidence for the factors that significantly influence satisfaction with online shopping. Economic value and ease of use were found to have a positive and direct effect on consumer satisfaction with an Internet purchasing experience. These findings may be important for marketing managers because they can provide guidelines for planning Internet strategies to develop customer satisfaction and maintain customer loyalty. A positive and direct effect between company image and consumers' desires to continue shopping on the firm's Web site was also statistically supported by the data. The factors found to influence a positive company image after shopping at a firm's Web site are ease of use and economic value. The results of the study also revealed that expectations and frequency of Internet shopping affected consumer's ratings of satisfaction. The findings from this study may provide future researchers with evidence to expand their understanding of how the electronic retail medium of the Internet impacts the customer-firm relationship. In summary, this study provides empirical support for the factors that influence satisfaction with an Internet shopping experience, company image, and future purchasing behavior from a firm's Web site.

## DEDICATION

This dissertation is dedicated to my loving family, especially Jessica, Chris, and Nick.

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It is with my deepest thanks and gratitude that I acknowledge and thank the following individuals for their support and assistance throughout this journey. For without them I would not have been able to successfully complete the program and write this dissertation.

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Many of my family and friends were always there for me. I am especially grateful to Dorys, Ruth, and Dolly for their constant support and encouragement for me to continue the journey even when it seemed endless and for their help in caring for my children when I was busy pursuing the journey.

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## CHAPTER 1 STATEMENT OF THE PROBLEM

#### **Objective of the Research**

The primary objective of this research is to understand how consumers become satisfied with an Internet purchasing experience and how satisfaction relates to future online purchasing behavior from a firm's Web site. The Internet is rapidly expanding as an acceptable and viable channel of distribution for consumer purchasing (Hoffman and Novak 1996; Ernst and Young 1999; Sheth and Sisodia 1997). This new and unique channel has the potential to cause a paradigm shift in marketing by affecting such areas as communications, marketing research, service, distribution, customer relationships, customer expectations, and satisfaction (Hoffman and Novak 1996; Peterson 1997; Sheth and Sisodia 1997; Whinston et al. 1997). Therefore, research is needed to develop theoretical models that systematically explain and predict consumer behavior related to Internet marketing and purchasing (Peterson et al. 1997). With the intention of contributing to this important and growing body of research, this study specifically investigates the antecedents and consequences of satisfaction with an Internet purchasing experience.

#### The Growing Importance of the Internet

The explosive growth of Internet usage and electronic shopping in the United States underscores the importance of this emerging business environment in both marketing and technological terms. Internet shopping is a rapidly growing and competitive distribution medium in which customer satisfaction will be a major success factor in the development and maintenance of this new retailing environment. The new era of Internet commerce is estimated to account for 16.2 percent of all purchases in the year 2000, compared to only 4.5 percent in 1994 (Lynch and Lundquist 1996). Statistics on electronic commerce compiled by Jupiter Communications, a research firm from New York, emphasized the growing importance and market potential of this new phenomenon (Cole et al. 1998). Jupiter Communications estimates that the number of online shoppers will grow from 16 million in 1998 to 61 million in the year 2002, a 281 percent increase in just four years. The revenue from consumer electronic commerce is predicted to increase from \$6 billion in 1998 to \$41 billion in 2002, a 583 percent expansion. Gartner-Group predicted business-to-business trade over the Internet to total \$15.6 billion in 1998 and climb to \$175 billion in the year 2000 (Cole et al. 1998). Jupiter Communications has profiled U.S. online shoppers to have an average household income of \$59,000 and a median age of 33 years; with 59 percent being single, 41 percent married, and 34 percent having children under 18 at home; 57 percent have earned a college degree and 30 percent are in professional occupations.

The Second Annual Ernst and Young Internet Shopping Study (1999) also provides relevant descriptive statistics on the growth and potential of online shopping. This study reported that in 1998, 43 percent of U.S. households owned personal computers, 26 percent were online, and 10 percent of the households responding to their survey had purchased over the Internet. They predicted an even more phenomenal growth in households coming online in the near future due to the continued decline in PC prices, enhancements in the telecommunications industry, and the spiraling adoption of Internet access devises. The typical online shopper is described as a male who is better educated and earning a higher income than the general population, with 45 percent being between the age of 30 to 49 years old. It was reported that the attraction of Internet shopping includes cost savings, a greater diversity of offerings, and convenience, which provides the chief motivation for consumers to pursue online shopping. The three most frequently purchased items on the Internet mentioned by the respondents include computer-related products, books, and consumer electronics (Ernst and Young 1999).

#### The Impact of the Internet on the Customer-Firm Relationship within the Business Environment

The World Wide Web and Internet have transformed the competitive business environment and altered the customer-firm relationship by creating a new retailing format and service enterprise that can provide for automated one-to-one conversations with customers, as well as other unique electronic customer services. The Internet has the capability of revolutionizing how business is conducted and how firms relate to their customers in the future, by providing for:

- 1) the integration of the service delivery process into the research and promotion processes;
- 2) the creation of "customer feedback loops";
- 3) the cost efficient mass customization of individual customers;
- 4) the practical application of relationship marketing; and
- the efficient implementation of micro marketing (Daniel and Story 1996; Kalakota and Whinston 1997; Peterson 1997; Sheth and Sisodia 1997; Sterne 1996).

The industry structure and competitive forces facing a firm can be altered significantly by the emerging importance of electronic commerce, transforming competitive advantages and power shifts in the buyer/supplier relationship. The availability of virtually unlimited product and pricing information on the Web allows consumers to easily and efficiently become proactive in their shopping activities. Researchers emphasize the need to understand consumers and how they utilize the Internet as being vital to the success for firms already active in cyberspace businesses and for those contemplating entering this domain (Fram and Grady 1995; Jarvenpaa and Todd 1997).

Success in terms of superior economic returns has been found to result from satisfied customers (Anderson et al. 1994). Exploiting Internet technology in strategic and innovative ways to improve the customer-firm relationship and to create customer satisfaction could lead to financial success by developing a long-term sustainable competitive advantage. This may even transform the basis of competition within the industry and create new businesses for the firm. From a strategic perspective, the Internet environment provides a means to incorporate quantifiable success criteria and measurable action plans to assess customer satisfaction (Hair and Keep 1997; Peterson 1997). Strategy, marketing, and branding have been reported as being the three key areas to facilitate and ensure success in Internet selling (Ernst and Young 1999). Leading online sellers attribute their success to the fact that their Internet strategy partially drives their business strategy. It has been reported that industrial firms, which have implemented a strategic policy for Internet marketing, have enjoyed more successes from selling online than those without one (Honeycutt, Flaherty, and Benassi 1998). These findings underscore the significance of strategic development and marketing as important components to successful utilization and exploitation of this new medium. The Internet is rapidly emerging as a viable and efficient distribution channel that can not be ignored, but must be studied to develop useful and workable models which are capable of predicting customer satisfaction in order to facilitate business and industry success.

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# Examples of How Strategic Utilization of the Internet Alters the Customer-Firm Relationship

The Dell Computer experience provides a documented example of how the strategic application of Internet technology in the selling of computers changed the customer-firm relationship and provided the firm with a competitive advantage (Hill 1997). The company first appeared on the Internet with a site in 1994, focusing on delivering technical support. Today Dell Computer sells more than \$3 million worth of computers a week through their Internet store. They contributed this phenomenal success to their well-orchestrated strategy and emphasis on personalized customer services, along with their direct marketing experience and substantial databases. (Dell began selling computers over the phone for \$6,000 in 1985). The successful personalized services and interactive customer relationship were established as a result of Dell's Internet information management approach. This approach emphasized providing different levels of personalized Web based services to different types of customers. Each customer is allowed access to increasingly greater levels of service through the Internet, from product and ordering information to their own home pages and replication of their Internet site on the Dell site, depending on type of customer - from all customers to platinum customers. This strategy provides Dell with an efficient, inexpensive, secure, and responsive technique to build and maintain satisfying customer relationships.

Additionally, Dell boasts of an extensive Intranet data infrastructure for their employees, connecting them to valuable information. Customers are also allowed access to Dell's databases for the purpose of extracting information that is thought to be valuable to them. This provides another component to improving and enhancing the customer-firm relationship, which could lead to more satisfied customers. Dell's Internet strategy also involves planned international activities, including connections in Europe, Asia, Canada, and Australia, transforming how companies can potentially interact with international customers. The enhanced flexibility and diversity of the Internet for communication, information, and transactions have provided Dell with the capacity to strategically transform its marketing activities and programs, producing important and significant implications for the development of new customer-firm relationships and improved customer satisfaction.

An example of how Internet commerce has transformed the customer-firm relationship in an entire industry can be seen in the financial services market. The banking industry is entering full force into this electronic marketplace by offering a variety of computer online banking services to its customers via the Internet. Due to deregulation and the increasingly competitive nature of the financial services market, the industry is under intense pressure to develop and offer a broad spectrum of innovative services to enhance the relationship with its customers and improve satisfaction. Online or electronic delivery of banking services is one of the newest choices of benefits available to banking customers and has been identified as having a significant impact on the future of retail banking (Aragon 1997; Daniel and Storey 1996). It is predicted that in the near future 52 percent of retail banking customers will be employing only electronic banking to conduct their banking business, with 32 percent using a mixture of channels, and only 16 percent still coming to a branch (Aragon 1997). This will significantly alter the relationship banks and other financial services have with their customers. The availability of electronic banking and other financial services allow customers to have instant access to their accounts, to inquire about their accounts' status, to have instant knowledge of available services and fees from any financial institution online, and to conduct a variety of banking and monetary transactions at their convenience. These opportunities will empower skilled consumers to make more informed decisions about financial product offerings and alter the customer-firm relationship in the financial services industry.

Electronic banking and financial services provide firms with the opportunity to send personalized messages about specific product offerings; gather and update demographic and financial information about their customers; expedient credit applications and approvals; and allow for a genuine two-way flow of communication (Daniel and Storey 1996). By capturing additional information about customers' needs and preferences through knowledge of their online interaction and financial activities, companies would be able to tailor and direct their services to those customers with specific needs for their product offerings, thereby increasing value to the customer and possibly enhancing satisfaction. Due to the ease and substantial costs savings of digitizing financial products and services, Internet commerce in the retail financial services market has the potential of significantly altering the way consumers purchase these services and interact with companies. These examples illustrate how the customer-firm relationship is altered and affected by the Internet.

#### Technology and Consumer Behavior

It appears that Internet technology will continue to exert a strong impact on how firms relate to their customers and conduct business in the future. Increasingly rapid changes in technology not only affect consumer behavior, but also impact the viability of the Internet as a successful transaction medium. The Internet provides firms with the technology to:

- 1) target micro segments or small homogenous groups;
- 2) improve post-sales customer satisfaction through the creation of new channels of customer service and support;
- 3) provide more targeted communications efforts;
- 4) develop low-cost customer-prospecting methods;
- 5) establish closer relationships with customers; and
- 6) develop customer loyalty.
- (Kalakota and Whinston 1997, p. 7-10)

Improvements in access technology and the proliferation of Internet service providers along with enhanced search engines continue to increase the efficiency, speed, and simplicity of transacting business over the Internet. These advances in technology can provide firms with a means to enhance the customer-firm relationship and improve customer satisfaction via the Internet.

The exponential pace of technological evolution has greatly impacted how consumers shop and interact with businesses. In addition to Internet technology, it has been reported that breakthroughs in production technology, innovations in distribution technologies, and the proliferation of technology based consumer products have significantly influenced consumer behavior (Sheth and Sisodia 1997). Consumers will be more acceptable of technological innovations, such as the Internet, that will improve and enhance their shopping experiences. However, it is only through continued consumer acceptance and satisfaction with efficient technological advances that the number of automated transactions being performed by consumers will increase.

As with any new innovation, poorly designed or implemented services by some providers may tarnish the reputation of the whole concept of electronic commerce for disillusioned and dissatisfied customers. It has been reported that some customers are already leaving the electronic marketplace for a variety of reasons, including:

- 1) security and privacy issues;
- 2) poorly designed Web sites;
- difficulty in obtaining the needed information on the Internet resulting from system problems which include the inability to access, link to, and navigate through some Web sites; and
- 4) inadequate customer service (Alba et al. 1997; Ernst and Young 1999; Gupta and Chatterjee 1997; Jarvenpaa and Todd 1997; Kalakota and Whinston 1997; Phillips et al. 1997).

Understanding the impact of the Internet and its related technology on consumer behavior can assist firms in developing marketing programs to generate customer demand and increase satisfaction for Internet shopping. Enhancing and maintaining satisfaction for customer whom participate in Internet purchasing becomes paramount to retaining customers and increasing sales.

#### **Customer Satisfaction and the Internet**

Customer satisfaction is a fundamental component of marketing theory, embodied in the marketing concept, in the AMA definition of marketing, and as a key variable in models of consumer buying behavior (Engel, Kollat, and Blackwell 1968; Engel, Blackwell, and Miniard 1995; Howard and Sheth 1969). In today's hyper-competitive, dynamic, and increasingly technology-driven markets, customer satisfaction is still considered a major element of a successful business. The key to success for the Internet depends on customer acceptance and satisfaction with the technology involved with Internet commerce (Aragon 1997; Burke 1997; Peterson 1997). It is thought customers will migrate to those Web sites that maximize the satisfaction of online shopping (Ernst and Young 1999; Szymanski and Hise 1999). A better understanding of how customers become satisfied with Internet shopping can benefit businesses. The discovery and verification of the determinants of satisfaction with online shopping can guide firms in developing strategies, which can improve and solidify their relationship with customers, thereby enhancing company image and increasing sales.

Another purpose for investigating satisfaction with Internet purchasing is to gain an understanding of how it influences subsequent purchase intentions in order to explain and predict future online shopping behavior. It has been found that purchase intentions are significantly affected by consumer satisfaction (Cronin and Taylor 1992; LaBarbera and Mazursky 1983; Taylor and Baker 1994; Swan and Trawick 1981; Zeithaml, Berry and Parasuraman 1993). Linking satisfaction to future behavioral intentions of online purchasing activities will assist in providing evidence for how and why consumers will adopt and utilize this new channel of distribution.

Despite the volumes of research dedicated to product and service satisfaction, little empirical research has focused on investigating the determinants of customer satisfaction with electronic shopping on the Internet. Due to the increased significance and utilization of Internet purchasing as an available shopping medium for consumers and the lack of theoretical research in this area, it seems highly relevant to conduct an empirical study in this area. The new under-explored arena of Internet shopping provides for a rich opportunity to investigate and develop a multidimensional model of Internet customer satisfaction and its relationship to future purchasing behavior.

#### **Contribution to the Marketing Discipline**

#### **Contributions to Marketing Theory**

Theory and model development and verification are essential components in the pursuit of academic research. This research investigates the literature exploring the Internet as it relates to consumer behavior and associated technology issues, as well as the customer satisfaction marketing literature. The conceptual ideas and empirical findings presented in these streams of research are integrated and rationalized to formulate comprehensive and meaningful conclusions about Internet shopping and consumer satisfaction. A multidimensional model is proposed which precisely specifies the nature of the relationships among the various constructs of satisfaction with a discrete Internet purchase. Proposing a theory of satisfaction with a discrete Internet transaction facilitates the classification of the various elements associated with the phenomenon. This allows for further investigation and the employment of the scientific method in subsequent research and testing.

Empirical data have been collected and analyzed in order to provide evidence for supporting the hypothesized relationships among the constructs in the proposed model. Also, the hypothesized relationship between satisfaction and behavioral intentions to shop from the firm's Web site in the future is tested through empirical analysis. The results from testing this comprehensive model provide evidence of the potential forces that facilitate or impede satisfaction formulation for Internet shopping. From this research, others can design experiments and additional research studies to test the accuracy of the predictive value of the proposed model and theory.

Additionally, this study employs a Web based survey to empirically measure

consumers' satisfaction with a discrete Internet transaction. The continued usage of this research methodology can facilitate the further expansion of marketing research techniques. An analysis of the methodology involved in utilizing this new data collection technique can also contribute to the marketing discipline by providing insights on how this technique can be employed to improve data collection and analysis.

#### **Contributions to Marketing Practice**

It is reasonable to investigate customer satisfaction with Internet shopping because of its growing importance and potentially significant impact on consumer purchasing behavior and related marketing activities. The determination of the particular factors that contribute to a satisfying online experience can assist firms in the development of marketing programs and strategies to facilitate satisfaction and improve the customer-firm relationship. By developing marketing programs and strategies that enhance the potential satisfaction for consumers engaging in online shopping and that improve customer relationships, companies can increase their market share while simultaneously expanding the sales potential of their entire industry. The development and verification of a theoretical model that can explain and predict satisfaction and future behavioral intentions can improve marketing on the Internet by providing information to assist marketers in creating successful strategies.

A comprehensive theory of consumer satisfaction can also facilitate product and promotional planning. By understanding the perimeters of satisfaction, decisions can be made to assist with collection, analysis, and interpretation of data used for product and promotion planning. The degree of difficulty in predicting the future rate of growth in new customers and in usage of the Internet for shopping increases the challenge of identifying the

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correct level of resources companies must commit to the developing Internet strategies aimed at satisfying customers. Further theoretical research into the area of customer satisfaction with Internet shopping can facilitate both the identification of and the development of strategies to encourage Internet adoption and usage.

#### **Organization of this Dissertation**

Chapter two presents a review of the relevant research investigating Internet marketing and technology utilization as it relates to consumer behavior; and the customer satisfaction literature. This investigation of these streams of literature has uncovered important and significant factors that influence, determine and/or contribute to customer satisfaction with Internet purchasing. Building on this literature review, in Chapter three a theoretical multidimensional model of customer satisfaction is developed that specifies the relationships among the constructs. Additionally, Chapter three presents the research questions and hypotheses, in addition to specifying the measurement scales to be employed. Chapter four is dedicated to presenting the findings from the formal testing of the model and hypotheses, as well as describing the data collection methodology. Chapter five provides a discussion of the limitations of the study, the major findings, and some general conclusions and implications with recommendations for future research.

## CHAPTER 2 REVIEW OF THE LITERATURE

This literature review presents, synthesizes, and integrates the following research streams: (1) electronic marketing literature that is applicable to understanding the dynamics of Internet purchasing and consumer behavior; (2) theories related to technology acceptance and utilization; (3) the expectation/disconfirmation paradigm of customer satisfaction; and (4) research exploring multidimensional models of satisfaction assessment.

#### The Internet and Consumer Behavior

As discussed previously, the Internet is a sleeping giant whose potential impact on American society is unknown at this time. It will certainly affect many aspects of the consumer-firm relationship as well as alter the business environment. Many business and technological issues are arising related to the increasing usage of the Web by households, consumers, and businesses. The Internet is changing how Americans do business, communicate, shop, search for information, and even entertain themselves. The focus of this research and literature review is on the recent theories and studies associated with the Internet and consumer behavior. The important characteristics of the Internet as it relates to consumer behavior will be discussed, after first clarifying the terms related to this subject. Also identified and discussed will be theories and studies that highlight how the Internet has altered many aspects of the current marketing paradigm and its impact on the customer-firm relationship. Exploration of technology and information systems research provides some insights on the relationship between the Internet and consumer behavior. Studies that expand and refine Internet theory related to consumer behavior are presented to gain an understanding on how and why consumers are satisfied with the Internet as a shopping medium.

The Internet is a "... network of networks, [in which] each network is comprised of computers connected by wire or wireless mediums, such as radio signals, that enable component computers to 'talk' to each other" (Whinston et al. 1997, p. 2). It is the largest network of computers in existence at this present time and is "... not owned or managed by any single entity" (Whinston et al. 1997, p. 2). However, many of the component computer networks comprising the Internet are individually managed and paid for by their owners. To become an element of the larger Internet, the computer component networks must employ the common standard for cross-communications - the TCP/IP protocol - also referred to as the language of the Internet. The World Wide Web, WWW, or the Web, has been described as "... a multimedia hypertext technology embodied in browsers ... , which use hypertext links to form conceptual relationships between otherwise unrelated sites" (Jarvenpaa and Todd 1997, p. 139). Most authors use the Web and the Internet as interchangeable terms.

#### **Defining the Related Terms**

There are many different phrases that describe the utilization of electronic devices to conduct business with consumers. These terms can be classified into a two-by-two matrix according to the type of marketing activities involved and the type of electronic media employed (see Figure 1).

	MEDIUM			
	AL	L ELECTRONIC MEDIA	INTERNET/WWW	
A C T I V	M A R K E T I N G	ELECTRONIC MARKETING	INTERNET MARKETING	
I T I E S	B U Y I N G	ELECTRONIC COMMERCE	INTERNET SHOPPING	

Figure 1: Classification of the Related Terms

When the terms relate specifically to buying activities being performed in electronic media, expressions such as shopping, retailing, and commerce are used. If one is referring to all types of marketing activities that can be performed electronically, then marketing is included in the term. Marketing and buying activities that are performed using any type of electronic media are referred to as electronic marketing and electronic commerce, respectively. Those activities which involve only one specific electronic device, in this case the Internet, have been described using the following terms: Internet marketing, Internet commerce, Internet shopping, Internet retailing, or online shopping. The focus of this research is on the specific activity of buying on the Internet. The related terms will be defined below for further clarification.

#### **Electronic Marketing versus Electronic Commerce**

Electronic marketing is a concept encompassing a broad perspective for achieving marketing objectives and/or programs electronically. It can be defined as a general method of accomplishing marketing through the employment of technologies which may involve any number of electronic devices (computer, telephone, television, cable lines, etc.), technologies and/or systems (Peterson 1997; Whinston et al. 1997). Peterson (1997, p. 8) considers electronic marketing in its broadest sense as "... marketing that is accomplished or facilitated by radio; television (both one-way and two-way transmissions); computers and computer-based technologies (including databases); telephone and telephone-based technologies; facsimile machines; videography (including those found on shopping carts); CD-ROM technologies; interactive kiosks; ETMs (electronic ticket machines); pagers; optical scanners; and smart cards." He admits that this list is neither mutually exclusive nor exhaustive and contends "... that no comprehensive 'list' can ever be developed" (Peterson 1997, p. 9).

It can be seen that electronic marketing encompasses any or all marketing activities, such as advertising, promotions, research, distribution, communication, buying and selling that can be conducted in an electronic format. E-marketing facilitates the network form of channel structures in business transactions linking customers, workers, suppliers, distributors, and in some cases, even competitors, into a chain of networks to produce end-toend relationship management, also known as integrated or extended supply-chain management (Kalakota and Whinston 1997). For consumers, e-marketing enables the customer to have an expanded input into what products are produced, how they are produced, and how services are delivered (Kalakota and Whinston 1997; Sheth and Sisodia 1997).

Electronic commerce or shopping, on the other hand, is a much more narrowly focused concept in terms of marketing, only concerned with those activities directly related to buying behavior, such as information search and evaluation, product selection, and purchasing activities, conducted through some or any electronic means. This perspective becomes apparent from the following definitions:

- "... the use of electronic devices to complete purchases remotely through interactive video systems, computer networks, or telephones" (Koschnick 1995, p. 173);
- "... the use of electronic means and technologies to conduct commerce, including within-business, business-to-business, and business-to-consumer interactions" (Whinston et al. 1997)
- electronic commerce is considered a subset of home shopping, which includes Videotext services, shopping channels, and interactive cable television systems (Baker 1995).

These definitions employ a broad perspective for the term electronic to encompass all electronic devices in which commerce or exchange can occur, such as telephones, interactive video systems, as well as computers.

#### Internet Marketing versus Internet Shopping

According to the definitions of electronic marketing and commerce presented above, the Internet is but just one particular electronic device, or environment, in which both marketing and/or shopping activities can occur. Internet marketing is a form of electronic marketing, unlike most other electronic devises, that allows for interactive marketing. It can be described as a general approach to marketing which creates an opportunity or mechanism enabling a marketer and its customers to interact or engage in a two-way flow of communication and exchange (Peterson 1997; Sheth and Sisodia 1997). As such, Internet marketing includes all marketing activities, programs, and strategies that can be implemented over the Internet. Marketing activities currently being performed over the Internet include: advertising; communications with customers, employees, and suppliers; database marketing; direct marketing; distribution; research; and selling.

An important and distinct element of Internet marketing is Internet shopping (also referred to as Internet commerce, retailing, or online shopping), which is concerned only with those actions specifically involved with selling and buying that can be accomplished online or via the Internet. This includes such activities as information search and evaluation, product selection, and purchasing. To distinguish Internet shopping from other forms of shopping media and behavior, it can be described as:

when consumers can interact with any number of retailers any time they desire by manipulating and controlling an electronic multimedia (audio, video, text, and graphics) and interactive environment to pursue shopping and purchasing activities (in-depth information search, evaluation of alternatives, exchanging payment for the product(s) or the right to use the product(s) - renting) from a remote location (home, office, plane, etc.).

At this point in time, the Internet, unlike any other electronic devise, allows

consumers to visit several "stores", interact with different sellers, initiate the interaction, obtain information on one or several products, control the flow of information and the search itself, and close the sale, all within one single electronic environment and without leaving their remote location. These capabilities exist only through this one electronic environment, providing consumers and firms with new possibilities to interact together and form relationships. It should be noted that the Internet is utilized by consumers for many activities other than shopping, including entertainment, play, communication (e-mail), in their work, and as a delivery medium for any and all forms of information (Hoffman and Novak 1996; Miller 1996; Peterson 1997). The use of the Internet environment for a multitude of different, unrelated activities can potentially impact consumer shopping behavior.

#### The Internet and its Characteristics

The Internet possesses unique characteristics different from other conventional retailers or marketing channels that are important to understand because of the potential impact to consumer purchasing behavior and to the customer-firm relationship. These characteristics allow consumers to be "more proactive, assertive, and unpredictable in their shopping, buying, and consuming behaviors" (Peterson 1997, p. xiii), creating consumers who are less brand and firm loyal. Peterson and his colleagues (1997, p.333) also noted that the Internet can by characterized by:

- the ability to inexpensively store vast amounts of information at different virtual locations;
- the availability of powerful and inexpensive means of searching, organizing, and disseminating such information;
- interactivity and the ability to provide information on demand;
- the ability to provide perceptual experiences that is far superior to a printed catalog, although not as rich as personal inspection;
- the ability to serve as a transaction medium;

- the ability to serve as a physical distribution medium for certain goods (e.g., software);
- relatively low entry and establishment costs for sellers.

Two prevailing characteristics of the Internet, distributed computing and openness, provide the favorable attributes for it to become a viable and dynamic market infrastructure, which will impact the customer-firm relationship (Whinston et al. 1997). The electronic highway, as a new channel of distribution, can also abolish geographic barriers and facilitate a global presence by providing a low cost global information sharing and advertising medium and increase the availability of more worldwide sourcing (Gupta and Chatterjee 1997; Hair and Keep 1997; Kalakota and Whinston 1997; Peterson et al. 1997). The important characteristics of the Internet that will be reviewed below include improved information, cost reductions, convenience, marketing efficiencies, and privacy/security issues.

#### Information as an Important Characteristic

Information is an integral and important component of the Internet. The most advantageous and distinct feature of the Internet is that it is a source of virtually unlimited information available and accessible by the click of a button (Alba et al. 1997; Burke 1997; Hoffman and Novak 1996; Peterson 1997; Peterson et al. 1997; Phillips et al. 1997; Sheth and Sisodia 1997). The Internet possesses an enormous quantity of information available from a large variety of sources in one place, providing for direct, personal and intelligent communication options for both the customer and the marketer (Burke 1997). Internet information is unique in that it possesses distinctly different characteristics from information communicated through other channels and media.

The unique characteristics of Internet information include interactivity; control by the receiver; on-demand information and answers to questions; anytime access; and the ability

to for anyone (buyer or seller) to customize information (Burke 1997; Hair and Keep 1997; Hoffman and Novak 1996; Phillips et al. 1997; Peterson 1997; Peterson et al. 1997; Sheth and Sisodia 1997). The Internet also represents a different paradigm in terms of a medium for communicating information. Hoffman and Novak's (1996) interactive communications model illustrates that Internet communication: 1) is a two-way flow between buyer and seller; 2) can be initiated by either the firm or consumers; and 3) can involve one-to-one and manyto-many lines of communication. It should be noted, however, that access to this information involves some special requirements in the form of electronic technology (i.e., computer with a modem or a television set with a special device to access the Internet) that requires consumers to learn new behaviors to successfully engage in online information acquisition and utilization.

These unique characteristics of Internet information can impact the shopping experience. When completing an Internet transaction the consumer is an active participant in accessing and obtaining the information that will be utilized in the decision. This is fundamentally different from other forms of media that communicate information to consumers. In these traditional forms of media, information is basically transmitted to a more or less passive consumer at times and through outlets decided upon by the sender. In a traditional goal-directed purchasing situation consumers are able to actively pursue information only by accessing various sources of print media. Any radio or televised information relevant to the purchase situation must be retrieved from memory or tuned into by the consumer at the time it is being broadcasted by the sender. Information on the Internet is fundamentally different because access and retrieval is controlled by the shopper. The Internet has basically altered the paradigm concerning how product information is distributed by companies, shifting access and retrieval from the control of the sender to the control of the receiver (Hoffman and Novak 1996; Peterson 1997; Peterson et al. 1997; Sheth and Sisodia 1997).

The information available on the Internet also provides shoppers with an efficient means to facilitate price and attribute comparisons across a wide range of firms offering the product. For example, Peapod, an Internet grocery service, provides consumers with the ability to sort cereals by nutritional content, thereby allowing for a simplified and accurate utilization of this relevant attribute in the consumer's decision making. Interactive information allows for accurate, on-demand answers to virtually any question consumers may have about their purchasing decision, thereby providing them with greater knowledge from which to make a more informed decision. The vast quantity of information readily available in one location expands the amount and timeliness of decision-relevant data, resulting in increased decision-making effectiveness (Peterson 1997). Burke (1997) found that the information available in a virtual shopping environment (similar to the Internet) was superior to traditional forms of information in terms of its ability to assist consumers in making better and faster decisions.

Information is an important vehicle that can assist consumers in making better, faster, and more satisfying purchasing decisions over the Internet (Alba et al. 1997; Burke 1997; Jarvenpaa and Todd 1997; Hoffman and Novak 1996; Peterson et al. 1997; Phillips et al. 1997; Sheth and Sisodia 1997). Although studies have found the consumers utilize little information when engaging in purchasing decisions, even for important and expensive purchases, (Beatty and Smith 1987; Maynes and Assum 1982; Widing and Talarzky 1993), these studies were examining traditional media and sources of information. Information that
is relatively simple to obtain and utilize, such as information found on the Internet, will be of greater value to consumers and is much more likely to be employed in the purchasing decision process (Widing and Talarzky 1993). The Internet provides useful information that can enhance and/or improve a consumer's ability to make a purchasing decision. Therefore, it can assist in contributing to optimal purchasing decisions for the consumer, leading to satisfaction with the decision (Burke 1997; Peterson 1997; Peterson et al. 1997; Phillips et al. 1997; Sheth and Sisodia 1997). The information available on the Internet can be a great benefit and useful to consumers in their shopping activities, allowing them to be a more informed decision maker, which may equate to being a satisfied consumer.

As it has been demonstrated from the above discussion, improving market information for the buyers is a significant outcome of an Internet-based marketing environment. Buyers can enhance their information search processes by employing the Internet, which allows for an effective method to access a virtually unlimited amount of information. The Internet provides the ability to efficiently focus the search to any particular element, thereby making the information more useful and relevant to the consumer's purchasing decision making process. The ability for shoppers to locate products according to customer defined criteria is a major enhancement of the Internet. It is predicted that in the near future the quality of information provided on the Internet will be greatly expanded and electronic shoppers will also be able to "...view products in three dimensions; obtain detailed information on product make-up, care, and usage; ask questions; and in some cases actually sample the product electronically" (Hair and Keep 1997, p. 165). The significance and usefulness of Internet information indicates the importance of incorporating it into any theories or models explaining customer behavior on the Internet.

## The Benefits and Costs of Using the Internet

Internet shopping possesses several characteristics that can beneficial for both the sellers and buyers. Peterson (1997) believes the Internet's greatest contribution will be its ability to create performance based marketing, making the firm more efficient and improving the customer-firm relationship. It permits accurate accounting of marketing activities by providing a means for direct measurement of the results of marketing programs and how they impact consumer behavior. Retailers can better understand market demand by employing Internet marketing activities (Phillips et al. 1997). Internet technology allows for efficient data collection, storing, processing, and maintenance of databases that can be utilized to enhance customer satisfaction (Alba et al. 1997; Hill 1997). The Internet as a marketing tool can be utilized to generate revenues by increasing sales to existing customers and by attracting new ones.

At this time, however, the revenue-generating potential of Internet marketing is not as substantial as its ability to reduce or eliminate some the costs associated with marketing and selling (Peterson, et al. 1997). Cost reductions for marketers include the potential for reduced marketing operating expenses, labor costs, and selling expenses directly related to responding to customers. Additionally, cost savings can occur because of fewer markdowns, improved buying efficiencies, and faster inventory turnovers, which can lead to improved marketing and more satisfied customers (Phillips et al. 1997). The reduction in costs for sellers made possible by the Internet also translates into lower prices of quality goods for buyers. An anticipated expectation will be that consumers will demand that firms share the benefits of any cost cutting technologies or innovations with them (Sheth and Sisodia 1997). Internet marketing allows for the integration of advertising, sales promotion, personal

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selling and physical distribution, and the ability to realize maximum market coverage with lower inventory levels (Sheth and Sisodia 1997). The Internet distribution technology provides the means for increasing consumer benefits, including reduced damages, better market coverage, more refined target marketing, and faster responses to market trends (Sheth and Sisodia 1997). Other benefits of Internet marketing to firms which impact the relationship with their customers include increased global reach, the ability to reach and market to geographically dispersed customers, and reduction in barriers to entry (Gupta and Chatterjee 1997; Hair and Keep 1997; Peterson et al. 1997). The property of low, or even nonexistent, barriers to entry transforms the business environment into one where a wide variety of possibilities exist in terms of who can market on the Internet and how they can interact with their customers. It also produces a business atmosphere that is free of time zones and geographic boundaries, expanding the realm of possibilities in the customer-firm relationship.

A multitude of benefits to shopping over the Internet has been reported in the literature (Alba et al. 1997; Bakos 1997; Burke 1997; Hoffman and Novak 1996; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997). Customer benefits include the ability to offer lower prices, to provide reliable "store" and product information directly to the consumer, to reduce shopping time, and to simplify shopping for frequently purchased convenience goods by facilitating the routine ordering and processing functions, thereby increasing customer satisfaction (Alba et al. 1997; Peterson 1997; Phillips et al. 1997). Perceived costs of shopping over the Internet have also been reported in the literature (Alba et al. 1997; Burke 1997; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997). The perceived rewards and total costs of Internet

shopping can be classified into benefits and expenditures related to the economic factors and convenience factors that one experiences as a result of engaging in the Internet purchasing activity (Burke 1997).

Economic benefits include reduction in the total costs related to the shopping experience. Consumers specify low price as being a primary motive for making purchases over the Internet (Ernst and Young 1999). A reduction in information search costs can be obtained due to the availability of easily accessible, reliable and useful product information. Also, the Internet provides an efficient venue for conducting product and price comparisons, which contributes to further reduction in search costs. Purchasing products over the Internet also eliminates check-out time, travel time and costs, thereby reducing total shopping time and costs.

The benefits associated with convenience pertain to those factors that facilitate the shopping activities and allow for a simplified purchasing experience. A substantial amount of evidence has been presented in the literature describing Internet shopping as being more convenient than retail store shopping (Alba et al. 1997; Burke 1997; Hill 1997; Hair and Keep 1997; Hoffman and Novak 1996; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997; Szymanski and Hise 1999). Online shopping provides for opportunities to locate unique or unusual product offerings; expands the number of and distance from stores that can be visited; increases the selection of products and retailers; and provides for on-demand reliable and useful product and store information. The improved information and accessibility provided by the Internet have resulted in consumer control and customization of information, delivered on demand, which can also be perceived as a major convenience benefit of the Internet. Routine shopping and buying activities can be

automated and simplified. Additionally, shopping on the Internet can provide entertainment and allow for a phenomenal degree of control over the shopping experience. Internet purchasing allows customers to initiate two-way interactions about product information and interact with the seller without leaving home and during times, which are convenient and relevant for them. By shopping online the consumer can avoid interaction with sales personnel, if desired; can avoid crowded parking lots, bad weather and transportation restrictions, including loading and unloading heavy and bulky packages to and from the car; and shop at any hour while simultaneously participating in other activities (such as exercising, cooking, or caring for children). All of these conveniences can greatly contribute to an enjoyable shopping experience, leading to enhanced customer satisfaction.

The economic costs associated with online shopping consist of any potential delivery fees, charges related to returning the merchandise, and possible spoilage of perishable items in-transit. Convenience costs refer to factors and characteristics of Internet shopping that produce inconvenience for the consumer. These include wait time before the receipt of the product, possible inconvenient delivery times, inability to examine the product before purchase, and the time that may be required to obtain (download) information from the Web site (which is dependent on the speed of the connection, traffic on the network and the site, and the type of information being requested). The likelihood of experiencing potential regret from disappointing purchases may be magnified when shopping online as opposed to retail store shopping because actual examination of the merchandise prior to purchase is not possible. However, these conceivable negative costs of Internet shopping over retail store shopping are far outweighed by the likely rewards, leading to the potential for enhanced perceived value for the online shopper, which could result in greater customer satisfaction.

## **Internet Privacy Issues**

The wonderful improvements and efficiencies in business interactions provided by Internet technology also bring increased privacy, security, and buyer/seller confidentiality issues to the forefront. The prediction is that safeguarding and maintaining privacy and confidentiality will be a major priority, to be carefully managed and successfully implemented (Hair and Keep 1997). Due to the increased ability to capture and store substantial amounts of behavioral and sensitive data, privacy and security issues must be consistently and immediately addressed by firms to be able to alleviate customers' fears and anxieties. Those firms that provide impenetrable security and privacy will be successful, but this issue will continually be a major concern that warrants persistent diligence on the part of both buyers and sellers.

A major societal issue posed by Internet security concerns privacy and surveillance related to "cookies" (Leibrock 1997). A packet of information providing both benefits and costs to Internet suppliers and users, a cookie is an "... electronic 'token', piece of data, or record transmitted by a Web server to a client computer" (Leibrock 1997, p. 155). It operates by allowing the server provider to send a transmission, or electronic signal, over the Internet to its clients' computers with the expectation of an automatic electronic return transaction. In a typical individual Internet interactive session between the client and the server, which extends from log on to log off, as many as 20 cookies, each four kilobytes in size, are exchanged. Cookies, also known as tokens or transactions, can either be "nonpersistent", meaning they will dissolve after the interaction, or they will be archived and considered "persistent". Persistent cookies reside on the users' computers and are capable of capturing a wide variety of data for the server. Some examples of data that can be seized by the server through cookies include:

- the user's name or ID;
- sites visited;
- previous visitation patterns;
- user preferences;
- search patterns;
- description of search paths taken by the user;
- description of the transaction itself;
- "meta-data" (data about the data).

This data is captured onto a log residing on the server. The cookie files and server's log are created and maintained without the user's consent, and, usually without their knowledge. Cookies currently cannot be prevented by the user from being created or from providing data to the server's log. They are basically under the control of the cookie originator, or server.

The implication of this technology can have a far-reaching impact in terms of both benefits and costs on the Internet as a channel of distribution, the customer-firm relationship, and consumer behavior. Several positive usages clearly illustrate some of the benefits of cookie technology. It enables shopping lists or baskets to be maintained between visits, thereby facilitating the shopping experience. The technology has the capability of monitoring the journey of the user within a Web site, allowing for a measurement tool to track exposure to and interaction with advertisements. An attractive utilization of cookies is its ability for visitors to customize a Web site to meet their particular needs and interests. This usage promotes relationship marketing and establishes user control for formulating the information content, rendering it more useful to them.

The cookie related costs include the many ethical issues created by this powerful technology that is capable of seizing useful and personal information without permission or

knowledge. Valuable customer information can be captured, cataloged, stored, and cross referenced by the server and/or Web provider, without the Internet user knowing any of this is occurring. The interactive exchange occurring during cookie creation and interchange can be abducted, recorded, and even sold by a third party, again without the knowledge or permission of either the client or server. The question then becomes - to whom does this personal information belong - to the user, to the server, or to anyone who can capture it?

Leibrock (1997) presents some techniques to address many of these issues and concerns resulting from cookie technology. One simple remedy is requiring the user's permission and consent through a registration process before some of the functions of cookies can implemented. Another means is the establishment of eTrust, which has developed a classification scheme for commercial Web sites. It works by branding every commerce-based Web site with a logo to indicate the site's data collection and usage techniques, such as, no data collected, data collected for its own use only, or data collected for third-party usage. This provides users with the ability to make informed decisions as to their options of interacting with the site. These very important issues and challenges require a concerted effort by both suppliers and users of the Internet to be ethically resolved because of the potential impact to the customer-firm relationship and to satisfaction with Internet shopping.

## **Internet Theory**

The characteristics of the Internet described above, coupled with the fact that consumers can be active participates in an interactive exchange, produce challenges that require new and different models and theories to explain and predict consumer behavior

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when shopping on the Internet. Since the Internet represents a new form of shopping activity that requires consumers to employ different behaviors to complete their purchases, new theories have been developed to describe and explain these new behaviors. The theories and models presented in the literature relating to the Internet and consumer behavior can be categorized into the following domains:

- 1) Communication and interaction on the Internet;
- 2) Customer-firm relationship on the Internet; and
- 3) Changing consumer behavior and the Internet.

# A Theory of Communication and Interaction in a Computer-Mediated Environment

The unique characteristics of the Internet have forced researchers to develop new theories of communication and interaction that can be applied to explain behavior in computer-mediated environments (CME). Hoffman and Novak's (1996) conceptual research concerning CMEs presented an interactive communication model and discussed the flow experience involved in CME interaction. The focus of their discussion is on how communication and interaction is different in CMEs (computer-mediated environments), which they define as:

"... a dynamic distributed network, potentially global in scope, together with associated hardware and software for accessing the network, which enables consumers and firms to (1) provide and interactively access hypermedia content (i.e., 'machine interactivity') and (2) communicate through the medium (i.e., 'person interactivity')" (Hoffman and Novak 1996, p. 52).

The Web on the Internet is considered by these authors to be the first and current global application of a CME, but certainly not the only model of what CMEs can evolve into in the future. They also make a distinction between interacting *with* the computer mediated environment and *through* the media. Interacting *with* the media, or machine interactivity,

refers to the ability of the participant, either the firm or consumers, to directly modify the form and content of a CME in real time (i.e., posting Web pages). Person interactivity is the ability to utilize the CME as a communication vehicle in which both firms and consumers can initiate the communication process *through* the medium.

Due to CMEs' unique characteristics, a new model of marketing communications (see Figure 2) is necessary to fully comprehend the magnitude of possibilities made conceivable by these environments (Hoffman and Novak 1996). The model illustrates the range of feasible communication relationships in a hypermedia CME. One possible communication relationship is consumers interacting on the Web by performing such activities as surfing, browsing, requesting information, shopping, etc. Firms also possess this capability. This new form of medium also allows for any individual, consumer, or firm to initiate the communication process by establishing a personalized presence (Web page) in the CME containing any type of message. In other words, *both* firms and consumers can create and apply content to the medium. This represents a major distinction of the hypermedia CMEs from traditional forms of communication media. The flow of communication is also two-way, which is another departure from traditional mass media.



Note: F = firm; C = consumer. Source: Hoffman and Novak 1996, p. 53.

Another important concept presented is the idea that an individual perceives two different environments in CMEs – "...(1) the physical environment in which he or she is present and (2) the environment defined by the hypermedia CME" (Hoffman and Novak 1996, p. 54). Telepresence is the term used to describe the perception of experiencing the CME environment. During an interactive session on the Internet, it is possible to perceive telepresence to a greater degree than the physical environment. The implications of this concept are addressed further in their examination of the flow experience.

The concept of the flow experience (Csikszentmihalyi 1977, 1990) in a CME is defined as:

"... the state occurring during network navigation, which is 1) characterized by a seamless sequence of responses facilitated by machine interactivity, 2) intrinsically enjoyable, 3) accompanied by a loss of self-consciousness, and 4) self-reinforcing" (Hoffman and Novak 1996, p. 57).

This flow experience can be described as a state in which the individual's actions and awareness are merged, characterized by intense concentration on the activity so that little else is able to penetrate the person's attention. This results in a loss of self-consciousness and time perception which leads to a "... state of mind [that] is extremely gratifying" (Hoffman and Novak 1996, p. 58). The flow experience construct is applied specifically to the concept of network navigation in hypermedia CMEs to gain an understanding of the differences in experiential behavior and goal-directed behavior occurring in CMEs and the implication for marketers.

The flow state is theorized to be preceded by a set of antecedents and followed by a set of consequences (Hoffman and Novak 1996). The two primary antecedents are 1) a perceived equilibrium between skill level and the challenges created by the interaction and

2) focused attention on the interaction, with all distractions filtered out. Two secondary antecedents, interactivity and telepresence, are offered by the authors because of their significance in enhancing the flow experience. The perception of telepresence and interactivity are always experienced by users of hypermedia CMEs because of the nature of the environment. However, perceptions of higher levels of interactivity and telepresence can result in increased intensity of the flow state, as long as the challenges of the activity do not exceed the skill level. The marketing implications of this notion involves determining the optimal level of challenge to incorporate into a Web site so as not to lose the interest of experienced users or discourage novice users.

The consequences described as resulting from the flow state include increased learning, exploratory and participatory experiences, positive subjective experiences, and a perceived sense of control over the interaction (Hoffman and Novak 1996). These consequences relate directly to a change in consumers' behavior and present both challenges and opportunities for marketing on the Web. As stated previously, in order to experience a state of flow a congruency must be achieved between skill level and the challenge of the activity. When consumers learning and perception of control increase as a result of the flow experience, they will need increasingly challenging activities to perform in the CME in order to achieve the flow state in subsequent interactions. As exploratory behavior expands, participation multiplies and regular and frequent users of the Internet will seek out those sites that offer new and unique experiences. It is also anticipated that encountering flow while interacting on Web will result in more positive subjective experiences or increased satisfaction. This positive subjective experience can lead to a distortion of time, translating into longer durations of CMEs visits. Additionally, feelings of satisfaction resulting from

flow experiences can also generate expanded future usage.

Another important point presented by these scholars concerning the flow state is the fact that it can be differentiated on the basis of goal-direct versus experiential behavior. Goal-directed and experiential behavior is characterized respectively by:

- 1) extrinsic versus intrinsic motivation,
- 2) instrumental versus ritualized orientation,
- 3) situational versus enduring involvement,
- 4) utilitarian versus hedonic benefits,
- 5) directed versus nondirected search, and
- 6) goal-directed versus navigational choice
- (Hoffman and Novak 1996, p. 62).

Goal-directed behavior, in which CME participants are absorbed in completing a specific task to obtain a prespecified goal, results in situational involvement and direct search behavior. Internet purchasing is an example of goal-directed behavior in a CME. On the other hand, experiential behavior is characterized as exhibiting an enduring involvement with the activity (or a product) and an ongoing search. Consumers may engage in several experiential CME sessions before the actually purchase of a product over the Internet. By understanding these specific motivational behavior distinctions, marketers can design sites specifically targeted to satisfying either experiential or goal-directed behaviors.

One of the major premise for exploring the concept of the flow state as it relates to behavior in CMEs is that a greater understanding of the flow experience can be applied to developing successful strategies for improving the customer-firm relationship over the Internet. By discovering the variables related to influencing consumers to experience the flow state, marketers will be able to specify strategies designed to facilitate and maximize consumers' propensity to enter into the flow state, which would then result in increased feelings of satisfaction and usage. Understanding the consequences of the flow state can assist in developing segmenting variables to target specific consumers in various levels of Internet interaction and experience. This becomes an ongoing endeavor because as consumers become more involved and experienced with interacting on the Internet, their skill level continually improves, which alters the level of challenge necessary to achieve congruency that is needed for experiencing flow. The challenge for marketers is to design and provide interactive opportunities on the Internet in which consumers with various levels of experience and expertise can actively and comfortable select activities that create congruency in order to maximize the flow experience. The result will be positive subjective experiences, resulting in satisfaction and increased utilization.

#### The Customer-Firm Relationship and the Internet

The Internet, because of its interactive characteristic, has the potential for altering the relationship between the firm and the customer. The multimedia capabilities and interactive nature of the Internet provide businesses with a cost-effective and efficient communication medium that has the potential to reinforce building customer relationships and increasing customer satisfaction. The enhanced ability of buyers and sellers to engage in two-way communication contributes to the practical application of relationship marketing (Hair and Keep 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997). More importantly, this exchange of information provided by Internet technology allows customers to maintain control of the interaction because they can initiate the communication process and request and receive information tailored to their needs. Because of the interactivity characteristic of the Internet, aggregation of demand will be increasingly driven by customers rather than by producers, altering the customer-firm relationship (Sheth and Sisodia 1997). Researchers have investigated the relationship between the customer and firm, and have theorized on how

the Internet will change or has changed this relationship.

Hair and Keep (1997) presented several thought-provoking predictions about the future possibilities of electronic marketing as it relates to the customer-firm relationship. One prediction is that improved market information for sellers, which is facilitated by Internet technology, will provide for the ultimate result of efficient one-to-one marketing. The Internet environment allows for extensive database marketing, including interactive communications and instantaneous exchange of information. This provides firms with a cost-efficient method for modifying and enhancing the interaction with their customers. Examples of strategic applications by firms to improve the customer-firm interaction include such companies as Amazon.com and Dell Computers, which provide their customers with the opportunity to maintain, update, and modify their own profiles in a secure and confidential environment (Hill 1997; Seybold 1998). The Internet permits the immediate online evaluation of marketing strategies and program effectiveness, specifically of promotions and pricing, which provides valuable information and accountability of strategic initiatives. This evaluation process results from the ability of customers to interact directly with the firm and provide immediate feedback in the form of two-way communication. Strategic decisions based on customers' profiles, buying habits, and online feedback can be easily monitored, evaluated, and modified to enhance and maintain the customer-firm relationship and satisfaction.

Hair and Keep (1997) predicted the creation of improved customer-firm relationships due to the Internet's ability to increase interactivity and enhance interconnectivity between buyers and sellers, as well as to build customer loyalty. As a result of timely electronic inquiries, customers can communicate to companies their wants, as well as have the

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opportunity to assess each firm's ability and willingness to accommodate these wants. Firms can efficiently solicit customers' continuous input, from idea generation to actual product launch, connecting the customer to the product development process and, hopefully, to the final product. Customers' past purchasing preferences can be utilized by companies to electronically inform them of other related products that may interest the customers. The possibility of developing and offering other technology-based services, such as bill paying, callback reminders, time and activity organizers, customized notices, and electronic upgrading, can also improve the customer-firm relationship. These customer services will facilitate loyalty because understanding and responding to customers needs is a key component to developing and maintaining customer allegiance.

Peterson, Balasubramanian, and Bronnenberg (1997) analyzed the distribution, transaction, and communication channel functions which are capable of being performed on the Internet to explain the potential consequences of the Internet on the customer-firm relationship of these intermediaries. From this analysis, these scholars reported that the logistical functions of assorting, accumulating, and sorting performed by distribution intermediaries would gain the least advantage from the flexibility, interactivity, and efficiency in information exchange between buyer and seller that the Internet provides its users. Therefore, of the three types of channel intermediaries, it was concluded that the impact of the Internet on the customer-firm relationship would be the least significant for distribution intermediaries. One notable exception would be intermediaries distributing potential digital goods, such as computer software, music, reports, books, or financial services. The Internet can exert a significant impact because it provides an efficient and cost effective medium of distribution for these products. The transaction channel functions aid in the economic exchange between buyers and sellers and include intermediaries such as brokers, wholesalers, and retailers. The potential impact of the Internet for these intermediaries is much greater according to Peterson and his colleagues (1997). The Internet provides producers with a low cost, flexible, and efficient means to interact directly with current and potential individual customers, thereby bypassing transaction intermediaries. Also, the elimination of distance and time constraints made possible by the Internet allows the producer to internalize the transaction functions, even in geographically dispersed and smaller markets. However, the characteristics of particular products and services will act to mediate the ability of producers to perform these transaction activities and deal directly with their customers.

According to Peterson and his colleagues (1997), the channel that will incur the greatest impact from the existence of the Internet will be communication intermediaries, such as advertising agencies and broadcast and print media. The Internet, because of its unique characteristics, has the capability of transforming the communication intermediaries' functions, which are the creation and delivery of information. The Internet can provide more flexibility than broadcast and print media and the ability of direct interaction, which will allow firms to develop and maintain a personal communication link to their customers. The information provided on the Internet can be more useful to consumers because they can customize it, interact with it, and select relevant and precise elements to evaluate. Additionally, the Internet has superior capabilities in targeting both current and potential individual buyers and "... can offer communication options that have virtually no variable costs" (Peterson et al. 1997, p. 334).

Hoffman and Novak (1996) also emphasized that it is more effective to market in the

open, interactive environment of the Internet, than through traditional media, because the communication is two-way and can be very personalized. Customers can provide personal information about their preferences directly to the firm and customize a firm's Web site to better meet their needs. Because of these capabilities, Internet marketing can facilitate the cost-effective creation of a "one-to-one" relationship with individual customers (Phillips et al. 1997). Knowledge about customers' needs, wants, preferences, and behavior which is made possible by Internet marketing, will truly become the cornerstone of effective marketing and can be utilized to improve the customer-firm relationship and satisfaction (Sheth and Sisodia 1997). This customer knowledge will translate into an extremely valuable corporate resource and alter the interaction between firms and their customers.

According to Sheth and Sisodia (1997), Internet commerce changes the customerfirm relationship by altering the need for multiple intermediaries between producers and consumers. The Internet allows almost any company, including producers and small firms, an efficient and inexpensive medium to serve enormous numbers of consumers directly, putting immense pressures on channel partners and intermediaries. They label this trend disintermediation. The Web permits for the establishment of a direct two-way flow of communication and information between buyers and sellers, eliminating the need for intermediaries to add time, place, and information utilities. Another consequence will be reintermediation, in which new categories of intermediaries will arise, such as rating services, automated ordering services, and services based on consolidating numerous small orders from many consumers into more economically viable quantities. These new types of marketing specialists will evolve to seize the value-creating opportunities resulting from this new interaction between buyers and sellers. Successful ones will be those that deliver the greatest value for the lowest cost and provide the most customer satisfaction.

Hair and Keep (1997) are other scholars who predicted that the continual expansion of Internet marketing will alter the customer-firm relationship by the emergence of new market intermediaries, expanded and more technology-based channels of distribution, and more world outsourcing. Future market intermediaries can include information warehouses, new search engines that rely on artificial intelligence, and a hybrid form of brokers to match customers with products without maintaining physical inventories or person-to-person contact with the customer. Physical distribution through electronic channels can completely eliminate the need for physical contact between buyers and sellers for any product that can be digitally converted and transmitted through electronic means. This includes such products as movies; music; newspapers; magazines and books; money; financial products; transportation and entertainment tickets; education; and market research information. The customer-firm relationship is significantly altered by this transformation of physical products into digital ones. It eliminates the need for physical distribution of these products and confines the entire transaction to an electronic medium.

Greater consumer accessibility to more powerful information tools and increased competition resulting from Internet commerce will shift the power into the hands of the buyers (Sheth and Sisodia 1997). This will result in market activities becoming almost entirely driven by buyer demand, in which strategies to manage the level, timing, and composition of demand will be necessary for firms to achieve their objectives. Mass customization is the predicted trend not only for product attributes, but also for all appropriate marketing mix elements, such as price, advertising messages, and distribution options. Consumers are developing into highly information-technology literate buyers who will insist on content-rich, useful information and demonstrable product innovations (Sheth and Sisodia 1997). The increasing interactive communication between buyer and seller will transform relationship marketing into the rule rather than the exception.

The above discussion provides evidence that Internet shopping can facilitate relationship formation between the buyer and the seller because it allows customers to initiate a two-way flow of communication with the seller, putting the customer in control of the interaction. Shopping online permit consumers to be proactive and assertive when shopping, buying, and consuming (Peterson 1997). Consumers can shop anytime, access any available information and Web site, engage in information exchange, and complete a transaction, all without leaving home or adjusting their schedule to fit the firm's hours. The numerous capabilities made possible by the Internet extensively alter the customer-firm relationship in many ways that may impact customer satisfaction with this shopping medium.

## **Changing Consumer Behavior and the Internet**

Sheth and Sisodia (1997) postulated that dramatic forces in consumer behavior, resulting from changes in lifestyles and demographics and evolving technology, have provided the Internet with the needed advantages to stimulate consumers to pursue this new shopping alternative. Dramatic macro-level lifestyle and demographic changes that have contributed significantly to influencing consumer behavior include:

- 1) negative growth birth rates and rising medium age in developed countries;
- 2) more women in the workforce;
- 3) lifestyle, income, and ethnic diversity;
- 4) increase in regional differences;
- 5) increased stress;
- 6) greater concern for privacy;
- 7) emphasis on safety and security;
- 8) entrepreneurial spirit (Sheth and Sisodia 1997, pp. 20-22).

Lifestyle and demographic changes have the capacity to influence the way people shop, work, communicate, and enjoy their leisure time. Future consumers are predicted to be "... more demanding, more time-driven, more information intensive, and highly individualistic" (Sheth and Sisodia 1997, p. 23). It is predicted that these changes and other major trends will dramatically impact consumer behavior and the utilization of the Internet as a viable shopping media (Sheth and Sisodia 1997). Consumers will relish the opportunity to be directly involved with designing and customizing their products, their information, and their channels of distribution. The Internet can provide consumers with the ability to be co-producers.

Severe time and place constraints currently facing today's consumers are major lifestyle trends that can have a dramatic influence consumers' behavior. The consequences resulting from these constraints are that consumers will demand time-free and location-free shopping in addition to traditional retailing, which is both time and location constrained (Sheth and Sisodia 1997). The ability to eliminate time and place barriers for consumers will allow for anytime, anywhere procurement, in addition to anytime, anywhere consumption. Internet commerce provides the ability to free consumers from these forces, allowing for ondemand purchasing, information acquisition, and interactive capabilities, anytime and anywhere.

Two other significant changes in consumer behavior noted by Sheth and Sisodia (1997) worth expounding on include the greater value consciousness of consumers and the blurring of consumer and business markets. Because consumer are becoming increasingly value conscious, they will expect to receive greater value in exchange for the fundamental resources in their control - money, time, effort, and space. It is predicted that value buying

will become dominant in the future. This value consciousness creates consumers that are more savvy and better educated about their purchasing decisions. Internet marketing can facilitate the achievement of value shopping. Also, the delineation between home life and workplace is rapidly disappearing, with work operations moving into the home and domestic tasks being performed at work. The result of this trend will be more business like purchasing decisions being made by consumers. Business-like purchasing involves rational decision making, utilizing objective and useful information, with a greater emphasis on costs. These changes are predicted to dramatically alter consumers' buying behavior.

When these changes in consumer lifestyle and behavior are coupled with the rapidly expanding technological advances, it produces an environment that is ripe for dramatic transformations in the customer-firm interaction that will require a reexamination of current business models. They predict "... the future success of marketers will depend on their ability to deliver total customer convenience. This includes hassle-free search (advertisingon-demand), hassle-free acquisition (home delivery), hassle-free consumption (e.g., products with built-in expert systems to enable maximal value extraction), and hassle-free disposal" (Sheth and Sisodia 1997, p. 25). Based on these predicted changes and the increasing acceptance of the Internet as a shopping venue, Sheth and Sisodia (1997) recommended approaches that marketers must develop and implement to be successful in the future. These include for marketers 1) to become more technology savvy; 2) to learn how to retain customer loyalty; 3) to learn how to become the quarterback; and 4) to practice interactive, one-to-one marketing. The strategic utilization of the Internet can facilitate the achievement of these recommendations.

Their discussion emphasized the increasingly significant impact electronic

technology will have on the customer-firm relationship due to changing consumer behavior and the need for businesses to adapt. This equates into the development of business models that will incorporate the impacts of changes in consumer behavior and technology, and that can optimize the utilization of the Internet. Finally, they stated:

"... marketing today largely operates under the modalities of industrial-age commerce, while consumer behavior has changed and will continue to change rapidly and dramatically. Industrial-age marketing, coupled with information-age consumer behavior, creates a misalignment that renders much of what marketing does ineffectual and sometimes damaging" (Sheth and Sisodia 1997, p. 33).

#### **Technology and the Internet**

Exploring technology and information system research can also provide some insights into the relationship between the Internet and consumer behavior. As it was previously discussed, rapid advances and changes in technology are important to consider and investigate because of their potentially significant impact on consumer behavior and user acceptance and utilization. Digital technology, emerging multimedia standards, and proliferating electronic marketing are driving the convergence of previously unrelated industries, altering the competitive environment, and reshaping consumer behavior and the customer-firm relationship. Regardless of its original form, digitized information can be processed, searched, sorted, enhanced, converted, compressed, encrypted, replicated, and transmitted at low cost providing for the creation of computer and network infrastructures that allow for new forms of consumer behavior and customer-firm relationships. This digitized information is able to travel through existing phone, wireless systems, and cable wiring systems, thereby facilitating the connection of computers, high-speed peripherals, consumer electronic devices, access to networks, and the creation of new low-cost delivery channels. This high speed and low cost transformation of information impacts how consumers behave in the marketplace and how customers and businesses relate to each other (Kalakota and Whinston 1997). A key purpose for investigating the information technology stream of research is to provide a framework for identifying and classifying the variables involved in user acceptance of technology as it relates to Internet usage and determine its impact on consumer behavior.

#### **Technology Acceptance and Utilization**

Explaining and predicting user acceptance of technology has been a priority in information technology and information systems (IS) research because of user acceptance's potential to substantially improve performance (Davis 1989). However, this research has been inhibited by the lack of high-quality assessment tools that can measure the key determinants of user acceptance. It has been stated that "[t]he development of improved measures for key theoretical constructs is a research priority for the information systems field" (Davis 1989, p. 319). Due to the persistence of this important technological issue, Davis (1989) developed and validated new scales for two specific variables which are theorized to be fundamental determinants of user acceptance of technology - perceived usefulness and perceived ease of use. Other studies and research have provided theoretical justification for employing the two distinct constructs of perceived usefulness and perceived ease of user acceptance because they have been found to impact decisions to utilize information technology (Bandura 1982; Davis et al. 1989; Hauser and Simmie 1981; Hill et al. 1987; Larcker and Lessig 1980; Robey 1979; Swanson 1982, 1987).

Davis (1989, p. 320) defines perceived usefulness as "...the degree to which a person believes that using a particular system would enhance his or her job performance." A technology system that is considered by the user to be highly useful is one in which there is a perceived positive use-performance relationship. In other words, the user believes that utilizing the technology will facilitate performance, which in term will bring related rewards. If performance can be enhanced than it follows that users will accept and utilized the technology.

Perceived ease of use if defined as "... the degree to which a person believes that using a particular system would be free of effort" (Davis 1989, p. 320). The user will perceive a technology system to be easy to use if it is free from difficulty when performing the required functions and it does not require a great deal of effort to operate the system. Acceptance by users would be facilitated by a system that is less difficult to operate and requires the least amount of effort to learn how to operate.

Rigorous testing by Davis (1989) for content validity, reliability and construct validity resulted in two six-item scales, one each for the perceived usefulness and perceived ease of use constructs. The reported reliabilities were .98 for usefulness and .94 for ease of use. Applying the scales to further testing, it was found that perceived usefulness correlated significantly with both self-reported current usage (r = .63) and self-predicted future usage (r = .85). This translate into user acceptance being a function of how well the system can execute the required operations to enhance user performance. Perceived ease of use was also found to be significantly correlated with current usage (r = .45) and future usage (r = .59). The results indicated that perceived usefulness was found to be significantly more correlated with usage behavior than was the case for ease of use. This finding implies that user acceptance is driven primarily because of the functions the system can perform for the user. The secondary driver is how easy or difficult it is for the user to operate the system and make

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it perform the desired functions. In other words, users will be willing to endure some difficulty of use as long as the system provides the crucially need functionality. These findings have been verified in subsequent research (Adams et al. 1992; Chau 1996; Davis et al. 1989; Hendrickson et al. 1994; Venkatesh and Davis 1996, Davis et al. 1989).

Research was conducted in the marketing discipline by Dabholkar (1996) to investigate consumers' propensity to utilize technology. This research specifically explored the attributes consumers deemed important to evaluate when deciding to use technologybased self-service options. Dabholkar hypothesized that speed of delivery (time), ease of use (effort and complexity), reliability (which includes accuracy), enjoyment, and control are important attributes to customers when they assess and decide to use technological options. To verify the significance of these hypothesized attributes she tested two alternative models (cognitive versus affective) for making technology usage choices using a scenario approach to simulate the conditions of the experiment.

The results of the experiment indicated that two-thirds of the participants chose to use the technology-based option versus the verbal option of ordering fast food. Another important finding was that consumers employed cognitive evaluations to make their technology usage decisions rather than affective ones. This indicates that meaningful attributes that the technology possesses are more important to consumers when making judgments rather than just feelings or attitude about using technology. Enjoyment and control were reported to enhance evaluations of the technology and therefore it was determined that both these variables positively impact intentions to use the technology for making purchases. Ease of use was found to be an important determinant for participants who experienced high waiting time. She also reported that speed of delivery and ease of use were highly correlated, and that reliability was highly correlated with control. These correlations were justified for the following reasons - if the technology is easy to use, service delivery would most likely be faster; if the option was perceived as reliable, than the user would likely expect greater control by using this option. It would be reasonable to assume that any technologically based shopping option that possesses these important attributes would be more readily accepted and utilized by consumers.

#### How Technology Can Impact the Customer-Firm Relationship

Perceived usefulness and perceived ease of use are considered to be necessary for acceptance of Internet purchasing. Burke (1997) deems the ease of use of Internet shopping and its usefulness to be major prerequisites for mass market acceptance and appeal. He predicts that the ability for consumers to have easy and extensive access to useful information and to interact with three-dimensional products will further increase usage and satisfaction with Internet shopping. Peterson (1997) also stresses the importance of consumer acceptance for the success of Internet shopping and that this acceptance is dependent on consumers' expectations of how this technology will improve and simplify their lifestyle. Others have also expounded on the idea that customer acceptance with the technology are important factors for the success of Internet shopping (Aragon 1997; Dabholkar 1996; Power 1998).

Simplicity in accomplishing the necessary tasks will intensify feelings of control and usefulness. Perceived behavioral control has been defined by Ajzen (1988, p. 132) as "the perceived ease or difficulty for performing the behavior". The easier technology is to use, the more it can encourage feelings of control and usefulness to the consumer. Swanson (1987), in his study to test a model for explaining choice and use of information, found that

the ability to control the selection and use of information related favorably to the perceived ease of use factor. Perceived ease of use can also enhance satisfaction by allowing consumers to control their interaction on the Internet and with the company through its Web pages. Allowing consumers to customize their information and their product offerings provides usefulness to the consumer, which can also enhance satisfaction. Proficiency in online shopping also allows the consumer to have control over the selection of products and the scheduling of the shopping experience, which can ease, if not eliminate, any time and place constraints (Kalakota and Whinston 1997; Sheth and Sisodia 1997). A consumer's perception of control over the behavior impacts future intention and actions more importantly than real control (Ajzen 1988; Hoffman and Novak 1996). This feeling of control, which develops from the ability to easily use the technology and a feeling of usefulness, can lead to satisfaction with the Internet transaction process.

The organization and search ability of the Web site design will influence the consumers' perception of how easy or difficult it will be to conduct the purchase and how useful the information will be to them. Factors related to the functionality and usefulness of Web sites include how effortless it is to navigate through the site, the layout of the virtual store, the presentation speed, uncluttered screens, uncomplicated and useful search paths, order confirmations, and the inclusion of shopping lists/baskets (Hodge 1997; Pastrick 1997; Szymanski and Hise 1999). Fast, uncluttered, useful, and easy-to-navigate Web sites are more likely to enhance satisfaction levels because they reduce shopping and cognitive effort (Szymanski and Hise 1999). It has also been reported that ease of use can facilitate learning in a computer environment, thereby creating usefulness and feelings of enjoyment (Dabholkar 1996; Hoffman and Novak 1996).

New technological advances are not without problems that can impact the customerfirm relationship and consumer behavior. There are numerous reasons why consumers may experience frustration when engaging in online shopping activities. Consumers have reported that slow access, hard-to-locate information, and connection difficulties are problems with their Internet experience (*Business Week*, 1996). Experiencing difficulties in Web site navigation (use) and in locating the product offerings within the site (information), as well as slow interfacing, have been reported as critical factors that discourage consumers from purchasing over the Internet (Ernst and Young 1999; Fram and Grady 1995; Szymanski and Hise 1999). Other factors impeding Internet usage that have been discussed in the literature include:

- 1) the excessive number of sites and information chaotically organized on the Web causes difficulty in finding and/or utilizing the information;
- 2) the lack of quality control or ratings of the large volume of Web sites posted on the Internet (anyone can post a Web site that contains anything that the person wants to communicate);
- 3) the difficulty in navigating through some Web sites due to the illogical organization and design;
- 4) the difficulty in maneuvering between some Web sites due to inactive or broken links;
- 5) the time that may be required to obtain (download) information from the Web site (which is dependent on the speed of the connection, traffic on the network and the site, and the type of information being requested);
- 6) graphics that impede downloading;
- 7) the number of "dead" or inactive sites that remain on the Internet (Alba et al. 1997; Daniel and Storey 1996; Gupta and Chatterjee 1997; Jarvenpaa and Todd 1997; Phillips et al. 1997).

It is important to recognize that these obstacles and impediments exist so as to pursue

action to minimize their impact on the customer-firm relationship, and in particular,

customer satisfaction. Increasing the ease of use and the usefulness of the Internet shopping

experience for the consumer will facilitate acceptance and potentially increase usage.

## Internet Theory Refined, Expanded, and Investigated

The theories and models related to the Internet and consumer behavior were presented in the previous discussion emphasized how the customer-firm relationship can be and has been altered by:

- 1) the unique characteristics of the Internet;
- 2) the transformation of consumer behavior due to lifestyle, demographic, and technology changes; and
- 3) the increasing acceptance and utilization of technology by consumers.

Other researchers have expanded on these themes to further the theoretical development in this emerging phenomenon. Researchers have investigated the consumer decision process as it relates to Internet shopping and how consumers are adopting Internet usage (Gupta and Chatterjee 1997; Peterson et al. 1997). Consumers' attitudes toward shopping on the Internet have been explored and documented to facilitate the determination of the causes of favorable or unfavorable evaluations for this new retailing channel (Burke 1997; Jarvenpaa and Todd 1997). Finally, an empirical study was conducted to investigate customer satisfaction with online shopping in general (Szymanski and Hise 1999).

## **Consumer Decision Process and the Internet**

It has been theorized that the Internet alters both the communication and the interaction within the customer-firm relationship (Hair and Keep 1997; Hoffman and Novak 1997; Sheth and Sisodia 1997). Peterson, Balasubramanian, and Bronnenberg (1997) expand this perspective by investigating how two components of the consumer decision process - information acquisition and product/brand acquisition - are altered due to the availability of the Internet as a shopping alternative. The existence of the Internet introduces another choice as to where consumers can acquire information, as well as to where they can conduct the

purchase transaction to obtain the desired product. They contend that the degree of impact the Internet will potentially exert on the consumer's decision process is contingent on the product's characteristics.

They developed a conceptual consumer decision framework which links their product and service classification scheme (Dimensions 1 -3) with likely consumer decision sequences (see Figure 3). This framework is based on consumers having three choices when purchasing products:

- 1) "whether to focus on a product or service category or a brand at any stage of the information acquisition process,
- 2) whether to use the Internet or conventional retail channels for information acquisition,
- 3) whether to use the Internet or a conventional retail channel for the final transaction and brand acquisition."
   (Peterson et al. 1997, p. 336)

These three choices are related to the consumer decision sequence of brand choice, price search, and final acquisition. Their model illustrates that the impact of the Internet on purchasing decisions is sensitive to the type of product being acquired.

The consumer decision framework depicts that consumers may elect to utilize the Internet only, traditional retail channels only, or both for conducting the different purchasing activities of brand selection, pursuing information, and product acquisition. They contend that the three product dimensions - 1) cost and frequency of purchase; 2) value proposition; and 3) degree of differentiation - will determine in which channel (traditional retail only, the Internet only, or both) consumers are likely to make each of the decision sequences. It was predicted that when a frequently purchased, low cost product is characterized as being intangible or informational, information search to decide brand choice, price search, and final acquisition are likely to be conducted on the Internet. For high priced, infrequently purchased products, information and price search will most probably be conducted in both traditional channels and on the Internet, with final acquisition occurring in either channel. This conceptual framework emphasizes that consumers are likely to utilize the Internet and traditional retail channels differently to seek information, make brand choices, and acquire products.

Dimension 1	Dimension 2	Dimension 3	Likely decision sequences
	Value proposition tangible or physical	Differentiation potential high	<ul> <li>(Example: Wines, soft drinks, cigarettes)</li> <li>Brand choice likely after retail search.</li> <li>Subsequent price search on the Internet is unlikely.</li> <li>Final acquisition likely in retail store.</li> </ul>
Low outlay, frequently purchased goods		Differentiation potential low	<ul> <li>(Example: Milk, eggs)</li> <li>Brand choice likely after retail search.</li> <li>Subsequent price search on the Internet is unlikely.</li> <li>Final acquisition likely in retail store.</li> </ul>
	Value proposition intangible or informational	Differentiation potential high	<ul> <li>(Example: Online newspapers and magazines)</li> <li>Brand choice likely after Internet search.</li> <li>Subsequent price search in retail channels is unlikely.</li> <li>Final acquisition likely on the Internet.</li> </ul>
		Differentiation potential low	<ul> <li>(Example: Stock market quotes)</li> <li>Brand choice likely after Internet search.</li> <li>Subsequent price search in retail channels is unlikely.</li> <li>Final acquisition likely on the Internet.</li> </ul>
	Value proposition tangible or physical	Differentiation potential high	<ul> <li>(Example: Stereo system, automobiles)</li> <li>Brand choice likely after search of both channels.</li> <li>Price search likely in both channels.</li> <li>Final acquisition may occur in either channel.</li> <li>(Comment: The need for personal product inspection may strongly influence the decision process in this case.)</li> </ul>
High outlay, infrequently purchased goods		Differentiation potential low	<ul> <li>(Example: Precious metal ingot of know weight and purity)</li> <li>Brand choice likely after search of both channels.</li> <li>Price search likely in both channels.</li> <li>Final acquisition may occur in either channel.</li> </ul>
	Value proposition intangible or informational	Differentiation potential high	<ul> <li>(Example: Software packages)</li> <li>Brand choice likely after search of both channels.</li> <li>Price search likely in both channels.</li> <li>Final acquisition may occur in either channel.</li> <li>(Comment: If prices are comparable, the Internet may be convenient for the final delivery of such products in the near future.)</li> </ul>
		Differentiation potential low	<ul> <li>(Example: Automobiles financing, insurance)</li> <li>Brand choice likely after search of both channels.</li> <li>Price search likely in both channels.</li> <li>Final acquisition may occur in either channel.</li> </ul>

Figure 3: Product and Service Characteristics and Likely Consumer Decision Sequences

Source: Peterson et al. 1997, p. 339.

# A Double Diffusion Process Perspective

The changing consumer behavior perspective of Internet theory provides a model for explaining why consumers will accept the Internet as a shopping medium. Gupta and Chatterjee (1997) expand this concept by viewing acceptance and adoption of the Internet from a "double diffusion" perspective, in which the adoption rate of both sellers and buyers is potentially dependent on each other. In other words, a wide spread acceptance of the Internet as a channel of distribution by consumers is dependent on a large source of companies providing products and services, which is contingent on a sizable demand. They believe a true understanding of the Internet's potential requires a careful examination of both the providers and customers' rate and nature of adoption. To conduct this analysis, they profiled online buying behavior, studied the evolution of firms on the Web, and investigated the relationship between this evolution and consumers' buying behavior.

Internet users were examined from two consumer behavior perspectives - information seeking stage (search and evaluation) and buying stage (ordering, paying for, and obtaining the product) - and how this new medium impacts both components of shoppers' decision process. For information seeking behavior, they reported that the Web has the potential to greatly reduce the marginal cost for searching and evaluating information and to provide an improved match between the firm's offering and a buyer's preferences. Results from their study revealed that seeking product information is the third most popular usage of the Internet (see Figure 4 for the usage intensity of Web resources).

The cost of assessing the credibility and reliability of the firm's information, comparing competitors' offerings, and reaching a responsible evaluation is also lowered when shopping on the Web thereby rendering the information more useful to the consumer.

It is relatively simple to compare different firm's offerings because of the ease of traveling from one firm's site to another on the Internet. There are also a variety of tools available on the Web to aid in the comparison and decision making process, again greatly reducing the actual cost of evaluation.

The costs and benefits they identified as being associated with buying over the Internet versus buying from off-line sources included the price/quality tradeoff, the relative shipping and delivery costs and speed, and other transaction risks (for example, order cancellation capabilities, return policies, availability and quality of after-sales services, and the possible exploitation of personal and credit card information). Their study revealed that more consumers were willing to employ the Internet as an information and evaluation tool rather than a purchasing tool (see Figure 5).

Their evaluation of corporate adoption of developing a Web presence shows a doubling of commercial sites every four to five months across a wide variety of product categories (Gupta and Chatterjee 1997). For Web users, the doubling rate took 12 to 15 months in the same time period (May 1994 and December 1995). The types of companies most likely to have a Web presence corresponds to the most popular types of products purchased online in 1996, which were software, hardware, travel, books, and music (see Figure 5). They explained the appeal of travel, books, and music categories to be related to a typical shopper's profile (see Table 1) and to the fact that these products can be readily compared across sellers and can be digitally transmitted or examined relatively easily. When examining the relationship between Web adoption by companies and buyers, they reported a high correlation between the number of new commercial sites and the percentage of users seeking information online, leading them to conclude that "... the two diffusion patterns


How often (7 = all the time, 1 = not at all) respondents employed the Web for each of the eight categories.

Source: Gupta and Chatterjee 1997, p. 126.



Figure 5: Percentage of All Respondents Who Sought Information or Bought Product/Services On-line Over the Past Six Months

Source: Gupta and Chatterjee 1997, p. 131.

appear to be closely related to each other" (Gupta and Chatterjee 1997, p. 133). It was also reported that death rates (firms abandoning their Web sites) "... appear to be driven by actual results, particularly the extent of information seeking by Web users" (p. 136)

		S	Survey Wav	/e	
	FIRST April 94	SECOND Oct 94	THIRD April 95	FOURTH Oct 95	FIFTH April 95
Age (average)	28	31	35	33	33
Income (average)	N.A.	\$59,000	\$69,000	\$63,000	\$59,000
Male (%)	95	90	85	72	68
Single (%)	N.A.	47	43	39	41
Education					
Undergraduate degree	N.A.	34	35	32	33
Grad/professional degree	N.A.	39	32	25	24
Occupation					
Education	43	31	24	31	30
Access to Internet through educational institute (%)	N.A.	51	27	32	27
Hardware and software used for Internet access					
Mac/PC (%)	8.5	48	78	82	88
Unix/other (%)	91.5	52	22	18	12

Table 1: Selected Characteristics of Web Users 1994 - 1996

Source: Gupta and Chatterjee 1997, p. 130, N.A. designates data not available.

## **Consumers' Attitudes and Internet Shopping**

The perspective that changing consumer lifestyles and behavior, as well as technological advances, impact the acceptance and use of the Internet as a shopping medium has been uncovered in the literature (Sheth and Sisodia 1997). Since consumers are more

value conscious today, they expect greater value for their time and money, as well as desire high quality and easily assessable information to assist them in making their purchasing decisions. Greater consumer convenience in terms of hassle-free information search, shopping, and delivery is also demanded by today's consumers to alleviate the serve time and place constraints they face due to changing lifestyles. Two studies that investigate consumers' attitudes toward Internet shopping are highlighted here to offer insights into the Internet's ability to provide consumers with the features they desire.

Jarvenpaa and Todd (1997) conducted an empirical study of 220 shoppers employing an experiential survey methodology to better understand how different shopping factors affect Internet shopping attitudes and future online purchasing intentions. Of these randomly selected primary household shoppers, only eight percent had prior Internet shopping experience. However, 70 percent of the respondents had Internet access, of which 46 percent had home access and 54 percent had previously employed Web-browsers for an average of six months. The online shopping sessions were conducted in a computer lab in which the participants came on site to perform three different typical Internet shopping activities:

- 1) a 10-minute familiarization task in which they browsed among different shopping sites;
- 2) a 20-minute gift-shopping exercise to try to find a gift for a friend or relative;
- 3) a 20-minute personal shopping exercise in which they tried to find something to buy for themselves (Jarvenpaa and Todd 1997, p.142).

Data collection procedures included open-ended questions, structured questions, and focus group sessions that gathered the information during and after the Web browsing and shopping activities. The researchers investigated different shopping factors related to product value, shopping experience, customer service, and consumer risks to determine these shopping factors influence on consumer attitude formulation and future online purchasing intentions. Table 2 reports the results in terms of the percentage of participants responding positively, negatively, or neutral to the survey questions. Table 3 outlines the results from the regression analysis of the relationship between the four shopping variables and attitude toward Internet shopping and future online shopping intentions.

	Each factor defines the degree to which	Percentage Response		
Shopping Factor	consumers perceive that	Negative	Neutral	Positive
Product value		7.3	53.9	37.4
• price	the Web provides competitively priced merchandise and attractive promotions and deals.	10.0	63.0	25.6
• variety	the Web provides a wide range of goods and services, including those that consumers are not able to get elsewhere.	9.1	42.0	48.9
<ul> <li>product quality</li> </ul>	the Web is a source of high-quality goods and services, which meet customer expectations.	4.6	52.5	41.1
Shopping Experience		5.5	30.6	63.9
• effort	the Web saves time and makes shopping easy.	26.5	36.5	36.5
• compatibility	the Web fits consumer lifestyles and the way they like to shop.	22.4	54.8	22.8
<ul> <li>playfulness</li> </ul>	shopping on the Web allows the consumer to have fun.	6.8	46.6	45.2
Customer Service		14.2	67.6	16.4
<ul> <li>responsiveness</li> </ul>	merchants provide the necessary information in a form that allows the consumer to conduct a prepurchase search, make a selection, place an order, make a payment, take a delivery, and receive support after the sale.	10.5	66.2	21.5
<ul> <li>reliability</li> </ul>	merchants can be counted on to deliver on their promises.	10.0	68.5	19.6
tangibility	goods and services are displayed in a visually appealing way.	3.7	71.2	24.2
• empathy	merchants understand and accommodate their individualized needs, such as providing universal access to services, linguistic or currency translation, and audio rather than text- based interaction.	2.3	28.3	68.9

Table 2: Descriptive Results from the Structured Ouestionnaire

Table 2 (continued)

Shopping Factor (continued)	Each factor defines the degree to which consumers perceive that	Negative	Neutral	Positive
Consumer Risk		6.8	41.6	51.1
<ul> <li>economic risk</li> </ul>	using the Web to shop will lead to monetary losses through poor purchase decisions.	5.9	50.7	43.4
<ul> <li>social risk</li> </ul>	shopping on the Web will be perceived as imprudent or socially unacceptable.	42.9	54.3	1.8
<ul> <li>performance risk</li> </ul>	goods and services bought on the Web will not meet consumers' expectations.	.5	43.8	55.7
<ul> <li>personal risk</li> </ul>	the process of shopping will result in harmful personal consequences to the consumer.	4.5	27.2	68.1
<ul> <li>privacy risk</li> </ul>	the process of shopping the Web puts the consumers' privacy in jeopardy.	2.3	32.0	64.4
Outcomes	Items composing the factor			
• Attitude toward Internet shopping	I like the idea of shopping on the Internet; the idea of shopping on the Internet is appealing; using the Internet to shop is a good idea.	11.0	26.9	61.2
Intention to shop	I intend to shop on the Internet frequently. I plan to do more and more of my shopping on the Internet; I use the Internet to collect information about goods and services; I intent to buy goods and services over the Internet.	16.0	67.4	16.4

NOTE: In some instances, the percentages do not total 100 because of missing responses. Source: Jarvenpaa and Todd 1997, pp. 144-145.

Attitude toward Internet shopping	Beta	F	Significance
Product factor	.344	3.914	.000
Shopping experience factor	.398	5.598	.000
Customer service factor	.042	.430	.667
Consumer risk factor	-2.850	3.591	.001
Intention to shop on the Internet within the part 6 months	Beta	F	Significance
Intention to such on the Internet within the next o montus			
Product factor	.264	3.358	.001
Product factor Shopping experience factor	.264	3.358 2.821	.001
Product factor Shopping experience factor Customer service factor	.264 .179 .176	3.358 2.821 2.020	.001 .005 .045

Table 3:	Regression	<b>Results from</b>	n the Struct	tured Questionna	aire
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Source: Jarvenpaa and Todd 1997, p. 146.

Jarvenpaa and Todd (1997) found that 63 percent of their sample of primary household shoppers, of which 85 percent were women (predominately well educated, affluent, computer literate, and interested in shopping in general), reported experiencing a positive shopping event after 50 minutes of interacting on the Web. Additionally, 16 percent indicated that they would shop online within the next six months. The security risk was considered a major concern for this sample, but not a major deterrent. The shopping experience was found to be simultaneously fun and frustrating by a majority of respondents.

Other significant highlights from this study include:

- 1) Attitude toward shopping on the Internet was significantly influenced by perceptions of product value, shopping experience, and risk, but not by service quality.
- The four factors product value, shopping experience, risk, and service quality- collectively accounted for 48 percent of the variance in attitude.
- Intention toward shopping on the Web was significantly influenced by perceptions of product value, shopping experience, and service quality, but not by perceived risks.
- 4) The four factors collectively accounted for 34 percent of the variance in intention.
- 5) Convenience was found to be the single most salient shopping factor for the respondents and the most frequent reason for shopping over the Internet.
- 6) Enjoyment of the shopping experience attributed to positive attitudes. Nearly half of the respondents perceived shopping on the Internet to be like play.
- 7) Variety, or breadth of selection, was the most frequently mentioned product-value factor, ahead of price and quality, in the open-ended questionnaire.
- 8) From the structured questionnaire, price appeared as the most important product-value determinant of attitude towards online shopping and of their future shopping intentions. Variety was also found to foster positive attitudes.
- 9) Product-value factors were reported as being the most important predictor of intention to shop in the future.
- 10) Customer service was found to be largely nonexistent on the Web by the respondents of the study. (Jarvenpaa and Todd 1997, pp. 143-151)

Another researcher to investigate consumers' attitudes towards electronic shopping was Burke (1997). His perspective was that consumers' attitude towards routine, repetitive shopping activities would accelerate the adoption online shopping. For example, grocery shopping is an inefficient activity disliked by most consumers, with 85 percent of the purchased items being replenishment purchases or convenience goods bought regularly. The Internet has the ability to increase the efficiency of this type of shopping because its technology can provide convenient, time-saving and automated devises to facilitate these routine, repeat purchases. According to this author, the level of Internet sales is restricted at this point in time because of the limited availability of certain products. The accessibility of high volume convenience goods, such as grocery and pharmaceutical products, through the Internet will produce a tremendous increase in online sales.

In order to investigate this idea, six focus group interviews were administered to assess consumers' reactions and thoughts about the concept of online shopping for frequently purchased nondurable products. Participants were asked to express their likes and dislikes about the 3-dimensional virtual shopping simulation system (developed by Burke) that they were using to purchase their groceries in a experimental lab environment. The responses were generally favorable, although they were dissimilar among the different consumer segments. Those consumers who enjoyed grocery shopping, such as stay at home moms and retirees who had much less time constraints and perceived grocery shopping as entertainment and a means for social contact, naturally were somewhat less enthusiastic about shopping in an electronic environment. The most positive responses came from consumers with high time or mobility constraints.

Burke (1997) also discovered that some consumers expressed a distinct dislike for

paying shipping and handling fees. They have become spoiled with free delivery of prepared "fast food" from restaurants and view grocery shopping as comparable to fast food. To overcome this objection, consumers expressed a willingness to pay a fixed charge, which they could amortize by purchasing larger orders less frequently. According to Burke (1997), delivery charges were expected to be eliminated as competition increased; efficiency in selecting, packing, and transporting goods by grocers improved; and the overhead associated with physical stores vanishes. Also, many participates expected to become more efficient consumers through electronic shopping by improving their ability to access and utilize better information concerning prices and to monitor the total cost of grocery shopping.

There were also perceived differences in the quantity and quality of the information provided in the virtual store as compared to real shopping experiences. On the positive side, the information available in the virtual store environment was perceived to be superior and more useful in terms of its ability to aid in making better and faster decisions. This was a result of the computer enriching the information environment by 1) providing information specific to the consumers' needs; 2) facilitating comparison shopping; 3) providing additional product information upon request, such as related recipes and meal planning; and 4) informing the shopper of new products and store specials. The negative information aspects related to the virtual store concerned the inability for the consumer to have physical contact with the product, such as touching, smelling, or tasting.

These studies revealed that consumers have formed particular attitudes toward Internet shopping and that these attitudes are generally favorable. Consumers' positive attitudes result from:

- enjoyment from the shopping experience;
- convenience;
- the availability of superior and useful information found on the Internet; and
- the wide variety of products available over the Internet.

Additional investigation into consumers' attitudes toward and evaluation of Internet shopping can further the development of Internet theory.

## **Customer Satisfaction and the Internet**

Changes in consumer behavior and attitudes, technology, and the customer-firm relationship will certainly impact customer satisfaction. Szymanski and Hise (1999) investigated the relationship between consumer satisfaction and online shopping in general to determine the factors related to this phenomenon. These researchers proposed that consumers' perception of convenience, merchandising, site design, and financial security are factors affecting customers' evaluation of satisfaction with online shopping. Their e-satisfaction model is shown in Figure 6 and they provided empirical evidence for their conclusions regarding consumers' satisfaction with online shopping. Following is discussion of the conceptualization of their model, the research methodology, and the findings.

The convenience factor, described as the level of difficulty in finding similar merchandise in traditional stores and distance traveled in miles to purchase the merchandise, was operationalized as search effort and shopping effort, respectively. They hypothesized that the effects of this factor are stronger for more time-constrained shoppers. The quality of merchandising factor included the following elements:

- 1) quantity of online offerings (assortment),
- 2) quality of online offerings,
- 3) quantity of online information,
- 4) quality of online information, and
- 5) price of offerings measured as relative to shopping in traditional stores.



Source: Szymanski and Hise 1999

The degree of consumer knowledge about what was being purchased was proposed to moderate any positive effects. The attributes of site designs theorized to increase e-satisfaction were shopping lists, order confirmation, uncluttered screens, easy to navigate search paths, and fast presentations. Positive effects of site design were hypothesized to be moderated by the consumer's knowledge of computers and the Internet. They also proposed an inverse relationship between a consumer's concerns with financial security of the Internet transaction and satisfaction.

Focus group sessions were conducted to gain knowledge of the relevant factors related to e-satisfaction and to determine the content and wording of items to be incorporated into their questionnaire. An online qualifying question was e-mailed to members of NFO's panel of Internet users and a total of 2018 panel members were revealed to be Internet shoppers. The survey, which contained approximately 60 questions, was e-mailed to the sample, with 793 completing the questionnaire, resulting in a 39 percent response rate. Those respondents were found to be similar in terms of demographic and purchasing patterns as typical Web users and shoppers.

A brief discussion of the measurement tool is included because it will reveal some of the issues that are unique to the administration of an electronic survey. The summed score of a 2-item measure of satisfaction was used as the overall satisfaction score to test the hypothesized relationship between each factor and e-satisfaction. The 2-items were found to be highly correlated at r = .78, p< .05. A 1-item measurement scale was employed to operationalize search effort and one for time constraint. Shopping effort was captured as distance in miles to travel to the nearest store for each product category being tested (books; CD's; PC's, including hardware, software, and accessories; and airline tickets). Consumer knowledge of each product offering typically purchased online was measured by employing a 7-point scale anchored with "not very knowledgeable" and "highly knowledgeable". Relative measures (better than, worse than) were employed to capture the perceptions of Internet merchandise versus store merchandise, in terms of assortment, quality of offerings, quantity and quality of information, and price. The scores for assortment and quantity of offerings were summed to measure the variety of offering effect. A 1-item price measurement score was used to estimate the price effects and a 1-item information score (quality, not quantity) estimated the quality of information construct. Financial security concerns was operationalized with a 1-item measurement scale. The usual demographic queries were also included.

Szymanski and Hise (1999) found the interaction model (which contained the four factors in addition to the moderating factors of time constraint, product knowledge, and technical knowledge, see Figure 6) to be statistically significant and superior in explaining the variance in e-satisfaction (by 4 percent) than the main effects model (which contained only the four factors of convenience, merchandise, site design, and financial security). For the convenience factor, the results showed that the hypothesized direct effect of search effort on satisfaction was supported by the data. However, the interaction between time constraint and search effort was found not to be significant. The hypothesized interaction between time constraint and shopping distance was supported. The significance of the merchandise factor on e-satisfaction also emerged as having mixed results. They reported that quality of offering and price had a significant effect on e-satisfaction and that product knowledge moderated these effects. Their conceptualizations of perceptions of product assortment and online information (both quantity and quality) were found to have little or no effect on levels of e-

satisfaction. The components of the site design factor found to be significant included order confirmation, fast presentation, and uncluttered screens (through a significant and negative interactive effect with technical information). They reported that the combined elements of site design together contributed the most to predictions of e-satisfaction, indicating that easy to use sites lead to greater satisfaction. The financial security factor was found to be a significant predictor of e-satisfaction, resulting in the largest, single indicator. It was also reported that the interaction model explained 34 percent of the variation in e-satisfaction. The researchers concluded that to satisfy customers who shop online one must provide "... an environment where consumers can feel secure about transacting business, where they can effectively obtain merchandise, and where they can process and obtain information quickly" (Szymanski and Hise 1999, p. 22). This translate into offering consumers a "... more convenient mode of shopping" (p. 22). Their research indicates that consumers are formulating satisfaction assessments about this new form of shopping. Further research into this domain can facilitate theory and model development.

#### **Concluding Remarks Concerning the Internet and Consumer Behavior**

The Internet possesses unique characteristics that can significantly alter how marketing can be conducted in the future, transforming the relationship and interaction between businesses and customers. An innovative theoretical paradigm of communication and interaction has been developed to explain and model this new customer-firm relationship that has evolved as a result of the ability to conduct exchange transactions in computer mediated environments (Hoffman and Novak 1996). The major distinctions of this model are that communication on the Internet 1) is a two-way flow between buyer and seller; 2) can

be initiated by either the firm or consumers; and 3) can involve one-to-one and many-tomany lines of correspondences. Another important variable of this model is that both the firm and consumers can develop and apply content to the medium, which creates a novel variation to the customer-firm relationship. Other factors that reflect the changing customerfirm relationship concern the Internet's potential capacity:

- to shift the power from the firm to the customer; to change the role and possibly the existence of intermediaries in channels of distribution;
- to provide for superior performance in conducting some of the channel functions, especially those performed by the communication intermediaries;
- and to empower the consumer to control the interaction.

A discussion has also been presented about how consumer behavior is changing significantly due to rapid changes in lifestyles, demographics, and technology, resulting in the acceptance and utilization of the Internet. It is the Internet's ability to easily and efficiently accommodate the emerging needs of modern consumers that help drive its increasing acceptance. Studies have also been conducted which reveal that consumers are forming attitudes toward shopping online. Specifically, it has been reported that consumers are generally positive toward Internet shopping. It was also found that customers are satisfied with shopping on the Internet, particularly when it is easy and convenient to purchase from a user-friendly Web site. This literature review revealed evidence that the Internet is capable of providing consumers with quality (useful) information, convenience, and value in an easily navigable, user-friendly electronic and interactive shopping environment. It also provided insights into the potential variables needed to develop models and/or theories of how consumers formulated satisfaction assessments with Internet purchases.

## Satisfaction and Consumer Behavior

Satisfaction involves the evaluation of the outcome of a purchasing experience, in which consumers engaged in purposeful and intentional behavior. Explaining human behavior has always been a formidable task due to the fact that mental processes can not be readily observed, but merely inferred from the output, or behavior, occurring as a result of the inputs, or stimuli, which precede and cause the action. Understanding consumer satisfaction with the purchasing decision process and its outcome can provide firms with a means to direct their marketing activities to accomplish a successful and continuing relationship with their customers. The marketing literature presents many conceptual and empirical studies that explore and model customer satisfaction, with these models providing a frame of reference for future research and serving as an integrating function and a means of theory construction. Since the beginning of consumer behavior research, the concept that disconfirmed expectations are related to subsequent consumer satisfaction has been advanced by the foremost and founding consumer behaviorists, including Engel, Kollat, and Blackwell (1968) and Howard and Sheth (1969). Additionally, the disconfirmation of expectations paradigm has been the most predominant and widely documented model of customer satisfaction (Bearden and Teal 1983; Bolten and Drew 1991; Churchill and Surprenant 1982; Oliver 1980; Olshavsky and Miller 1972; Spreng et al. 1996; Spreng and Olshavsky 1993; Taylor 1993).

# The Expectation/Disconfirmation Paradigm of Customer Satisfaction

The expectancy/disconfirmation paradigm for explaining satisfaction represents a cognitive process in which consumers compare their beliefs or expectations about a product,

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formed before purchase, to their perception of how the product performed during consumption. The extent to which post-purchase perception of the performance confirms or disconfirms the prepurchase expectation(s) is theorized to be the primary determinant of satisfaction/dissatisfaction. Disconfirmation has been explained as the difference, or discrepancy, between expectations formed prior to consumption and the perceived performance of the product the consumer experienced during consumption (Bearden and Teel 1983; Bitner 1990; Bolten and Drew 1991; Cadotte et al. 1987; Cardozo 1965; Churchill and Surprenant 1982; Day 1977; Ennew et al. 1993; Halstead, Hartman and Schmidt 1994; Oliver 1980; Oliver and DeSarbo 1988; Oliver and Linda 1981; Oliver and Swan 1989; Olshavsky and Miller 1972; Spreng et al. 1996; Taylor 1993; Tse and Wilton 1988; Westbrook 1987; Woodruff et al. 1983). The expectation/ disconfirmation paradigm of customer satisfaction postulates that positive disconfirmation (perceiving performance received as greater than expectations) results in higher satisfaction; whereas negative disconfirmation (perception of performance as less than expected) produces dissatisfaction; and when perceived performance matches expectations indifference or moderate satisfaction occurs.

#### Expectations

Expectations have been operationalized as the probability or belief that a product possesses certain attributes, benefits or outcomes and that these beliefs are formulated from past experiences, word of mouth, advertisements and other marketing activities prior to purchase and consumption (Anderson et al. 1994; Bearden and Teel 1983; Bolten and Drew 1991; Cadotte et al. 1987; Churchill and Surprenant 1982; Day 1977; Ennew et al. 1993; Fornell et al. 1996; LaBarbera and Mazursky 1983; Oliver 1980; Oliver and DeSarbo 1988;

Oliver and Linda 1981; Olshavsky and Miller 1972; Spreng et al. 1996; Spreng and Olshavsky 1993; Tse and Wilton 1988; Westbrook 1987; Westbrook and Reilly 1983; Zeithaml et al. 1988; 1993). Zeithaml et al. (1993) conducted extensive research in the domain of expectation formulation using focus groups in order to develop a conceptual model on the nature and antecedents of service expectations. Knowledge concerning customer expectations is important because management has the capability of influencing customers' expectations through their marketing communications efforts. They interviewed experienced and inexperienced customers (both consumers and businesses) of pure and product -related services, as categorized by Lovelock's (1988) classification scheme. From these interviews, it was reported that these diverse groups of customers were fundamentally consistent in their descriptions of the nature and determinants of expectations.

The research indicated that the antecedents of expectations are derived from both external and internal search. External promises are comprised of those personal and nonpersonal statements disseminated by the organization to its customers, such as advertising, personal selling, contracts, and communication activities. It was reported that external service promises exert a direct influence on expectations, although the nature of the effects varies depending on the difficulty of the evaluation for the purchase process. Implicit service promises are described to be derived from cues, such as price and other service tangibles, and to produce a strong influence in shaping customers' expectations. Word of mouth is acknowledged as an important determinant in shaping expectations particularly because of its perceived unbiased nature. Past experience, an internal source, is also described as influencing expectation formulation. This research provides specific, concrete examples of how expectations are formulated by consumers.

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#### **Disconfirmation of Expectations - What Studies Have Revealed**

One of the earliest researchers to empirically explore the concept of expectations as a determinant of satisfaction was Cardozo (1965) who examined the dimensions of customer effort and expectations as they related to satisfaction. He based his theory of expectations and customer effort on two branches of psychological theory: (1) contrast theory, which implies that customers will magnify the difference between what was expected from the product to what was received if the product is perceived to have less value than was expected; and (2) Festinger's theory of cognitive dissonance which suggests that discomfort occurs when expectations are not met, producing pressure for its reduction, so adjustments to the perceived disparity are made by altering the product evaluation to be more congruent with expectations. To test his theory, satisfaction was operationalized as a high or favorable evaluation of the product (a pen). Product evaluations were affected by both the amount of effort expended in the purchase situation and the level of expectations prior to receiving the product. He manipulated the evaluations by providing particular groups of participants with pens that were definitely less valuable than the expectations formed by information presented in a printed catalog. The results of the experiment supported the hypothesis that those participants who received a product less valuable than expected (negative disconfirmation of expectations) gave a much less favorable evaluation than those whose expectations were confirmed, supporting the contrast theory. Cardozo (1965) also found that the effect of negative disconfirmation of expectations was moderated when a greater amount of effort was expended in the shopping situation, supporting the dissonance theory. The results also found that those participants who expended the greatest shopping effort evaluated the product significantly more favorably than did those who expended little or no shopping effort.

Olshavsky and Miller (1972) measured the effects of disconfirmation of expectations, both positive and negative, for a product (tape recorder) in a controlled laboratory study with college students. The study was testing whether "...a little positive exaggeration in product promotion favorably influences a consumer's judgment of product quality" (p. 19). In other words, they were examining the effect of expectations on consumer's evaluation of perceived performance. To assess how expectations influenced performance ratings rather than just the impact of performance level on satisfaction, respondents rated the performance of a complex, multi-attribute product after reading an advertisement (either high expectations or low expectations) and listening to the product (manipulated to have either high performance or low performance). They concluded that subjects with high expectations rated the product quality higher than those with low expectations, regardless of level of performance; those with negatively disconfirmed expectations (high expectations, but low performance) rated the quality higher than those with confirmed expectations (low expectations and low performance), and those with confirmed expectations (both high expectations and performance) rated quality higher than those with positively disconfirmed expectations (low expectations but high performance). The importance of their research was that they found that the level of expectation was determined to significantly affect quality rating, and satisfaction, regardless of the level of performance.

Oliver (1980) measured the relationship among expectation, disconfirmation, satisfaction, attitude, and purchase intention in respondents before and after participation in a federal flu vaccination program, comparing the results of both users and nonuser groups. A cognitive model of the antecedents and consequences of satisfaction was developed where satisfaction was conceptualized as a function of 1) a preconceived standard (expectations),

2) any perceived discrepancy that existed from this initial point of reference (disconfirmation), and 3) any subsequent attitudes that were formed after consumption, and that satisfaction affects future purchase intentions. Overall expectations were measured as the sum of the perceived belief probability of the occurrence of an outcome and the evaluation (importance) of the outcome. Disconfirmation was measured using overall better than-worse than expected scales. Satisfaction, which included measuring respondents' outright satisfaction, regret, happiness, and general feelings about their decision to purchase, was assessed using a 6-point Likert scale designed specifically for this study. The results of the study prompted Oliver (1980) to conclude that the disconfirmation was not unique to satisfaction, but also affected all post-exposure criteria, including future purchase intentions.

Churchill and Surprenant (1982) assessed the interrelationships among expectations, perceived performance, disconfirmation, and satisfaction for a durable and nondurable good to determine the necessity of including disconfirmation as an intervening variable affecting satisfaction or whether the disconfirmation effect can be captured adequately by expectations and perceived performance. Their findings revealed that for the nondurable good (a plant) the level of satisfaction was directly affected by disconfirmation, expectations, and performance - higher satisfaction was reported when performance ratings were higher. Performance was found to be positively related to disconfirmation, while expectations were shown to have a negative impact on disconfirmation. Subjects who perceived the plant to perform better than expected were more satisfied, indicating a positive relationship between disconfirmation and satisfaction. Expectations and performance were found to have both a direct impact on satisfaction and an indirect one through disconfirmation. The impact of disconfirmation on satisfaction was determined to be the largest of all the variables. It was reported that together the three variables, expectations, performance and disconfirmation, explained 78 percent of the variation in satisfaction.

The findings revealed a different picture for the durable good (video disc player) demonstrating that performance was the only variable to have an impact on satisfaction, explaining 88 percent of the variation. Performance ratings were shown to be significantly affected by expectations and, combined with expectations, to affect disconfirmation. Disconfirmation was found to be positively related to performance and negatively related to expectations when analyzing the results of consumption of a durable good.

Bearden and Teel (1983), assessing consumer satisfaction with automobile repair services, investigated the same antecedents of satisfaction, expectations and disconfirmation, but revised Oliver's (1980) model by incorporating complaint behavior into the model as another possible consequence. Satisfaction was depicted as a function of expectations (which were operationalized as product attribute beliefs) and disconfirmation; both these variables were believed to be unrelated, additive, and exogenous to the system. Expectations were also conceptualized as determinants of attitudes, which precede intentions; with satisfaction/dissatisfaction influencing subsequent attitudes, intentions, and complaint behavior. All the relationships except the one between satisfaction and complaining were hypothesized to be positive. Significant results indicated that expectations were positively related to attitudes and to satisfaction; a significant relationship was found to be a significant indicator of satisfaction; a significant relationship was found between disconfirmation and intentions; and satisfaction was significantly correlated with postpurchase attitudes and found to be negatively related to complaint behavior. These researchers concluded that expectations and disconfirmation are determinants of satisfaction.

Although much of the customer satisfaction research involving the expectation/ disconfirmation paradigm has been reported on products, other researchers have contributed to this paradigm in the area of services with a Gaps Model of service quality (Parasuraman, Zeithaml and Berry 1985; 1988; 1991; Zeithaml, Berry and Parasuraman 1988; 1993). This model embodies customer determination of service quality as a process of comparing service expectations with actual performance. Their research also included the investigation of customer satisfaction assessment, which they noted as being distinctly different from service quality evaluation and occurs as an outcome of comparing expectations (labeled as predicted service) and perceived service, with any perceived discrepancies reflected in the level of satisfaction.

# Expanding and Refining the Expectation/Disconfirmation Paradigm of Customer Satisfaction

It has been successfully argued in the marketing literature that the expectations/ disconfirmation paradigm is inadequate in fully capturing all of the antecedents to satisfaction. Expectations as the only comparison standard produce a number of inconsistencies and conceptual problems that cause researchers to examine alternative disconfirmation and comparison standards. For example, some of the limitations and conceptual problems with the expectations/disconfirmation paradigm reported in the literature include the following:

 restricts expectations to a one dimensional construct when in fact distinctly different types of expectations may actually be employed by the customer as a comparison standard depending on the use occasion and product type (Miller 1977) 82

- the inability of the expectation/disconfirmation theory to explain satisfaction for all product types (Churchill and Surprenant 1982)
- limits the evaluation of product performance to only those beliefs formulated preceding the purchase (Westbrook and Reilly 1983)
- restricts the process of satisfaction formulation to a cognitive process only, minimizing, if not completely eliminating, the importance of emotions and affective information processing (Westbrook and Reilly 1983; Woodruff et al.1983)
- confines the process of satisfaction formulation to being dependent solely on the particular brand being purchased and evaluated rather than including experiences with other brands in the same product category (Cadotte et al. 1987)
- fails to incorporate the motivation for purchase of the product in terms of the needs and wants that the consumer is attempting to satisfy as a determinant of satisfaction (Spreng et al. 1996; Spreng and Olshavsky 1993; Westbrook and Reilly 1983; Woodruff and Gardial 1996)

Because of these noted limitations and inconsistencies, researchers have also investigated alternative disconfirmation comparison standards for satisfaction. Additional comparison standards for evaluating product performance investigated in the literature include desired expectations (Swan and Trawick 1980); value-precept disparity (Westbrook and Reilly 1983); experienced based norms (Woodruff, Cadotte and Jenkins 1983); equity (Oliver and Swan 1989); desires congruency (Spreng and Olshavsky 1993); and price-value (Ostrom and Iacobucci 1995). Other research has taken a different path and investigated multidimensional models of satisfaction that incorporate a variety of comparison standards and different determinants. Multidimensional models presented and tested in the literature included several additional variables such as, attribution, expectation, equity, performance, and disconfirmation (Oliver and DeSarbo 1988); disconfirmation, expected product performance, ideal product performance, and equitable product performance (Tse and Wilton 1988); performance, service quality, value, expectations, and disconfirmation (Bolten and Drew 1991); and attribution satisfaction, information satisfaction, expectation congruency, desires congruency, and perceived performance (Spreng, MacKenzie and Olshavsky 1996).

# Research Exploring Other Comparison Standards and Multidimensional Models

LaTour and Peat (1979) viewed satisfaction as a comparison of what was experienced during consumption by the customer on all relevant attribute levels to some predetermined comparison level for each attribute. This comparison level (one for each attribute) was theorized to be a function of past experiences, knowledge from other consumers, and expectations created by the manufacturer, salesperson and/or service provider. Overall satisfaction then becomes a relative judgment of how well the attributes, as they were experienced by the customer, relate to the comparison level, or, in their words, "... a sum of the discrepancies of all relevant attributes from their appropriate comparison level with each discrepancy weighted by the importance of the attribute with which it is associated" (LaTour and Peat 1979, p. 435). These scholars developed their model of satisfaction because of the failure of the disconfirmation of expectations model to account for consumer satisfaction/dissatisfaction in all circumstances.

Woodruff, Cadotte and Jenkins (1983) developed a model incorporating experience based norms as the standard for evaluating a product's performance level in addition to expectations. They argued that satisfaction was more than just a cognitive process, but also an affective process that involves positive and negative emotions. These researchers conceptualized that consumers formulate norms (based on prior experience with the brand and/or product class; the brand's attributes and functions; the value of an attribute - cost and effort; and its use occasion) to function as the frame of reference when evaluating performance and then judge satisfaction relative to these norms. Additionally, the authors presumed that consumers have pre-existing ideas of the specific combination of attributes or benefits that a brand must possess in order to satisfy the particular needs and wants that motivated them to make the purchase.

In later research, Cadotte, Woodruff and Jenkins (1987) employed experience based norms that "reflect desired performance in meeting needs/wants" (p. 306) in an empirical study to determine the degree to which these standards explained satisfaction. The two distinctly different sets of experience based norms employed consisted of a "product type norm" (the average of all past experiences with the product category) and the "best brand norm" (based on the consumer's favorite brand). In their research on evaluating satisfaction of restaurants, the authors found that disconfirmation of the two experience-based norms standards were superior than disconfirmation based on expectations in explaining satisfaction, providing empirical support for employing a different comparison standard in satisfaction assessment.

Miller (1977), in his conceptual piece, specified four distinct types of expectations that a customer may utilize as standards when evaluating actual perceived performance levels: The Ideal: ... the "wished for" level;

The Expected: ... reflects what the respondent feels performance probably "will be" (based on past average performance, learning, information, advertising, prior experience);

The Minimum Tolerable: ... least acceptable level ... reflects the minimum level the respondent feels performance "must be";

The Deserved: ... reflects what the individual, in light of his "investments", feels performance "ought to be" or "should be" (Miller 1977, pp. 76-7).

Miller argued that these types of expectations were conceptually different and led to varying levels of satisfaction, depending upon the type in which perceived actual performance was judged against.

Oliver and DeSarbo (1988) also found empirical support for utilizing a multidimensional comparison standard for satisfaction determination when purchasing investment stocks. Their research found significant results for the following variables in explaining satisfaction: attribution, expectation, equity, performance, and disconfirmation. They concluded, based on the results of their experiment, that "... the expectation-disconfirmation model and performance are the primary means by which the subjects assessed satisfaction, although equity and attribution influences remain evident" (Oliver and DeSarbo 1988, p. 501). Other studies have also reported equity (fairness in the customer/salesperson/company interaction) as an additional construct along with disconfirmation of expectations in explaining satisfaction of goods and services (Oliver and Swan 1989; Swan et al. 1985).

Tse and Wilton (1988) also reported a multiple standard comparison model to be superior to the single-standard model in representing the underlying processes involved in

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satisfaction formulation. They conceptualized consumer satisfaction as "... a post-choice process involving complex, simultaneous interactions that may involve more than one comparison standard" (Tse and Wilton 1988, p. 206). Their multidimensional model included disconfirmation, expected product performance, ideal product performance, and equitable product performance as the standards for the multiple comparison processes. According to these scholars, the expected performance construct represented the most likely performance of a product and would be affected by both advertising and the average product performance. The optimal product performance a consumer is hoping to receive is reflected by the ideal product performance construct and established from word-of-mouth communications and learning from advertisements and previous product experience. The equitable product performance construct depicted what a consumer should reasonably expect to receive given the costs involved in obtaining the product. The results of their lab experiment exploring satisfaction for a miniature record player indicated that a multiplestandard comparison model was superior in portraying the underlying processes of satisfaction formulation than a single-standard model. Additionally, it was shown that the individual constructs appeared to represent different components in the model, each contributing separately to the process of satisfaction assessment.

Westbrook and Reilly (1983) conceptualized satisfaction as an emotional response to a product and that the "[e]valuation concerns the estimation of the beneficial relationship of perceived existent to the individual, enabling choice among alternative actions to fulfill the individual's needs" (p. 257). They viewed the evaluation process as one in which consumers compare the extent to which the product was able to either enhance or threaten their desires, which they labeled as values. According to their value-precept disparity model, the smaller the consumers' perception was of the disparity between their values and the product's attributes and benefits, the more favorable the evaluation. This favorable assessment would generate a greater positive affect that translated into goal attainment and lead to satisfaction. Westbrook and Reilly's (1983) model distinctly differentiated expectations from values and proposed it was consumer attainment of their values or desires, rather than confirmation of expectations, that resulted in satisfaction. Consumers purchase products to achieve fulfillment of needs, wants, desires, and/or values and not necessarily to confirm expectations they may have developed about a product prior to purchase and consumption.

Westbrook and Reilly's (1983, p. 260) defined expectations as "... the subjectively perceived likelihood of obtaining one or more particular outcomes..." and postulated they are developed through the processing of information provided by past experiences, word-of-mouth, and/or marketing activities in order to formulate an idea about how well the product is able to fulfill desires. They indicated that values and expectations will frequently be related because consumers are intentionally forming product choices based on their knowledge about product attributes and benefits to realize their goals. Empirical results indicated that the model which incorporated disconfirmation, expectations, and value-precept disparity performed better in estimating satisfaction than either the disconfirmation of expectation model or the value-precept disparity model did alone. This is another example supporting the notion that a multidimensional model is superior in assessing satisfaction than a single determinant one.

Spreng and Olshavsky (1993) developed a multidimensional model that incorporated desires congruency, disconfirmation of expectations, and performance as antecedents to

satisfaction. They incorporated two comparison standards - the traditional expectations standard and desires and a standard similar to the one described by Westbrook and Reilly (1983) - in addition to performance in creating their multidimensional model of the antecedents to satisfaction. The comparison standard of desires were related to higher-level values but, unlike Westbrook and Reilly (1983), they defined desires in concrete terms "... as the attributes, levels of attributes, and benefits that the consumer believes will lead to or are connected with higher-level values" (Spreng and Olshavsky 1993, p. 171). Desires congruency was conceptualized as a separate construct that depicts the consumer's subjective appraisal of the extent to which perceived product performance will correspond to what they consumer desires. Despite the frequent correlation between expectations and desires, they emphasized the fact that the two are distinctly different constructs. Expectations refer to "... beliefs about the attributes or performance levels that will occur in the future, [and] desires are beliefs about the product attributes or performance that will lead to higher-level values" (Spreng and Olshavsky 1993, p. 172).

In an experimental setting that assessed the components of the model in explaining the level of satisfaction for a new kind of camera, Spreng and Olshavsky (1993) employed confirmatory factor analysis using maximum likelihood estimation on the covariance matrix to test the model fit. The relationship between desires congruency and satisfaction was found to be significant and positive. The effect of disconfirmation of expectations on satisfaction was nonsignificant. Desires and expectations, as comparison standards for perceived performance, were confirmed as the antecedents for desires congruency and disconfirmation, with 56 percent of the variance in desires congruency being explained by desires and performance, and expectations and performance explaining 61 percent of the variance in disconfirmation. Overall, the model explained 74 percent of the variance in satisfaction. The indirect effect of expectations on satisfaction was found to be weaker than the indirect effect of desires on overall satisfaction, prompting these scholars to conclude that "... expectations did not have much of an effect on overall satisfaction" (Spreng and Olshavsky 1993, p. 174).

Later. Spreng, MacKenzie and Olshavsky (1996) presented an expanded multidimensional model of customer satisfaction and tested it in a laboratory setting, using a complex, expensive consumer product (camcorder), by manipulating the levels of variables being examined. They theorized that overall satisfaction results from two distinct, but related, constructs involved in the purchasing experience. Overall satisfaction was modeled to be a function of two direct antecedents: (1) attribute satisfaction and (2) information satisfaction. Attribute satisfaction concerns the product's performance and is conceptualized as a subjective judgment by the respondents of each product attribute's performance rated after usage. Information satisfaction is a separate but related construct that involves the "... subjective satisfaction judgment of the information used in choosing a product" (Spreng et al. 1996, p. 18). The indirect antecedents of overall satisfaction that directly affect attribute and information satisfaction are: 1) expectations congruency (disconfirmation - a subjective rating of the difference between expectations and the performance received) and (2) desires congruency (a subjective assessment comparing desires and the performance received). The antecedents of the two congruency constructs were listed as expectations and desires, respectively, and perceived performance. The findings of this empirical study included:

- 1) attribute satisfaction and information satisfaction had significant, positive effects on overall satisfaction, explaining 56 percent of the variation;
- expectations congruency had significant effects on attribute satisfaction and information satisfaction and a nonsignificant direct influence on overall satisfaction, confirming that the effects were completely mediated;
- desires congruency had significant effects on attribute satisfaction and information satisfaction and had a nonsignificant direct influence on overall satisfaction, confirming that the effects were completely mediated;
- 4) desires and expectations congruencies explained 88 percent of the variation in attribute satisfaction and 30 percent of the variation in information satisfaction;
- 5) the total effect of desires congruency was greater than the total effect of expectation congruency on overall satisfaction (.42 v. .33) and on attribute satisfaction (.63 v. .41);
- 6) the direct effect of attribute satisfaction on overall satisfaction was greater than the direct effect of information satisfaction (.52 v. .34);
- expectations were found to have both a negative effect (through expectations congruency) and a positive effect (through performance, which was stronger, thereby overwhelming the negative effect) on overall satisfaction, resulting in a total positive effect;
- 8) desires were found to have a negative effect on desires congruency;
- 9) perceived performance positively effected desires congruency;
- 10) the strong effect of perceived performance on overall satisfaction was found to be completely mediated by the model constructs. (Spreng et al. 1996, pp. 23-6)

These findings provide empirical support for the theory that overall satisfaction is

comprised of two distinct constructs resulting from the different components of a purchasing experience. Attribute satisfaction concerns the feeling the consumer perceives about the performance of the product itself and was found to significantly and positively affects overall satisfaction. Information satisfaction, distinctly different from attribute satisfaction, involves the evaluation of the information utilized in the purchasing process to make the product choice. Their study revealed that information obtained and used by consumers in making their purchasing decision is important and does significantly and positively affects overall satisfaction. These findings are important to consider when investigating consumer satisfaction because they offer evidence that consumers are evaluating the different dimensions of the purchasing experience separately when making satisfaction assessments.

#### Value and Customer Satisfaction

Value, or equity, has also been examined in the literature as an underlying variable in explaining overall satisfaction. Value can be viewed as the consumer's universal evaluation of the worth of a product based on the perceptions of the benefits received relative to the costs sacrificed (Anderson et al. 1994; Dodds, Monroe and Grewal 1991, Holbrook 1994; Taylor 1993; Zeithaml 1988). Both monetary prices and nonmonetary resources, such as time, effort, and energy, comprise the sacrifice component. Zeithaml (1988) enumerated on the benefit components of value to encompass salient intrinsic attributes, extrinsic attributes, perceived quality, and other relevant high level abstractions. The perception of value is also considered to be situational and dependent on the frame of reference in which the consumer is making the evaluation (Holbrook and Corfman 1985; Zeithaml 1988). Other scholars investigating the components of satisfaction and quality mentioned the importance of value and have conceptualized it as a function of a comparison between rewards received and what is relinquished by the consumer (Anderson et al. 1994; Bolten and Drew 1991; Churchill and Surprenant 1982; Oliver and Swan 1989; Ostrom and Iacobucci 1995; Taylor 1993; Tse and Wilton 1988).

As mentioned earlier, Miller (1977) conceptualized four distinctly different types of expectations that can potentially be a comparison standard in which to evaluate performance and judge satisfaction. The 'deserved' level involves an expectation about what the product performance "should be" or "ought to be" based on the quantity of investment a consumer has in the purchase. This comparison standard involves assessing the benefits, outcomes, and rewards the consumer expects to receive through the consumption of the product to the total costs that were necessary to obtain the product. Total costs include both monetary and time investments, as well as anything else that was given up by the consumer in order to acquire the product. Miller (1977) conceptualized that satisfaction could result even if performance was below the 'ideal', or "wished for" level, but above the 'expected' and 'deserved' level, and dissatisfaction would result if performance is perceived to fall below the 'deserved' level, even if it was judged to be above what was 'expected', illustrating the importance of the "reward-cost" or "investment cost" dimension (Miller 1977, p. 77). When performance is judged to be below 'expected', but above the 'deserved' level, surprise may result because the consumer has received more than was expected based on the investment foregone. Miller's (1977) conceptualization placed the 'deserved' level, or value received, as an important determinant of customer satisfaction.

Zeithaml (1988) generated qualitative research, as well as reviewed previous research on the relationship between price, quality, and value, to formulate her propositions about these concepts, to define price, quality, and value from the customers' perception, and to develop a model of their relationship. She concluded that perceived value was highly personal and individualistic, representing a higher level concept than quality. It was also noted that value was a unique construct, distinctly different from price and quality. Grouping the consumers' responses into categories, four expressions of value were developed:

- 1) "value is low price": emphasizing that what was being sacrificed or given up is the most significant component of value;
- "value is whatever I want in a product": essentially equivalent to the economic's definition of utility, indicating benefits received as most important;

- "value is the quality I get for the price I pay": referring to value as a tradeoff between a singular "give" component (price) and only one "get" component (quality);
- 4) "value is what I get for what I give": this definition underscores that value is a multidimensional tradeoff between all relevant "give" elements and all pertinent "get" elements (Zeithaml 1988, p. 13).

These four consumer interpretations of value were consolidated into one overall definition: "perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml 1988, p. 14). It was further proposed that the perception of value was dependent on the frame of reference, or context, in which the assessment was formulated and that perceived value affected the relationship between quality and purchase.

Oliver and Swan (1989) explored the role of equity in influencing consumer satisfaction in purchasing automobiles by investigating consumers' interaction with both the salesperson and the dealer. Equity and expectation were viewed has distinctly different constructs, with each having complimentary influences on satisfaction. Equity involves a judgment of the fairness of the exchange process in terms of what each party was receiving as compared to what each was foregoing, and implicitly included the price, or a monetary value. Fairness was conceptualized as "... an absolute function of the equality of buyer outcome and input combinations" (Oliver and Swan 1989, p. 374). These researchers viewed equity judgments as a two-stage process that are more complex than disconfirmation. This is because equity evaluation involves both an input phase - defined as "...passive interpersonal norms that have been acquired through various forms of socialization" (p. 374) - and an output phase as standards employed for the comparative process. In addition, they suggested that consideration is also given to the exchange partner and the inputs and

outcomes they bring and receive from the exchange. As stated by these researchers, "... equity captures the degree to which the consumer's outcomes and inputs were 'matched' by the merchant" (p. 375). The findings of this empirical study indicated that fairness (equity) and satisfaction were indeed highly related. It was also reported that both equity and disconfirmation are important constructs in the comparison process, being both complementary and separate dimensions in consumer satisfaction judgments.

Bolten and Drew (1991) developed a model that explained customers' assessment of service quality and value, which decomposed the global assessment of a service into a series of interrelated stages: assessments of 1) performance, 2) service quality, and 3) value. They theorized that when assessing value, customers may evaluate their perceptions of performance levels, expectations, and disconfirmation differently then when assessing quality. It was their contention that customers' global evaluation of service quality was influenced by their feelings of satisfaction with specific service transactions, which resulted from disconfirmation, expectations, and perceived performance. Value was hypothesized to be assessed after determining service quality by comparing the quality of the service to the costs in the particular situation. In other words, value is assessed by comparing what was received (quality) to what it cost to receive it. In addition to the customer's assessment of value reflecting the sacrifices (monetary and nonmonetary costs) incurred to purchase the service, differences in customer taste and characteristics were include in these authors' conceptualization of value. Customers' perceptions of service performance, service quality (which was conceptualized as disconfirmation of expectations) and value of their telephone service were measured to evaluate the relationships and strength of these constructs. In operationalizing the value construct, they hypothesized the disconfirmation and performance
would be weighted differently and more importantly in value assessment than in assessing quality. Additionally, due to price regulation of local telephone services, it was believed that nonmonetary costs were more meaningful in assessing value.

The results indicated that the most significant determinant of perceived service value was the quality (performance) construct, with the customer perception of the level of performance of local and long distant services affecting value directly, as well as indirectly through quality. The customers' disconfirmation experiences were found to be the second most important set of determinants for perceived value. From the findings of their study, they concluded that "... customers' perceptions of core, facilitating, and supporting telephone services and their disconfirmation experiences are weighted differently in assessing value than in assessing overall quality" (Bolten and Drew 1991, p. 383). For example, it was revealed that billing, local, and long-distant services were weighted more heavily by the respondents for value than for quality. Other findings indicated the importance of the customers' personal characteristics in value assessment. In discussing the findings of their study, the authors reiterated that assessment of service value was found to be positively related to their evaluations of service quality, with service quality and value being different constructs. They also called for further investigation into the relationship between customer satisfaction, perceived quality, and service value.

Ostrom and Iacobucci (1995) compared value and satisfaction of services by manipulating the price, quality, friendliness, and customization of a variety of experience services (those in which consumers can evaluate after consumption) and credence services (those in which evaluation is difficult even after some trial). Examples of experience services under investigation included hotels, fast food restaurants, hair salons, and checking accounts; while tax consultants, psychotherapy, physicians, and financial investments were considered to be credence services. The results indicated that for services perceived to be highly critical, involving higher risks in which customers have less confidence in their ability to judge the service, attributes other than price, such as the quality, friendliness, and customization ability they received, were more important in the evaluation of satisfaction and purchase intention. Price was found to be a more important factor with experience services and those judged to be less critical or important and involving less risks to the customer. Their findings are consistent with the concept of value being a trade-off between benefits received and expenditures foregone, because it was revealed that price (or cost) becomes less significant when evaluating services judged to be critical, riskier, and more important to the consumer. In this situation, the consumer is receiving more so there is a willingness to assume more costs, i.e. pay a higher price. When the benefits obtained are somewhat limited or minimal, then the customer is less willing to pay a higher price, or give up more for the service. It was concluded that evaluative judgments of satisfaction and purchase intentions "... appear to be partly a function of a trade-off between costs and benefits" (Ostrom and lacobucci 1995, p. 25). The authors indicated that value, satisfaction, and purchase intentions need further exploration and empirical studies to verify and solidify the strength of the interrelationships.

Anderson, Fornell, and Lehman (1994) included value as a determinant of customer satisfaction in their study that investigated the economic returns of customer satisfaction by linking it to such performance measures as market share and ROI. Customer satisfaction was viewed as being distinctly different from quality and dependent on value, which was viewed as "... the ratio of perceived quality relative to price or benefits received relative to costs incurred" (Anderson et al. 1994, pp. 54-5). Although Anderson's et al. (1994) study did not explicitly investigate the level or strength of value as an antecedent to customer satisfaction, their results indicated that high customer satisfaction was related to superior economic returns. If research can establish value to be a strong determinant of customer satisfaction, the economic significance of customer satisfaction may be enhanced.

### Satisfaction and Future Purchasing Behavior

It has been found that purchase intentions are significantly affected by consumer satisfaction (Bearden and Teel 1983; Cronin and Taylor 1992; LaBarbera and Mazursky 1983; Oliver 1980; Taylor and Baker 1994; Swan and Trawick 1981; Zeithaml, Berry and Parasuraman 1993). The results from one study indicated that satisfaction was found to be indistinguishable from future purchase intentions (Ostrom and Iacobucci 1995). Intention has been referred to as the consumer's verbal expression of future intent regarding the product and/or brand, and will be influenced by the consumer's knowledge, satisfaction and attitude about the particular brand in question (Howard and Sheth 1969). Satisfaction can lead to a higher probability of repurchase of the brand, given similar circumstances and choices, whereas dissatisfaction could result in the elimination of the brand from the consumer's choice set.

A substantial body of research supports the hypothesized relationship chain between beliefs, attitudes, and intentions, with attitude considered the most immediate precursor to behavioral intention (Bearden and Teel 1983; Davis et al. 1989; Fishbein and Ajzen 1975; Oliver 1980; Ostrom and Iacobucci 1995). Oliver (1980) hypothesized that post-purchase attitude is a function of pre-purchase attitude and satisfaction. The results of his study confirmed that satisfaction was a primary determinant of post-usage attitude and that they were positively related. It was also concluded that post-usage intention was related to satisfaction, post-usage attitude, and pre-exposure intention. He reported that the consequence of satisfaction was its ability to revise both pre-usage attitudes and pre-usage intentions. These findings led him to propose the satisfaction  $\rightarrow$  post-attitude  $\rightarrow$  post-intention relationship, which was well supported by the results from all three samples tested in the study. It can be argued that if satisfaction mediates attitudes, and attitude precedes behavioral intentions, than satisfaction can influence future intentions. Subsequent research has supported this relationship between satisfaction and intentions (Bearden and Teel 1983; Cronin and Taylor 1992; LaBarbera and Mazursky 1983; Ostrom and Iacobucci 1995).

#### **Conclusions from the Literature**

In conclusion, the literature suggests that Internet shopping is distinct from retail shopping, involves different behavior, and is a rapidly growing and significant phenomenon which will affect the marketing function, strategies, and activities (Hair and Keep 1997; Hoffman and Novak 1996; Ernst and Young 1999; Peterson 1997; Sheth and Sisodia 1997). It has been stated that consumers will need a decisive advantage to engage in this new purchasing activity (Sheth and Sisodia 1997). Several scholars have recommended investigating the implications of this new technological, interactive medium to determine its impact on existing business operations, the customer-firm relationship, and changing consumer behavior (Hoffman and Novak 1996; Peterson 1997; Sheth and Sisodia 1997; Whinston et al. 1997). Since the Internet represents a new form of shopping activity that requires consumers to employ different behaviors to complete their purchases, new theories are needed to describe and explain the behavior associated with this new phenomenon and its impact on the customer-firm relationship, including customer satisfaction. Additionally, new models and/or adaptation of existing ones may be necessary to appropriately exploit the many new opportunities that will surely result from this new phenomenon. The literature review revealed that information, ease of use, convenience, and value are important to consumers when shopping on the Internet. Empirical analysis is needed to establish which variables aid in the determination and prediction of customer satisfaction with Internet shopping and its affect on future online purchasing intentions.

The marketing literature reports that customer satisfaction is an important marketing phenomenon that positively influences future purchase intentions (Bearden and Teel 1983; LaBarbera and Mazursky 1983; Cliver 1980; Ostrom and Iacobucci 1995) and the expectations/disconfirmation construct is well established to be an important factor in explaining customer satisfaction (Bearden and Teel 1983; Bolten and Drew 1991; Churchill and Surprenant 1982; Oliver 1980; Olshavsky and Miller 1972). Additionally, many subsequent researchers have presented empirical evidence that a multidimensional model of determinants of satisfaction is superior in explaining the phenomenon than a single construct model (Cadotte et al. 1987; Oliver and DeSarbo 1988; Spreng et al. 1996; Spreng and Olshavsky 1993; Tse and Wilton 1988). It is therefore concluded that the literature provides theoretical justification for the development of a multidimensional model of satisfaction for Internet purchasing. It would be highly appropriate to incorporate variables that have been revealed in the literature to explain satisfaction, such as the disconfirmation and value constructs, into a model of customer

satisfaction with Internet shopping. Additionally, any aspects unique to an online shopping experience, such as information and technology, can also be included in a proposed theoretical model of customer satisfaction with Internet purchasing.

## **CHAPTER 3**

## **RESEARCH QUESTIONS AND METHODOLOGY**

#### **Overview**

This dissertation proposes to examine the phenomenon of consumer satisfaction with a discrete Internet purchasing experience, which involves both purchasing activities and the product received. This study investigates satisfaction with an Internet purchasing experience by first developing a model that illustrates the proposed determinants of overall customer satisfaction and of purchasing intentions to shop from a firm's Web site. Hypotheses are introduced which specify the relationship between the proposed constructs, overall satisfaction, and future purchasing behavior. The measurement scales to measure and confirm the relationships among the proposed indicators of consumer satisfaction with the Internet purchasing experience are presented. Additionally, exogenous variables theorized to influence overall consumer satisfaction with an Internet purchasing experience are also discussed, including how they will be measured.

#### Satisfaction and the Internet

Satisfaction is not an easily defined or measurable construct. Many researchers describe satisfaction as being a transaction specific construct, a favorable assessment of a distinct purchase, rather than a global construct (Bitner 1990; Bitner and Hubbert 1994; Bolten and Drew 1991; Carmen 1990; Cronin and Taylor 1992; Parasuraman, Zeithaml and Berry 1988). This research adopts the perspective that satisfaction is transaction specific and investigates overall consumer satisfaction for a singular, discrete Internet transaction. As

such, this study is investigating not just satisfaction with a product, but also examining satisfaction with the entire process involved in conducting an Internet purchase. Overall satisfaction with an Internet purchasing experience is comprised of both assessing the product's performance and evaluating the entire transaction process that involves the consumer in goal-directed activities to accomplish a specific task. It is theorized that how successful the consumer was in completing the activities involved in online shopping, as well as how the consumer perceived the product to perform, will influence the degree of overall satisfaction. Overall satisfaction with the Internet purchasing experience will be greater the more pleasurable the process of conducting the activities was and the better the product performed.

The level of overall satisfaction with the Internet purchasing experience involves the positive feeling of accomplishment that the correct purchasing decision has been achieved, resulting from the successful execution of the activities involved in the transaction process of obtaining the desired product over the Internet. The correct decision is one in which the consumer perceives that product expectations were confirmed and value received from the product. An Internet purchasing experience is a self-directed, goal-oriented procedure occurring in three distinct stages performed by the consumer in an electronic environment.

When asking consumers to express their satisfaction with the Internet purchase, they are actually being asked to formulate an evaluative judgment about how well they were able to engage in the process of obtaining the product in a computer mediated environment, taking into consideration the costs expended compared to the rewards received. This proposed model postulates that the consumer's judgment is based upon three major components:

- cognitive component a comparison of the perceived performance level of both the process and the product received to what one expected to receive;
- affective component an evaluation of feelings about the activities involved in the purchasing process and the product itself; and
- quantitative/economic component an analysis of the costs (both monetary and nonmonetary) involved in conducting the purchase and obtaining the product relative to benefits one perceived to receive.

It is proposed that overall satisfaction results when consumers perceive they were able to easily and proficiently manage the information on the Internet to make a correct purchase and they perceived the performance of the product received and the transaction process to be equal to or greater than their expectations. Additionally, the customer concludes that the benefits of the purchase process and the product outweigh the costs. Conversely, dissatisfaction occurs when consumers perceive an inability to easily employ Internet technology to extract useful and appropriate information, perceive that expectations are not adequately fulfilled by the transaction process and the product itself, and/or conclude that sacrifices incurred to obtain the product exceeded the benefits received. The degree of satisfaction will affect future purchases, with overall satisfaction enhancing the probability of continuing the purchasing behavior and dissatisfaction diminishing it (Howard and Sheth 1969). Satisfaction with the transaction process is important because it may greatly influence the consumer's decision as to whether or not an Internet purchase can fulfill shopping needs in subsequent buying situations. Marketers will find it useful to know which variable(s) enhanced satisfaction and which variable(s) reduced it in order to develop appropriate strategies to insure continued satisfaction with an Internet purchasing experience. The model of consumer satisfaction presented here focuses on satisfaction as an evaluation process that extends throughout the Internet purchasing experience, resulting in an assessment of overall satisfaction with the experience and how this relates to future purchasing from the firm's Web site.

## The Research Questions (RQ)

The research questions this dissertation is designed to address include:

- RQ 1: What factors influence satisfaction with the Internet purchasing experience?
- RQ 2: Which of the proposed factors have the greatest impact in explaining satisfaction?
- RQ 3: How well does satisfaction with the Internet purchasing experience predict future shopping from the firm's Web site?
- RQ 4: How is company image impacted by the consumers' interaction on the firm's Web site?
- RQ 5: How does company image influence future Internet shopping behavior?
- RQ 6) To what degree do the exogenous variables impact overall satisfaction with the Internet purchasing experience?

## The Proposed Model

It is acknowledged that any model is an abstraction of reality and possesses its own particular strengths and weaknesses, but Hunt (1991) advocates the use of explanatory models as scientific interpretations to explain, predict, understand, and control the phenomena under study. Five major roles for utilizing models in marketing have been identified. Marketing models can 1) furnish a frame of reference for problem solving, 2) aid in predicting behavior, 3) assist in explaining relationships and reactions, 4) serve in theory construction, and 5) facilitate the development of hypotheses for testing (Lazar 1962). The goal of empirically examining this model is to investigate Internet shopping behavior in the pursuit of a theoretical explanation for Internet purchasing satisfaction and future usage. This goal will be pursued through the development and testing of hypotheses based on the proposed model.

An illustration of the proposed model of consumer satisfaction with an Internet purchasing experience is presented, followed by a discussion of the variables included in the model and proposed research hypotheses concerning the constructs. Also presented in this chapter are the proposed measurement scales, which were formulated based upon relevant and substantiated research studies, and some preliminary results of the pretest. Figure 7 illustrates the transaction process for an Internet purchasing experience. Figure 8 presents the model of consumer satisfaction. Figure 9 shows the relationship between the transaction process and the proposed determinants of satisfaction.

As illustrated in Figure 7, an Internet purchasing experience has three distinct stages in which consumers are performing different behaviors related to their shopping activity. The first stage describes what operations are necessary in order to enter into the Internet environment and shop. These activities will vary depending on whether the consumer has a pre-determined Web site to shop from or is searching for a Web site to conduct the shopping activities. In the second stage, consumers are engaging in the shopping activities of selecting a product and purchasing it through the ordering procedures. Additionally shopping activities may also occur in this stage, such as information search and product examination. Once the product is ordered, the consumer has completed the purchase transaction and exited the Internet for this purchase. The third stage of the process, posttransaction, involves the consumer's interaction with the product itself. These stages are distinctly different and separated for analysis purposes because the firm can only influence and control those activities involved in the purchase and post-transaction stages. These two stages involve direct interaction between the consumer and the firm, whereas the first stage involves the consumer interacting with other firms, including servers and possibly search engines.

## Figure 7: Model of the Transaction Process for an Internet Purchasing Experience



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Figure 8: Model of Consumer Satisfaction with an Internet Purchasing Experience

# Figure 9: Model of the Relationship Between the Transaction Process and Satisfaction with an Internet Purchasing Experience



## **Proposed Research Hypotheses**

## **Overall Satisfaction with an Internet Purchase**

Overall satisfaction is conceptualized as an affective state resulting from a positive emotional reaction (Cadotte et al. 1987; Cardozo 1965; Oliver 1980, 1989; Rust and Oliver 1994; Spreng et al. 1996; Westbrook 1981; Westbrook and Reilly 1983) to the Internet purchasing experience, and is influenced by the evaluation of both the product received and the activities involved in the purchase. Figure 8 presents the proposed conceptual model, which illustrates that overall satisfaction with an Internet purchasing experience results from the consumer's positive assessment of information quality, ease of use, value, expectation congruency, and a little or no pre-transaction frustration.

The process of shopping online involves activities, such as decision making, interaction with technology, and active participation on the part of the shopper. This requires consumers to engage in new and different behaviors from when they are purchasing through traditional channels of distributions, such as store retailers, catalog, television, or even the telephone. During the Internet purchasing experience the shopper is performing activities within an electronic, interactive environment in which a positive or negative judgment may result from the process of performing these activities. The range of activities that may be performed within the Internet environment include:

- logging on the Internet to gain access to the interactive environment;
- navigating through various Web sites en route to the desired site;
- using technology to obtain, process, and/or review information needed to make the purchasing decision, and to correspond with the seller(s);
- navigating within the chosen Web site to select products to review or examine, fill or empty shopping carts, request additional information, and, finally, to process the order.

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While performing these activities in the Internet environment, it is possible to encounter telepresence (the perception of experiencing the computer-mediated environment) to a greater degree than the physical environment (Hoffman and Novak 1996). Perceiving telepresence more than the physical environment may lead to a flow experience, which has been described as "... the state occurring during network navigation, which is 1) characterized by a seamless sequence of responses facilitated by machine interactivity, 2) intrinsically enjoyable, 3) accompanied by a loss of self-consciousness, and 4) selfreinforcing", which can lead to an extremely gratifying state of mind for the shopper (Hoffman and Novak 1996, p. 57). To experience flow there must be a perceived equilibrium between the skill level of the shopper and the activities being performed in the online environment. The shopper's skill level can be enhanced by quality information, easy to use technology, and user friendly Web sites.

When performing the purchasing activities, the consumer may have several different feelings (harmonious or conflicting) about the process itself which will affect overall satisfaction. A feeling of satisfaction may result if the shopper perceived to have a flow experience due to the successful and enjoyable execution of the activities involved in the Internet purchase. Additionally, when expectations about performing the activities are met and value received from the action (such as a flow experience or convenience), satisfaction is likely to result. A positive judgment or feeling about the product that was purchased will also influence overall satisfaction with the online purchasing experience. This positive feeling toward a product can occur when the consumer perceives that expectations about the product were met and when the benefits received from the product were perceived to be greater than the costs.

#### **Perceived Information Quality**

Information is an integral and important component of Internet shopping, especially in the purchase transaction stage. No other medium allows consumers to control their interaction with and access to a vast quantity of information that can be utilized and processed for purchasing decision making. The construct of perceived information quality is defined as the perception of how useful and accurate the information from the firm's Web site is for the consumer in making the purchasing decision. Perceived usefulness and accuracy of the Web site information refer to the ability of the information to assist consumers in performing the goal-directed task of making an optimal purchase decision to fulfill their needs. It is being proposed that information quality will increase satisfaction with the process of shopping on the Internet because useful and accurate information can assist in improving and enhancing the purchase decision and facilitate the flow experience.

Internet information is unique in that it possesses distinctly different characteristics from information communicated through other channels and media (Burke 1997; Hoffman and Novak 1996; Phillips et al. 1997; Peterson 1997; Peterson et al. 1997; Sheth and Sisodia 1997). These unique characteristics can influence overall satisfaction because information on the Internet provides consumers with the ability to customize the information to suit their needs; request specific information on demand; and interact with the firm selling the product, causing the information to be more useful to the consumer. Additionally, it can improve the shopper's skill level of interacting in the Internet environment, thereby facilitating the flow experience. Because of its unique characteristics, especially the feature of control by the receiver, information is more likely to be utilized by consumers when engaging in Internet purchases than when shopping from traditional retailers.

Customer satisfaction and loyalty can be enhanced due to the increased availability and reliability of information delivered directly to consumers over the Internet (Phillips et al. 1997). In fact, satisfaction with product information has been found to be a positive and significant factor in explaining overall satisfaction with a product (Crosby and Stephens 1987; Spreng et al. 1996). Information must be perceived as important, useful, relevant, and valuable to aid consumers in their decision making process (Swanson 1987) and most scholars agree that information found on the Internet possesses these qualities. The quality of information can also improve the interaction between the consumer and the firm, and increase the consumer's perception of telepresence, which can positively impact the shopping experience. Useful and accurate information from a Web site can assist the consumer in conducting the Internet shopping activities, leading to positive feelings, therefore:

H<sub>1</sub>: Consumers' perceived information quality is positively related to overall satisfaction with an Internet purchasing experience.

## Perceived Ease of Use

Perceived ease of use is a fundamental and distinct construct that has been found to impact decisions to utilize information technology (Davis 1989; Davis et al. 1989; Hauser and Simmie 1981; Hill et al. 1987; Larcker and Lessig 1980; Swanson 1982, 1987). Since Internet shopping automatically includes the use of technology it should be a factor in satisfaction. Perceived ease of use as a construct in this study is defined as the perception of how easy and free from difficulty conducting the purchase transaction from the firm's Web site is for the consumer. Perceived simplicity and convenience relate to the ability of consumers to easily learn how to purchase from the firm's Web site, to become skillful at performing this task, and the degree to which they feel in control of the purchase transaction. The perception of how easy or difficult it is to use and navigate through a Web site to accomplish the task of purchasing a product will be investigated to determine its impact on customer satisfaction with an Internet purchasing experience.

Perceived ease of use over technology and information can produce a feeling of control over the experience, leading to enhanced satisfaction with the process of purchasing a product from a firm's Web site. The easier it is to learn to maneuver on the Internet and within Web sites, the greater the perception of control over the process. This perception of control increases confidence in a person's ability to engage in the online shopping activities (Hoffman and Novak 1996). The perception of ease of use due to a well-organized and searchable Web site can also lead to increased satisfaction because it simplifies and expedites the performance of online shopping activities.

The less difficult it is to perform the tasks involved in shopping from a firm's Web site, the more likely telepresence and flow can be experienced, resulting in an enjoyable experience, which can lead to greater satisfaction with the process of shopping online (Hoffman and Novak 1996). It has also been found that ease of use can facilitate learning in a computer environment and create feelings of enjoyment (Dabholkar 1996; Hoffman and Novak 1996). The easier it is for consumers to maneuver within the Web site and reach their goal of making a purchase, the more enjoyable the experience will be for them. Higher levels of pleasure, enjoyment, and involvement during computer interactions have been

found to result in subjective perceptions of positive mood and satisfaction (Hoffman and Novak 1996; Starbuck and Webster 1991; Webster and Marocchio 1992). Since perceived ease of use leads to many desirable outcomes that can result in positive feelings toward the purchasing activities, it is being proposed that:

H<sub>2</sub>: Consumers' perceived ease of use is positively related to overall satisfaction with an Internet purchasing experience.

## **Pre-transaction Frustration**

The process of logging on to the Internet and conducting any search activities before selecting a particular Web site to make the purchase from are components of the Internet transaction process occurring in the pre-transaction phase. Before shoppers enter the Web site from which to make their purchase, they must access the Internet by logging on to the World Wide Web. This activity can potentially impact their overall feelings toward the purchasing experience. It is a necessary, yet peripheral, component of online shopping, analogous to driving to the mall or the retail store. Technology, service provider, and/or search engine problems may arise, which could adversely affect the shoppers' total experience and produce negative feelings or frustration as they engage in the online shopping activities. In particular, it is being proposed that any negative feelings or frustrations resulting from performing the pre-transaction functions will have a negative impact on customer satisfaction with the Internet purchasing experience.

Pre-transaction frustration is defined as the assessment of the level of difficulty in logging on to the Internet and the difficulty of performing any activities that may have been conducted before selecting the Web site from which to make the purchase. Pre-transaction activities involve logging on to the Internet; possibly choosing a search engine, browsing Web sites for product/company information, requesting additional information; and selecting a Web site to conduct the purchase transaction activities. If the consumer has a particular Web site in mind to purchase from, then the only pre-transaction activities necessary are logging on to the Internet and accessing the desired Web site. The influence of pretransaction activities on satisfaction will be assessed separately from the activities involved in the purchase transaction and post transaction stages. This is because pre-transaction activities, by definition, do not involve customer interaction with the firm's Web site from which the shopper will be making the purchase. Therefore, these activities, as opposed to purchase and post transaction activities, are beyond the control of the specific seller to influence or modify by developing strategies to improve satisfaction for the consumers shopping on its Web page. Internet retailers may find it important to understand the impact of any pre-transaction activities adversely affecting satisfaction with the Internet shopping experience, even if they are limited in changing or influencing this component of satisfaction.

The level of frustration and/or difficulty a consumer may experience with the Internet technology and activities involved in navigating through the different pre-purchase Web sites can have a negative affect on the satisfaction with the Internet purchasing process in a number of different ways. Inability to easily access the Internet caused by problems with the consumers' service provider can affect their ability to even successfully engage in online shopping activities. Frustration due to inactive or dead links can lead to terminating the activity before a successful purchase is completed or attempted. The difficulty in maneuvering through some Web sites and the time required to obtain (download)

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information may increase the shopping time and costs, resulting in decreased satisfaction with the shopping activity. The sheer number and disorganized placement of Web sites or illogical search procedures may overwhelm the shopper, causing a negative evaluation of the experience. Therefore, due to the negative feelings that may occur toward the activities involved in the pre-transaction stage and their impact on satisfaction, it is hypothesized that:

H<sub>3</sub>: Consumers' level of pre-transaction frustration is negatively related to overall satisfaction with an Internet purchasing experience.

## **Perceived Value**

Value has been reported in the satisfaction literature as an important and significant antecedent of customer satisfaction (Bolten and Drew 1991; Miller 1977; Oliver 1997; Oliver and DeSarbo 1988; Oliver and Swan 1989; Ostrom and Iacobucci 1995; Rust and Oliver 1994; Swan et al. 1985; Tse and Wilton 1988). Empirical evidence has depicted value to be a distinctly different construct from disconfirmation in explaining satisfaction and to be influenced by perceived performance (Bolten and Drew 1991; Oliver and Swan 1989). The inclusion of this variable in a model of satisfaction appears to be highly appropriate when viewed in light of Howard and Sheth's (1969) definition of satisfaction as "...the buyer's cognitive state of being adequately or inadequately rewarded for the sacrifices he has undergone" (p. 145).

Perceived value is defined in this model as a positive assessment of the trade-off between the perceived rewards received and the total costs incurred when conducting the purchase from a Web site as compared to making the same purchase in a retail store. Consumers shopping from a firm's Web site receive different benefits and incur different costs then when shopping at a retail store. Evaluating these rewards relative to the sacrifices incurred by purchasing the product online as compared to buying the product in a traditional retail store will result in a value perception of the Internet purchasing experience. Because there is evidence in the literature to support the inclusion of value as an antecedent to explaining satisfaction, further empirical evidence and investigation into this phenomenon can assist in determining the strength and relationship of this satisfaction construct as it relates to shopping at a Web site.

Purchasing from a Web site is a viable alternative to shopping in traditional retailing environments and possesses the potential for providing consumers with the many benefits they are seeking, which will lead to feelings of satisfaction. It is proposed that any perceived value received from conducting the online shopping activities will enhance satisfaction.. Product value has also been reported to be a significant factor in explaining positive attitudes toward Internet shopping and for predicting future intentions to continue performing electronic shopping activities (Jarvenpaa and Todd 1997). Researchers have reported that the promise of lower prices can be considered one of the most important advantages of shopping online (Ernst and Young 1999; Peterson 1997; Sheth and Sisodia 1997). Any perception of obtaining more rewards relative to costs incurred will lead to positive feelings toward the Internet shopping activities, therefore:

# H<sub>4</sub>: Consumers' perceived value is positively related to overall satisfaction with an Internet purchasing experience.

### Expectations Congruency

Disconfirmation, or the discrepancy between performance and expectations, has been

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found to be a key determinant and significant indicator of overall satisfaction in a number of studies (Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver 1980; Olshavsky and Miller 1972; Spreng et al. 1996; Spreng and Olshavsky 1993). The expectancy disconfirmation paradigm describes a process in which expectations are used as the comparison standard to evaluate performance. Expectations are confirmed when consumers perceive no difference between their expectations and the performance they received from the purchasing experience. Any discrepancy between the expectations and perceived performance levels results in disconfirmation. The construct of expectation congruency in this model resembles the expectancy disconfirmation paradigm. Expectation congruency is defined in this dissertation as the outcome of the comparison process between expectations and the perceived performance of the Internet purchasing experience (Spreng, MacKenzie and Olshavsky 1996; Spreng and Olshavsky 1993). It represents a subjective evaluation made by consumers and describes the level of discrepancy, or gap, between expectations (about both the transaction process and the product) and the perceived performance from the purchasing experience. Expectations are the perceived beliefs that the Internet transaction process and the product possess certain attributes, benefits or outcomes (Bearden and Teel 1983; Oliver 1980; Tse and Wilton 1988; Westbrook 1987; Westbrook and Reilly 1983). Perceived performance represents the consumer's evaluation about what was received from the purchasing experience. It is the consumer's perception of the ability of the purchasing experience to deliver the expected attributes, benefits, and/or outcomes that determines if congruency exists between expectations and performance.

Expectation congruency results when consumers perceive no difference between their

expectations and the performance they received from the purchasing experience. This equates to the concept that expectations were confirmed. In other words, perceived performance was assessed to be equivalent to expectations, resulting in satisfaction. A gap results when there is a perceived discrepancy between expectations and performance, with a positive expectations congruency occurring if performance is judged to be greater than expectations and a negative expectations congruency (or noncongruency) resulting if perceived performance was found not to meet expectations. Similar to disconfirmation of expectations, satisfaction results with positive congruency and dissatisfaction follows from negative congruency.

Consumers have expectations about purchasing over the Internet. Consumers expect and desire speed of access, reliability, security, time and costs savings, high-quality goods and services, simplicity, and ease of user interface when purchasing over the Internet (Dabholkar 1996; Daniel and Storey 1996; Ernst and Young 1999; Jarvenpaa and Todd 1997). These expectations need to be met by the Internet purchasing experience in order for the consumer to feel a sense of satisfaction with the purchase, therefore:

# H<sub>5</sub>: Consumers' perceived expectation congruency is positively related to overall satisfaction with an Internet purchasing experience.

### Dependent Variables: Overall Satisfaction and Future Purchase Intentions

Overall satisfaction with an Internet purchasing experience is defined as a positive emotional feeling or reaction to a successful online transaction. This positive emotional feeling is predicted to occur when the consumer has positive assessments of information quality, ease of use, value, and expectation congruency, and little or no pre-transaction frustration. Were consumers able to easily and conveniently utilize the technology (i.e., software, hardware, search engines, hypertext links, navigating procedures) to gain access to and navigate within the desired Web site from which to make the purchase? Did consumers feel they were able to efficiently and effectively utilize the information available on the firm's Web site to confidently formulate the best possible purchasing decision, given their self-imposed constraints on the purchase (i.e., constraints can be in the form of money, time, and/or specific product attributes)? Did they feel the benefits received from the shopping experience outweighed the costs incurred? Were their expectations about the product and the shopping process confirmed or not? Once overall satisfaction is estimated it can be employed to measure its influence on predicting future Internet shopping intentions at the firm's Web site. Many researchers have explicitly recognized that experiences of satisfaction positively impact future purchase intentions (Cronin and Taylor 1992; LaBarbera and Mazursky 1983; Oliver 1980; Oliver and Linda 1981; Swan 1977; Swan and Trawick 1981; Taylor and Baker 1994; Zeithaml, Berry and Parasuraman 1993).

The level of overall satisfaction with the Internet purchasing experience pertains to a positive feeling that the correct purchasing decision has been achieved, resulting from a successful execution of the activities involved in the process of obtaining the desired product over the Internet. A successful execution of completing a purchase over the Internet from a particular Web site will more likely lead to the continued usage of this Web site for future acquisitions than an impeded or unsuccessful purchase attempt. A successful online transaction process can produce satisfaction, which leads to a positive attitude towards the experience, which is directly related to expanding future purchasing intentions (Bearden and Teel 1983; Davis et al. 1989; Fishbein and Ajzen 1975; Oliver 1980; Ostrom and Iacobucci 1995). The satisfaction-future intention of Internet shopping relationship is justified based on the same theoretical effect of attitude  $\rightarrow$  behavior  $\rightarrow$  usage relationship represented in the Technology Acceptance Model (TAM) (Davis 1989; Davis et al. 1989). This theoretical assumption implies that, all else being equal, individuals who hold a positive attitude toward the behavior formulate intentions to use technology. Overall satisfaction produces positive feelings and reactions, which can influence behavior intentions, therefore,

H<sub>6</sub>: Consumers' overall satisfaction with an Internet purchasing experience is positively related to intentions to shop from the Web site.

#### Exploratory Research - Perceived Company Image

As previously discussed in this proposal, it has been reported in the literature that shopping in a computed mediated environment alters the customer-firm relationship and the communication between the buyer and seller. On the Internet, the Web site functions as the contact point between the customer and seller, essentially replacing the salesperson in the buyer-seller exchange process. Research studies have investigated the buyer-seller relationship to determine the impact the sales force has on the probability of a continued interchange between the customer and the firm in the future (Crosby et al. 1990; Crosby and Stephens 1987; Doney and Cannon 1997; Dwyer et al. 1987; Wilson 1995). Drawing from this research, an exploratory investigation is included in this dissertation to determine the effect the customers purchasing experience at the firm's Web site has on company image and how this image impacts future intentions to shop from that Web site.

It is proposed that company image can be enhanced or blemished by its Web site,

which in turn will affect future online interactions by the consumer with the firm. Company image results from consumers' perception of firm trust and the reputation of the company. Firm reputation has been defined as the extent to which others believe the company is honest and concerned about its customers (Doney and Cannon 1997). If the firm's reputation is well justified, trust will be conferred on to the firm based on the history of the relationships with its customers. There is empirical evidence that supports the link between a seller's reputation and buyer trust (Anderson and Weitz 1989; Ganesan 1994). A favorable reputation also magnifies the credibility of the firm (Doney and Cannon 1997).

Trust has been defined as a confident belief in the seller to reliably and consistently act in a manner that facilitates and serves the long-term interest of the consumer (Crosby et al. 1990). Credibility is one dimension of trust that concerns the ability of the firm to meet it obligations and promises (Bitner 1995; Doney and Cannon 1997). In order for buyers to form a current purchase decision and long-term relational commitments, they must determine the extent to which the seller is trusted. The higher the degree of risks, the more important trust becomes in the buyer-seller relationship. Due to the security and privacy concerns related to "cookies" and shopping on the Internet, as well as other perceived risks, it can be presumed that online shopping may involve more risks, so trust becomes an important component in determining whether to continue the relationship. To develop a positive company image, consumers must trust the firm to send them the product they in ordered within the promised time frame. Empirical evidence has been reported that supports the concept that trust in the seller is crucial to the buyer's intention to remain in the exchange relationship in the future (Anderson and Weitz 1989; Morgan and Hunt 1994). Evidence exists that consumers have pre-determined images about companies prior to shopping from their Web site. A preference for familiar companies with credible reputations was expressed by Internet shoppers in the empirical study investigating Internet shopping conducted by Jarvenpaa and Todd (1997). Ernst and Young (1999) also found that the majority of respondents reported that familiarity with the Internet retailer (79 percent) and brand name (82 percent) to be important attributes in their decision to conduct online purchases. These findings suggest that consumers are more likely to begin their online shopping experience with well-established, reliable firms. However, interaction with the firm's Web site may either enhance or diminish the perceived image of the company, affecting future usage of the firm's Web site as a shopping venue. It is proposed that after interacting with the firm's Web site, the consumers' interpretation of information quality, ease of use, and value will influence the perception of company image.

The perception of how useful and accurate the Web site information is (information quality), how easy and free from difficulty it is to conduct the Internet purchase on the Web site (ease of use), and whether the benefits received outweighed the costs incurred (value) will impact the consumer's evaluation of the company's reputation and the level of firm trust (company image). It has been established that a positive and significant relationship exists between likability and trust (Doney and Cannon 1997). Consumers will like a Web site in which they can easily navigate within to accomplish the purchasing activities, are able to get useful and accurate information to improve their decision making process, and one in which they received some value. If they like the Web site, trust should develop, leading to a favorable image and future patronage.

Several scholars have expounded on the contribution of the Internet in encouraging and improving the customer-firm relationship because of its interactive properties (Hoffman and Novak 1996; Peterson 1997; Peterson et al. 1997; Phillips et al. 1997; Sheth and Sisodia 1997). Bitner (1995, p. 248) has designated interactive marketing to be "the dominant function for relationship building". If consumers can easily employ the Web site technology to successfully interact with the seller, a positive relationship and image can begin to emerge. This characteristic of interactivity can potentially increase the value of the experience to the consumer, enhancing the firm's reputation. The interactive property of the Internet will also impact the quality of information on the Web site, which can influence the perceived reputation and level of firm trust. Information that consumers' perceive to be honest, reliable, and proficient improves trust and reputation, leading to a positive image (Crosby et al. 1990; Doney and Cannon 1997).

A successive demonstration of personalized, positive, informative, and error free interactions can provide consumers with their best assurance of future continuation of trust and company concern for the customer. Continual positive encounters with the firm's Web site can serve to enhance the level of trust and the firm's reputation, contributing to a positive company and Web site image, therefore,

## H<sub>7a</sub>: Consumers' perceived information quality, perceived ease of use, and perceived value are positively related to company image.

Consumers will view firms on the Internet that possess an indisputable, positive reputation, known for their reliability and trust has having a more favorably image than sellers without these attributes. It is more likely for consumers to continue a relationship with firms they trust and perceive favorably, therefore,

# H<sub>7b</sub>: Consumers' perceived company image is positively related to intentions to shop from the Web site.

### **Exogenous Variables**

The exogenous variables presented in the model are not determinants of Internet purchasing satisfaction, per say, but are factors that may serve to enhance or inhibit the feeling of satisfaction the consumer can experience from the Internet purchasing activity. Following is a brief explanation of these variables and how they may impact the overall satisfaction with the Internet purchase.

#### **Personal Characteristics** (interest in shopping, time constraints, demographics)

Interest in shopping (product oriented versus experiential oriented): A consumer may engage in shopping activities for fundamentally two primary motives: to purchase a product and/or acquire product information, or for the sheer pleasure inherent in the experience itself (Bloch, Ridgeway and Dawson 1994; Dawson, Bloch and Ridgeway 1990; Westbrook and Black 1985). Product oriented shoppers pursue shopping activities to achieve a specific goal, that is to purchase a particular product to satisfy a need or to obtain product information related to a future purchasing decision. This is distinctly different from experiential shoppers who engage in shopping activities to gain pleasure and satisfy hedonic needs. Hedonic benefits of shopping can include boredom relief, social activity, eating, browsing, exploring the retail environment, interaction with others (sales personnel and/or friends), bargaining, and keeping abreast of new trends (Bloch, Ridgeway and Dawson 1994). There may be greater opportunities to pursue nonpurchasing activities that would provide pleasurable experiences in traditional shopping environments than while shopping over the Internet. Additionally, because of the vast amount of information easily accessible on the Internet that can facilitate the achievement of the specific goal of purchasing a product or obtaining product information more efficiently than in traditional shopping environments, product oriented shoppers may prefer Internet shopping. Therefore,

H<sub>8a</sub>: The responses of those individuals who have a product-oriented interest in shopping will be different from those who have an experiential-oriented interest in shopping, with product-oriented shoppers being more satisfied with the Internet purchasing experience.

Time constraints (*high versus low*): Due to changing lifestyles, many consumers today place a very high premium on time and time-saving devices. Burke (1997), in his research measuring consumers' reactions to the concept of virtual shopping for groceries, found that the most positive responses toward this concept came from consumers with significant time or mobility constraints, such as single parent households, dual-income families and disabled consumers. These consumers perceived the grocery shopping experience as unpleasant, but necessary, requiring too much time due to long lines and poor services. Another study surveyed women to investigate why they shop online (Tracy 1997). It was reported that, although 65 percent of the respondents enjoyed shopping, they felt lack of time restricted their participation in shopping activities. Additionally, 90 percent of the women surveyed cited the 24-hour availability of Internet shopping as a primary benefit. Due to time constraints it is theorized that,

H<sub>8b</sub>: The responses of those individuals who have high time constraints will be different from those who do not, with consumers who have high time constraints being more satisfied with the Internet purchasing experience.

Demographics: The demographic characteristics of Internet users have been changing since 1994, when males comprised up to 95 percent of users (Gupta and Chatterjee 1997). Females are the primary decision-makers concerning household purchases, but they are still the minority of users on the Internet. However, Gattuso (1996) found that women represented 31 percent of the Internet purchases while comprising only 17 percent of online users. The very next year, Tracy (1997) reported that women accounted for 40 percent of Internet users and were primarily utilizing this medium for their shopping needs. Other studies have reported equal numbers from both genders shopping online (Kunz 1997). Jarvenpaa and Todd (1997) conducted an empirical study to identify factors that influence consumers' attitude toward and intentions to shop on the Internet and they reported that demographic variables (including age, education level, household income, years of employment, and gender) explained less than five percent of the variance in the identified factors. It is predicted that the demographic profile of Internet shoppers will mirror those of all Internet users, except that a larger percent will be females. Demographic characteristics are not expected to have an impact on satisfaction directly, but may be influential through the other exogenous variables (i.e., interest in shopping - gender, occupation; perceived risks - age, income; time constraints - marital status, gender, occupation).

H<sub>8c</sub>: There is no difference in overall satisfaction with the Internet purchasing experience due to consumers' individual demographic characteristics.

#### **Internet Experience** (usage frequency, user type, Internet shopper type)

Usage frequency (high versus low): Prior experience with technology-based products has been found to positively affect consumers' attitudes towards continual usage

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of these products in general (Dabholkar 1996). The level of Internet usage will positively impact the performance of activities necessary to engage in an Internet shopping transaction. As Internet usage increases, users become more experienced and familiar with the Internet technology and the capabilities it possesses. This familiarity will increase confidence levels. Experience provides the opportunity for users to become more effective and efficient navigators to and through search engines and/or Web sites to extract more valuable information. Greater Internet usage also facilitates the learning of what opportunities, information, retailers, products and services are available on the Internet. Increased knowledge, improved ability to employ Internet technology, and enhanced navigation skills will simplify the shopping effort and increase confidence in the transaction process, strengthening satisfaction with the Internet purchase. Therefore,

## H<sub>8d</sub>: The responses of high Internet users will be different from low Internet users, with high Internet users being more satisfied with the Internet purchasing experience.

User type (experiential versus utilitarian): This research is investigating satisfaction with a goal directed, utilitarian activity (shopping on the Internet) as opposed to an experiential activity (i.e., game playing, participating in chat rooms, etc.). The type of Internet activity consumers frequently engage in is considered an exogenous variable in the model because it may have some impact on the outcome of the goal-directed shopping behavior. Internet experiential usage involves any activity on the Internet that provides entertainment, enjoyment, play, and fun for the individual engaging in the endeavor. Experiential behavior also facilitates learning about the Internet environment, which will assist in simplifying the goal-directed purchasing behavior (Hoffman and Novak 1996). In an empirical study conducted by Jarvenpaa and Todd (1997) to identify factors that influence consumers' attitude toward and intentions to shop on the Internet, close to half of the respondents believed shopping on the Internet was like play and enjoyment of the Internet shopping experience contributed to a positive attitude toward it. Tracy (1997) also reported that 69 percent of the respondents listed fun as a primary motivation for purchasing on the Internet. Hoffman and Novak (1996) described a flow experience associated with Internet usage and consider this experience to underlie many crucial elements of consumers' interaction with the firm and its offerings. This flow state (a process of optimal experience) is preceded by the antecedents of focused attention and congruency between skill level and challenges and followed by a set of consequences. These consequences include enjoyment, positive attitudes, and likely future usage. Those individuals that engage in experiential Internet usage should perceive greater incidences of flow experience and the consequences of these flow experiences will positively impact the goal-directed shopping task and a feeling of satisfaction with the Internet purchase, therefore,

 $H_{8e}$ : The responses of those individuals who are Internet experiential users will be different from those who are utilitarian users, with Internet experiential users being more satisfied with the Internet purchasing experience.

Internet shopper type (frequent versus infrequent): The level of Internet shopping experience a consumer possesses will also have an impact on the performance of the activities necessary to engage in an Internet transaction. As usage of the Internet for shopping increases, shoppers become more experienced and learning progresses to a point where they can more effectively and efficiently navigate to and through search engines and/or Web sites to extract more valuable information about the specific purchase transaction. Additionally, prior experience has been found to be a relevant factor in consumers' satisfaction with the current purchase and future purchase intentions (Bolten and Drew 1991; Oliver 1980). Prior experience has also been shown to render disconfirmation less important than the perceived performance of the product (Bolten and Drew 1991; Oliver 1980; Woodruff, Cadotte and Jenkins 1983). Greater experience in Internet shopping will improve a shopper's performance level. This should serve to enhance the experience, hence, greater satisfaction with the Internet purchase will occur. Therefore,

H<sub>8f</sub>: The responses of frequent Internet shoppers will be different from infrequent Internet shoppers, with frequent Internet shoppers being more satisfied with the Internet purchasing experience.

### Expectations

Expectations are defined here as the consumers' preconceived beliefs about the attributes, benefits or outcomes of Internet purchasing (Bearden and Teel 1983; Oliver 1980; Tse and Wilton 1988; Westbrook 1987; Westbrook and Reilly 1983). It has been reported that consumers do have expectations concerning Internet purchasing, which include speed of access, reliability, security, time and costs savings, a degree of control, high-quality goods and services, simplicity, and ease of user interface (Dabholkar 1996; Daniel and Storey 1996; Jarvenpaa and Todd 1997). Prior experience has been found to affect expectations, modifying them to be more realistic as to what to expect with the next purchase (Carmen 1990). The more realistic the expectations about the Internet, the more likely they will be confirmed by the purchasing transaction. Expectations have been found to be significantly and positively related to satisfaction (Bearden and Teel 1983; Churchill and Surprenant 1982; Olshavsky and Miller 1972; Spreng, MacKenzie and Olshavsky 1996), therefore,
# H<sub>88</sub>: Consumers who have higher expectations will be more satisfied with the Internet purchasing experience.

## **Perceived Risk** (security risk; privacy risk; financial risk; performance risk)

Applying the concept of perceived risk (Murray 1991) to online shopping, this construct is defined as the degree of uncertainty for the Internet purchase and the likelihood of any negative consequences. For Internet purchasing the likely negative consequences could include:

- 1) security risk: the risk of credit card information being intercepted and stolen during the transaction;
- privacy risk: the risk that any personal or transaction information is being captured and utilized by others without the knowledge or permission of the consumer;
- 3) *financial risk:* the risk of monetary losses from a poor purchase decision; and
- 4) *performance risk:* the risk that the purchased product will not performed as expected.

In an empirical study conducted by Jarvenpaa and Todd (1997) to identify factors that influence consumers' attitude towards and intentions to shop on the Internet, they found that perceived risk significantly affected consumers' attitude towards Internet shopping, but not their intentions to shop on the Internet. The risk dimensions included in this study included personal risk (personal harm from credit card information being stolen); privacy risk (loss of privacy); economic risk (a poor purchase decision which results in monetary losses); performance risk (product performance does not meet expectations); and social risk (disapproval of others). Personal and privacy risks were found to be the most significant determinants of overall risk. Sixty-eight percent of the respondents agreed with the personal risk statement that "the process of shopping on the Web will result in harmful personal consequences to the consumer" and 64.4 percent agreed with the statement that "the process of shopping on the Web puts the consumers' privacy in jeopardy" (Jarvenpaa and Todd 1997, p. 145). Only 43.4 percent believed that Internet shopping would result in monetary losses from a poor purchase decision, while 55.7 percent felt that the products purchased on the Internet would not meet expectations. Social risk was found to be unimportant.

Gupta and Chatterjee (1997) reported that 60 percent of the sample, and 71 percent of the females, responded that security concerns was the primary reason for not purchasing products on the Internet. Additionally, a higher perception of risk was noted by consumers buying from mail-order than when retail shopping (Spence, Engel and Blackwell 1970). Since Internet purchasing possesses some of the same characteristics as mail-order shopping (inability to physically examine the product before purchase; product is delivered) consumers may have higher perceptions of risks which can impact their level of satisfaction. A higher perception of security, privacy, financial, and performance risk should act to inhibit satisfaction by causing more anxiety in consumers as they engage in Internet shopping, therefore,

H<sub>8h</sub>: The responses of consumers who perceive low risk will be different from consumers who perceive high risk, with consumers who perceive low risk being more satisfied with the Internet purchasing experience.

**Product Type** (convenience goods; shopping goods; specialty goods)

Consumer products have been classified as convenience, shopping, and specialty goods since the 1948 Definition Committee of the AMA adopted the following definitions for each term:

1) "convenience goods - those consumers' goods which the customer purchases frequently, immediately, and with the minimum of effort;

- shopping goods those consumers' goods which the customer in the process of selection and purchase characteristically compares on such bases as suitability, quality, price and style;
- specialty goods those consumers' goods which a significant group of buyers are habitually willing to make a special purchasing effort." (Holten 1958, p. 58).

It is widely held that this classification system for goods is based on how consumers shop for the products, with shoppers exhibiting different shopping behavior for each different product class in terms of the amount of effort involved in comparing price and/or quality and in the frequency of purchases. Shopping goods involve the greatest shopping effort for consumers in terms of comparing 1) different brands for quality, style, attributes and prices; and 2) different sellers for the best price of the desired brand(s). Shopping goods are also purchased less frequently than convenience goods. Due to these factors, shopping goods require more information and search effort in terms of time, money and energy, but the probable benefits of conducting these comparisons is high relative to the increased searching costs. Expending greater shopping effort has been found to positively affect satisfaction (Cardozo 1965). The likely gain for engaging in price and quality comparisons between alternative sellers for convenience goods is much smaller relative to the perceived searching cost. Also, by definition, convenience goods are frequently and immediately purchased, with little effort, often through repeat purchases of the same brand. Because of these reasons, little or no comparison and shopping effort is expended for convenience goods. Specialty goods are specific brands consumers desire and are willing to consume a considerable amount of effort to purchase that brand. There is little, if any, quality or style comparisons because a particular brand is desired by the shopper. However, price comparison between sellers may be conducted, especially if it is a very expensive brand. Since shopping effort and the probable gain from comparison are greatest for shopping goods, satisfaction will be enhanced if the best possible product was purchased due to the Internet shoppers' own successful self-effort. Therefore,

H<sub>8i</sub>: The responses of consumers purchasing convenience and specialty goods will be different from consumers purchasing shopping goods, with consumers who purchase shopping goods being more satisfied with the Internet purchasing experience.

#### Selection of Scales/Measures

The measurement instrument is as parsimonious as possible to insure a higher response and completion rate. Fram and Grady (1995) found they generated a higher response rate for their questionnaire completed over the Internet by utilizing a more succinct format. The items contained in the questionnaire employ a balanced, nonforced format to solicit self-reported metric responses. A seven category response scale for the Likert-type responses was used because researchers have recommended formats containing six or more categories to be optimal for marketing research studies (Bendig 1954; Green and Rao 1979; Martin 1973). Generally, as the number of response categories is reduced, the correlation coefficient decreases (Martin 1973). All items use the seven category Likert response, unless otherwise noted. The measurement instrument was produced in an HTML Web based format, distributed via the Web, and completed over the Internet by the participants. The Web questionnaire is set up on the Old Dominion's server with direct access through a Web address. The URL for the survey is www.odu.edu/survey. See Appendix 1 for an example of the Web survey. The study and the survey have been approved by the University's Human Subjects Institutional Review Board. Following is a discussion of the selected items to measure the proposed constructs.

#### Measuring Perceived Information Quality

Perceived information quality is concerned with the usefulness and accuracy of the information from the firm's Web site in terms of facilitating the consumer in making the purchase decision. This is analogous to the construct of perceived usefulness which Davis (1989, p. 320) defines as "...the degree to which a person believes that using a particular system would enhance his or her job performance." In other words, for online shopping information quality pertains to the degree to which consumers believe that using the information contained in the Web site would enhance their performance of making a purchase decision. Davis' perceived usefulness scale (see Table 4) was successful in reflecting the usefulness of the computer software technology for the respondents in accomplishing the tasks related to performing their jobs. It was reported that the perceived usefulness scale achieved a Cronbach alpha reliability of .97 and also exhibited an unusually high level of discriminant validity (Davis 1989). Additionally, the Technology Acceptance Model (TAM) (Davis et al. 1989), employing the perceived usefulness and ease of use scales, has been well researched and verified in numerous studies and is a well accepted model measuring these constructs (for example, Adams et al. 1992; Chau 1996; Davis 1989; Davis et al. 1989; Hendrickson et al. 1994; Venkatesh and Davis 1996). Since the process of shopping requires consumers to make decisions, any information that improves the job performance of making the correct purchasing decision will be perceived as useful. Davis' perceived usefulness scale was adapted to measure how useful the information on the Web site was to the consumer in a making the purchase decision (see Table 5).

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Table 4:	Davis'	Scale	Measuring	Perceived	Usefulness
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DAVIS' (1989) PERCEIVED USEFULNESS SCALE				
Using [this technology] in my job would enable me to accomplish tasks more quickly. Using [this technology] would improve my job performance.* Using [this technology] in my job would increase my productivity.* Using [this technology] would enhance my effectiveness on the job.* Using would [this technology] make it easier to do my job. I would find [this technology] useful to my job.*				
likely I———— I———— I———— I———— I———— I———— I unlikely extremely quite slightly neither slightly quite extremely				
* These items were included in the 4-item Technology Acceptance Model (TAM) scale. (Davis, et al. 1989). Bolded words will be incorporated into the proposed scale to measure perceived information quality.				

# Table 5: Items Measuring Information Quality



#### Measuring Perceived Ease of Use

Davis (1989, p. 320) defined perceived ease of use as "... the degree to which a person believes that using a particular system would be free of effort." Similarly, in this research perceived ease of use is defined as the perception of how easy and free from difficulty conducting an Internet purchase is for the consumer. Davis (1989) developed a scale to measure respondents perception of ease of use for computer software technology in assisting them in accomplishing the tasks related to performing their jobs. He reported a Cronbach alpha reliability of .91 and high discriminant validity for his scale. Davis' ease of use scale (see Table 6) was successful in reflecting the ease of use construct in several other studies (for example, Adams et al. 1992; Chau 1996; Davis et al. 1989; Hendrickson et al. 1994; Venkatesh and Davis 1996). The process of shopping over the Internet requires consumers to be able to efficiently and effectively use technology to perform an online purchase. For the above reasons, Davis' ease of use scale was adapted to measure how easy it was for consumers to make an online purchase on the firm's Web site (see Table 7).

I able o: Dav	is Scale N	leasuring	rerceiveu	Lase of U	se	
	DAVIS' (1989) PERCEIVED EASE OF USE SCALE					
Learn I would My int I would It is <b>ea</b> I would	ing to open d find it ea eraction w d find to be sy for me d find easy	rate [this tec sy to get [this ith [this tec e flexible to to become to use [thi	chnology] his technol hnology] interact v skillful at is technologi	would be e logy] <b>to do</b> would be cl vith [this te using [this	easy for me what I wa lear and un echnology] s technolog	e.* ant it to do.* derstandable. y].*
likely I extremely	likely I I I I I I I I I I I I I I I I I I I					
* These items al. 1989). Bo use.	s were includ blded words	led in the 4-ite will be incorp	em Technolo orated into t	bgy Acceptan he proposed	ce Model (TA scale to meas	AM) scale. (Davis, et sure perceived ease of

Table 6: Davis	' Scale Measuring	g Perceived	Ease of Use
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## Table 7: Items Measuring Perceived Ease of Use

# PERCEIVED EASE OF USE SCALE

- Buying the product from this Web site was easy to do.
- Learning how to purchase the product from this Web site was easy for me.
- It was easy for me to be in control of the purchasing transaction on this Web site.
- This company's Web site made it easy for me to purchase the product.
- It was easy for me to do what I wanted to do on this Web site.

the above are scored: strongly agree o o o o o o strongly disagree

## **Measuring Pre-transaction Frustration**

The items measuring pre-transaction frustration relate directly to the activities involved in the pre-transaction phase of the transaction process for an Internet purchasing experience (see Table 8). In this stage, in order to purchase a product online a consumer must log on to the Internet and connect to a Web site. The items directly ask about these activities, requesting that the respondent provide a self-evaluation of the level of frustration or difficulty that was experienced to get to the particular Web site from which to make the Internet purchase. Once a Web site is selected to purchase from, the consumer has entered the purchase transaction stage and is engaging in purchasing activities confined to the firm's Web site from which the consumer plans to make the purchase.

# Table 8: Items Measuring Pre-transaction Frustration

# **PRE-TRANSACTION FRUSTRATION SCALE**

• Logging on to the Internet when I bought this product was frustrating for me.

• For this purchase, I experienced no problem with connecting to the Web site that I bought from. (Reversed coded)

the above are scored: strongly agree o o o o o o strongly disagree

# Table 9: Items Measuring Perceived Value

# PERCEIVED VALUE SCALE

	For this purchase, the benefits I received by purchasing from this Web site were greater than the costs. strongly agree 0 0 0 0 0 0 0 strongly disagree Compared to buying this product in a retail store, the price I paid for the product I bought from this Web site was less 0 0 0 0 0 0 more. Compared to getting the information while shopping at a retail store, searching for information about the product on this Web site took me less time 0 0 0 0 0 0 more time. Overall, considering all the time it takes to shop in a retail store, such as driving, parking, in-store searching, waiting, check-out time, etc., purchasing this product from this Web site rather than from a retail store took me less time 0 0 0 0 0 0 more time. Compared to what I paid for the product, it was worth more 0 0 0 0 0 0 more time. Compared to shopping in a retail store, I found shopping for this product on this Web site to be more enjoyable 0 0 0 0 0 eless enjoyable. Compared to shopping at a retail store, buying the product from this Web site was more convenient 0 0 0 0 0 0 eless convenient. Compared to shopping in a retail store, I found comparing prices for this product on this Web site to be easier 0 0 0 0 0 0 more difficult. Compared to shopping in a retail store, I found comparing prices for this product on this Web site to be easier 0 0 0 0 0 0 more difficult. Compared to shopping in a retail store, I found purchasing the product from this Web site to be easier 0 0 0 0 0 0 more difficult. Compared to shopping in a retail store, I found purchasing the product from this Web site to be easier 0 0 0 0 0 0 0 more difficult. Compared to shopping in a retail store, I found that buying this product from this Web site gave me more freedom 0 0 0 0 0 0 less freedom over the shopping experience. For this particular purchase, the benefits I received from the product were greater than 0 0 0 0 0 0 eless than all of the costs involved in purchasing it.
•	From this purchasing experience, compared to shopping in a retail store, I found that to shop from this Web site takes less effort 0 0 0 0 0 0 0 more effort.

# Measuring Perceived Value

The construct of perceived value involves evaluating the benefits received and the

costs incurred to make the purchase over the Internet as opposed to buying the product from

a traditional retail store (see Table 9). To measure this construct, the items were generated from the inventory of economic and convenience benefits and costs that were reported in the literature pertaining to online shopping (Alba et al. 1997; Bakos 1997; Burke 1997; Hoffman and Novak 1996; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997; Szymanski and Hise 1999). Value was measured by asking respondents to compare the benefits received and the total costs incurred from the Internet shopping experience to shopping in a retail store.

#### Measuring Expectations Congruency

Many researchers have employed direct comparison scales when measuring disconfirmation of expectations (i.e., Bearden and Teel 1983; Bolten and Drew 1991; Oliver 1980; Oliver and Linda 1981). Peter, Churchill and Brown (1993) advised against the use of difference scores in consumer research and instead recommended using direct comparisons. They provided several reasons to justify their recommendation. The major issues for using difference scores cited by the authors are reliability and discriminant validity problems. They noted that difference scores were less reliable than each individual component variable because as the reliability of either (or both) component score decreases, the decrease in the reliability of their related difference score will be magnified. Also, as the correlation between the component scores become greater, the reliability of the difference score score decreases. Since difference scores are not unique from their components, it seems reasonable to believe that they would not provide any additional information for predicting or explaining the phenomenon under study beyond what the components could themselves. Carmen (1990) also noted serious problems with utilizing difference scores between

perceived performance and expectations in both the administration of the scale and when employing factor analysis.

For these reasons, expectations congruency was measured by employing a direct comparison scale with items reflecting expectations consumers have for the Internet purchasing experience (see Table 10). The items in the scale reflect the expectations related to the product purchased and the shopping activities conducted in the purchase transaction and post-transaction phase of the transaction process for an Internet purchasing experience.

Table 10: Items Measuring Expectancy Congruency

	EXPECTANCY CONGRUENCY SCALE				
	The product I received was <b>[better 0 0 0 0 0 0 0 worse</b> ] than I expected				
	The ordering process to purchase this product was				
	[better o o o o o o worse] than I expected.				
•	The time I saved shopping from this Web site was				
	[better o o o o o o worse] than I expected.				
	The price I paid was [better o o o o o o o worse] than I expected.				
•	The convenience of shopping from this Web site was				
	[better o o o o o o worse] than I expected.				
	Overall this purchase was <b>[better o o o o o o worse</b> ] than I expected				

#### Measuring Satisfaction and Future Purchase Intentions

Overall satisfaction is conceptualized as an affective state resulting from a positive

emotional reaction (Cadotte et al. 1987; Cardozo 1965; Oliver 1980, 1989; Rust and Oliver

1994; Spreng et al. 1996; Westbrook 1981; Westbrook and Reilly 1983) to the Internet

purchasing experience. The items measuring overall satisfaction directly ask consumers to

provide a self-reported evaluation of their overall feelings with the product and the purchasing experience, similar to items in other satisfaction studies (Bearden and Teel 1983; LaBarbera and Mazursky 1983; Oliver 1980; Spreng and Olshavsky 1993; Tse and Wilton 1988). Respondents were asked directly if they were happy and satisfied with the product and the experience of shopping from the particular Web site (see Table 11).

# Table 11: Items Measuring Satisfaction

# SATISFACTION SCALE

 How do you feel about the overall shopping experience and the product you bought? very happy o o o o o o o o very unhappy

 Considering everything, the product you bought and the purchasing experience, how satisfied are you with your last Internet purchase?
completely satisfied o o o o o o o o o not at all satisfied

Future behavioral intentions were operationalized by asking consumers to respond

to the following statements (see Table 12) concerning their future Internet shopping plans,

similar to how future purchase intentions have been measured in the literature (Bearden and

Teel 1983; LaBarbera and Mazursky 1983).

#### Table 12: Items Measuring Future Purchasing Intentions

# FUTURE ONLINE PURCHASING INTENTIONS SCALE

• If I had to do it all over, I would shop on the same Web site again. the above are scored: strongly agree 0 0 0 0 0 0 strongly disagree

• When buying the same type of product, I will continue to shop from this Web site in the future. very likely 0 0 0 0 0 0 0 0 very unlikely

# Measuring Company Image

In order to be perceived as having a favorable image, customers must feel a level of trust, believe the company has a positive reputation, and have experienced previous positive encounters with a company (Crosby et al. 1990; Doney and Cannon 1997; Dwyer et al. 1987). Inherent in the trust variable is the perception of the firm's ability to make, enable, and keep its promises (Bitner 1995; Crosby et al. 1990; Doney and Cannon 1997). Positive reputations are formulated when customers feel the firm is honest, concerned about its customers, and it has a positive history of relationships with its customers (Doney and Cannon 1997). The construct of a company's image was operationalized by employing the following proposed items (see Table 13), which are adapted from Crosby's et al. 1990 trust index and Doney and Cannon's 1997 firm reputation and trust scales.

Table	13:	Items	Measuring	Company	Image
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	COMPANY IMAGE SCALE			
	I believe that the information on this Web site was true. The company I purchased this product from seems to be trustworthy. the above are scored: <b>strongly agree 0 0 0 0 0 0 strongly disagree</b>			
•	Because of this shopping experience with this Web site, I have a favorable o o o o o o o unfavorable image of this company. After shopping from this Web site, my image of this company is better o o o o o o o worse.			

#### Measuring Exogenous Variables

The items for the exogenous variables directly ask respondents to provide a selfreported evaluation of each factor that is proposed to influence overall satisfaction with an Internet purchasing experience.

## **Items Measuring Personal Characteristics**

Personal characteristics concern the consumers' interest in shopping (productoriented versus experiential-oriented), time constraints (high versus low) and demographics (gender, age, household income, ethnic identity, education, and profession). The two items to identify the consumers' interest in shopping include:

- The primary reasons I go shopping are to buy products and/or get information about products I might want to buy in the future. (productoriented)
- The primary reason I go shopping is to have a good time. (experientialoriented)

Time constraints was operationalized by employing the item from Szymanski and

Hise's (1999) scale measuring the perceived time constraints of respondents:

• With everything else I have to do, I have little time available for shopping.

The items measuring the demographic characteristics of the respondents are typical

of surveys, including gender, age, marital status, household income, ethic identity, education,

and occupation (see items #70-76 in the proposed questionnaire, Appendix 1).

## Items Measuring Internet Experience

Usage frequency (high versus low), user type (experiential versus utilitarian), and

Internet shopper type (frequent versus infrequent) comprise the Internet Experience variable.

When asked, "How often do you spend time on the Internet?" the respondents were requested

to select one choice:

- every day;
- between 5 and 6 days a week;
- between 3 and 4 days a week;
- between 1 and 2 days a week;
- between 1 and 2 days a month; and
- less than once a month.

Those users who spend three or more days a week on the Internet were classified in the high usage frequency category.

The user type was differentiated by the variety of activities the consumer performs over the Internet. Respondents were asked to select all activities they participated in over the Internet from a list that includes both utilitarian and experiential activities. Utilitarian users engage in Internet usage for communication, work, financial services, or other goal directed behaviors. They participate in such activities as information browsing, e-mailing, shopping, banking, checking stock prices, paying bills, buying personal investments, and buying insurance over the Internet. Those consumers who utilize the Internet for entertainment, play, and enjoyment purposes, such as surfing, game playing, and chat rooms, were classified as experiential users.

Frequent shopper types have made 10 or more purchases over the Internet in the last year and infrequent shopper types will have purchased less than 10 products in the last year over the Internet.

#### Items Measuring Expectations

Expectations are defined as the consumers' preconceived beliefs about the attributes, benefits or outcomes of Internet purchasing experience (Bearden and Teel 1983; Oliver 1980; Tse and Wilton 1988; Westbrook 1987; Westbrook and Reilly 1983). Beliefs were solicited from a small convenience sample of Internet shoppers following the procedures utilized by Ajzen and Fishbein (1980) and Davis et al. (1989). Respondents were asked to separately list the advantages, disadvantages, and whatever else they associated with Internet shopping. Beliefs that refer to almost identical attributes, benefits, or outcomes of Internet shopping but utilized alternative wording were classified as the same item, employing the most commonly used wording. The six most frequently reported beliefs were chosen. The other criteria for selection was that at least 20 percent of the sample mentioned the belief statement and the scale should contain more than 75 percent of the communicated beliefs (Davis et al. 1989). A convenience sample was obtained from Old Dominion University students, faculty, and staff who participate in Internet shopping. The final set of belief statements, listed below, was measured using a 7-point Likert scale anchored by strongly agree and strongly disagree.

- Shopping over the Internet is very convenient.
- Shopping over the Internet is easy to do.
- Shopping over the Internet is fast.
- I can find any kind of product on the Internet.
- I can shop any time I want to over the Internet.
- I can save money by shopping over the Internet.

#### **Items Measuring Perceived Risks**

The perceived risks proposed in this study to influence satisfaction with online purchasing are adapted from the risks Jarvenpaa and Todd (1997) found to have a significant effect on consumers' attitudes toward shopping on the Internet. The items comprising this proposed scale to measure perceived risks were modified from Jarvenpaa and Todd's (1997) definitions, was measured using a 7-point Likert scale anchored by strongly agree and strongly disagree, and were operationalized as:

- It concerns me that my Internet activities could be monitored without my knowledge or permission. (Privacy Risk)
- It concerns me that my credit card information might be stolen or misused while I am shopping over the Internet. (Security Risk)
- It concerns me that I might lose money by making a poor purchase decision while shopping on the Internet. (Financial Risk)
- It concerns me that a product I might purchase while shopping over the Internet may not work the way I thought it would. (Performance Risk)

# Items Measuring Product Type

The scale to classify the purchased product into the appropriate product type focused

on the frequency of buying this type of product, the amount of time devoted to comparing

brands, and the number of Web sites searched before the purchase. These activities relate

directly to the behaviors described in the definitions of the different consumer goods

classification (Holten 1958, p. 58). The items include:

The product I purchased from this Web site was \_\_\_\_\_.

For this particular purchase, how many Web sites did you examine before purchasing this product?

01 02 03 04 05 06 07 08 09+

For this particular purchase, how much time did you spend over the Internet comparing different brands before deciding to purchase this product? More than two hours Between 30 minutes and one hour Less than 15 minutes

How often do you purchase this type of product in general? At least once a week At least once a month At least once every 6 months At least once a year Less than once a year

Shopping goods are those products purchased in which consumers examined two or

more Web sites; spent greater than 15 minutes comparing different brands; and purchase this

type of product less often than once a month.

#### Pretest

A pilot study was conducted before the final version of the survey was placed on the Web for pretesting. Four students, one faculty, and one staff member from Old Dominion University were given the proposed survey in a traditional paper format individually (except for one case in which two students were questioned together) and asked specific, open-ended questions to provide their verbal feedback. Each session lasted approximately 30 minutes, with ten to fifteen minutes devoted to completing the questionnaire and the remaining time utilized for an interactive feedback discussion on the content, layout, and format of the survey. The feedback from the individual discussions was incorporated into the final version of the questionnaire. Additionally, the dissertation faculty committee members provided constructive and useful feedback which resulted in a better layout, format, and improved items for many of the scales.

The questionnaire was pretested online in order to provide preliminary results to further validate and improve the proposed scales. It was administered on the Web to test for any variables or situations that could result from conducting a survey in an electronic environment. Volunteers were solicited from both graduate and undergraduate classes, as well as some faculty and staff. Approximately 90 e-mail addresses were obtained from individuals who stated they had indeed purchased something online and were willing to participate. An incentive was included when asking for volunteers. The incentive consisted of the possibility of winning a \$50 prize and the volunteers were informed that one respondent would be randomly selected to receive \$50 at the end of the pretest. Additionally, Dr. Flaherty forwarded the e-mail message to her listservs that included approximately 200 names consisting of ODU students:

- 1) currently enrolled or have taken her Marketing on the Internet class;
- 2) currently enrolled in her Retail Marketing class;
- 3) student members of Pi Sigma Epsilon.

From the 89 e-mail addresses that were obtained from the volunteers, all but four by e-mail contact due to a variety of reasons, such as the wrong address given or an inability to read the address given. The e-mail message they received (see Appendix 2) included specific instructions and the Web site address that enabled them to access the site directly. From the initial request, 33 volunteers replied (representing a 37 percent response rate) that they completed the survey within the ten-day deadline. It was found that 46.9 percent of the respondents replied within the first two days after being notified by e-mail and 90.7 percent responded within the first five days after notification. Only 7 more individuals responded following a second request e-mailed to the 50 who did not complete the survey in the specified time limit. The second request stated that they still would be included in the prize drawing because the deadline was extended by three more days.

From the approximately 200 member listservs, only four students responded that they had purchased online and did complete the survey. This represents a very low (2 percent) response rate, but there is no way to know the reasons for the non-response. It may be due to the fact that very few individuals in that particular population had purchased online. The majority of the members of the listservs were undergraduate students and they were not initially prescreened to determine if they had indeed ever purchased online as were the volunteers from the other classes. It was found that a larger percentage of volunteers who had purchased online were obtained from the graduate classes than from the undergraduate

classes. To increase the response rate, the sample for the study was drawn from a population of known Internet shoppers.

CONSTRUCT	CRONBACH ALPHA	STANDARDIZED ITEM ALPHA
SATISFACTION (9 items)	.8314	.8393
INFORMATION QUALITY (6 items)	.8769	.8781
EASE OF USE (5 items)	.8638	.8790
VALUE (10 items)	.8165	.8349
EXPECTATION CONGRUENCY (6 items)	.7781	.7938
PRE-TRANSACTION FRUSTRATION (2 items)*	.7293	.7339
PRE-TRANSACTION FRUSTRATION (3 items)	.6589	.6578
COMPANY ATTRIBUTES (4 items)**	.7079	.7226
COMPANY ATTRIBUTES (5 items)	.6780	.7472
PERCEIVED RISK (4 items)	.7397	.7396
EXPECTATIONS (6 items)	.7419	.7749

Table 14: Reliability Coefficients from Pretest Data

\* Item removed: easy to select a Web site \*\*Item removed: buy often from this company over the Internet The pretest survey contained some different items then those in the final version of the survey.

The responses from all sources of volunteers were combined and analyzed. Results of the pretest were positive. All participants were able to access the Web site to complete the survey. The instrument was properly applied and answered in about 15 to 20 minutes by the respondents. The comments received indicated there were no problems with readability

or the ability to complete and submit the survey online. Overall the pretest confirmed the selection of the measurement scales, and a final version of the instrument, with a few modifications, was applied to a sample of Internet shoppers in the United States. The Cronbach alphas for each scale are listed in Table 14.

## **Concluding Remarks**

This chapter presented the research questions this dissertation is addressing and the proposed model to be tested. The hypotheses were outlined as well as justified with supporting evidence. A scale was developed for each construct based on theoretical propositions from the literature. A pretest was conducted and the results provided preliminary validation for the items in the scales. As a result of the pretest, modifications to the survey instrument were made. The questionnaire was then developed into a Web page to allow participants to access and complete the survey online.

# **CHAPTER 4**

# DATA COLLECTION AND ANALYSIS

#### **Overview**

Consumer satisfaction with a purchase has been studied in a variety of situations and product categories. However, few studies have examined consumer satisfaction with an online purchase and none have investigated how satisfaction affects purchase intentions to shop at the same Web site in the future. In this study, several theories are tested from different disciplines (satisfaction theory, Internet research, and technology acceptance) in order to better understand how consumers become satisfied with an Internet purchasing experience, how satisfaction relates to future online purchasing behavior from a firm's Web site, and how the online shopping experience influences company image. The purpose of this chapter is to present the findings from the formal testing of the proposed satisfaction model and research hypotheses analyses. Included in this chapter is a discussion of:

- 1) the data collection methodology;
- 2) the sample data, including sample representativeness, demographics, what respondents purchased, and the activities conducted on Internet;
- 3) measurement scale reliability and validity analyses; and
- 4) the formal testing of the proposed model and the research hypotheses.

# **Data Collection Methodology**

#### Survey Design

The survey research method is a procedure that involves gathering specific

information from a sample of a population for scientific purposes, by using standardized instruments (Rossi, Wright and Anderson 1983). In order to accurately conduct a research survey study, a survey instrument must be created to gather the desired data. The survey instrument designed for this study was a highly structured questionnaire that was developed based on theoretical propositions and constructs obtained from the literature (see Chapter 3, pages 134-147, for details on the scale development). The close-ended questions consisted of a 7-point or 9-point Likert scale, a semantic differential scale, or a choice of one response from a selection of responses. One question allowed the respondents to select as many of the Internet activities they participated in from a list of activities. A highly structured questionnaire was developed for the following reasons:

- 1) to insure the responses would be standardized;
- 2) to avoid ambiguity in the responses;
- 3) to facilitate and improve the time it would take to complete the questionnaire;
- 4) to provide respondents with a simple survey instrument to complete. (Dillman 1978; Rossi, Wright and Anderson 1983).

There was only one qualitative, open-ended question that requested the respondents to provide comments about their online shopping experience. This question was asked to solicit a richer, more detailed description of their shopping experience in hopes of learning more about how consumers feel toward shopping on the Internet (see Appendix 13 for the respondents comments). Other open-ended questions allowed the respondents to specify the exact Web site they shopped from and the specific product(s) they purchased. After undergoing a pretest and preliminary validation testing, the questionnaire was revised and created into a Web page from which respondents would access and complete the survey (see Appendix 1 for a copy of the complete survey).

#### Sample Design

Survey sampling theory describes methods and techniques for selecting samples so that the results may be projected to the larger population. The major sampling issues concern choice of population, sampling frame, sample size, and minimizing non-response bias. A set of procedures specifying how a sample is selected comprises the sample design. Following is a discussion of the sample design used in this research study.

The target population for a study investigating satisfaction with an online purchasing experience includes all individuals who have shopped and purchased product(s) over the Internet. In this study the population frame was limited to Internet shoppers who live in a specified regional area in the United States that included New York, New Jersey, Pennsylvania, Maryland, Washington, D. C., Virginia, North Carolina, South Carolina, and Georgia. The sampling frame used in this study consisted of a population of known Internet shoppers from Esperian, a firm that sells lists from its large databases. Their population was obtained from self-reported data on warranty cards and other surveys they have conducted and was limited to the specified geographical area. The firm guaranteed the integrity of their population, contending that its lists are purged monthly and represent accurate information. Esperian generated a random sample of 2000 from its population of online shoppers. The firm provided names, addresses and phone numbers of known Internet shoppers comprising the random sample of 2000 individuals who live in eight states in the East Coast, including the District of Columbia.

Calculating the appropriate sample size is an important issue to consider when designing samples for statistical research. Typical sample size calculations reflect a desired

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level precision or power. Precision is presented as a range around the descriptive statistic of interest and depends on the alpha level selected. For example, selecting a .95 alpha level, with  $\pm 5$  precision means that the true mean has a 95 percent chance of being no more than five points greater or less than the sample mean. However, in structural equation modeling a much larger sample size is normally required in order to maintain the accuracy of the estimates and also to insure representativeness. The need for multiple observed indicator variables to describe latent variables and the requirements of the program provide additional reasons for larger samples when using LISREL to analyze the data. A minimum of between 100 to 150 subjects has been recommended when employing structural equation modeling (Schumacker and Lomax 1996). A general rule of thumb is between 10 and 20 subjects per variable to be estimated. The proposed model in this study contains five independent variables and three dependent variables to be estimated. This requires a minimum sample size of 160 subjects; however, a larger sample size would be preferable. Drawing 2000 names from a population of known Internet shoppers could generate a sample of 400, assuming a twenty-percent response rate, and 200 if only ten-percent responded. With a sample of 2000, an eight percent response rate would still generate the desired 160 subjects needed to adequately analyze the data using structural equation modeling.

One method to minimize non-response bias is to increase the survey's response rate. The Total Design Method (TDM) presents a set of techniques developed specifically to increase response rates by providing a guide for personalizing the survey for the respondents (Dillman 1978). Several TDM techniques to were implemented and applied to this research study. First, the postcard sent requesting participation (essentially serving as a cover letter) was carefully composed following the TDM guidelines (see Appendix 3). To personalize each message, the respondent's first name was handwritten after the greeting on each postcard. Handwritten signatures of each researcher were also included to further personalize the message. An e-mail address was included to allow the participants to initiate personal interaction with the researchers if desired. Each paragraph provided the respondent with an appeal to participate and a monetary prize was offered as a reward for participation. The message included clear and concise instructions on how to access and complete the survey online. The questionnaire itself was also designed and crafted to incorporate as many TDM guidelines as feasible. As recommended, a second mailing was sent one month after the first mailing. The second postcard was modified to encourage those who had not participated and to thank those who had completed the survey (see Appendix 3-B).

In this study, non-response bias was examined by comparing the demographic variables of the respondents in the first mailing to those who responded in the second mailing. The goal was to determine if there were any statistically significant differences between the two groups. A Chi-square test of significance was conducted between the two groups on the demographic variables of gender, age, marital status, income, ethnic identity, and education. The results confirm that the two groups are not significantly different on the comparison variables (see Appendix 5).

#### **Data Collection Procedures**

A Web-based survey was selected as the most effective way of collecting the responses to the survey. The URL address for the Web survey was mailed to the sample of 2000 via a postcard, requesting participation (see Appendix 3-A). The respondents were

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requested to access and complete the survey online. The data were electronically collected from the responses to the questionnaire and returned to a comma-delimited data file when the individuals submitted their completed Web-based survey. This data file was downloaded into the appropriate statistical package for analysis. Of the 2000 postcards mailed, 243 postcards were returned because the U.S. Postal Service was unable to deliver the postcards to the addresses. The number of completed questionnaires from the first mailing was 133, representing a response rate of 7.6 percent. Table 15 shows the distribution of individuals in the sample by state.

Following standard survey research practice, a second mailing of 1700 postcards from the original mailing list was conducted one month after the first mailing (see Appendix 3-B). Only 1700 postcards were sent because it was determined that 300 addresses would not complete the questionnaire due to the following reasons:

- 1) 243 were undeliverable addresses as determined by the postcard being returned;
- 32 individuals were known to have completed the survey as determined by matching their names and/or addresses from their entry into the contest (not all respondents entered the contest and not all that entered included their name or address);
- 3) 25 addresses were omitted after a random calling of 100 participants determined that:
  - > 8 completed the survey after the phone call;
  - > 6 had completed the survey prior to the phone call;
  - > 5 were not interested in completing the questionnaire;
  - ➢ 6 had never shopped on the Internet

From the second mailing, 52 post cards were returned due to the fact the forwarding

time had expired or the addressee had moved. The total number of completed surveys from

both mailings resulted in an 11.8 percent response rate, with a total sample size of 201.

STATE	NUMBER OF INDIVIDUALS	PERCENT OF INDIVIDUALS
New York	410	24.1%
Pennsylvania	266	15.6%
New Jersey	225	13.2%
North Carolina	216	12.7%
Georgia	168	9.9%
Virginia	158	9.3%
Maryland	124	7.3%
South Carolina	120	7.0%
District of Columbia	18	1.1%
TOTAL	1705	100%

Table 15: Distribution of Individuals in the Sample by State

#### **Sample Data**

#### Sample Representativeness

Sample representativeness assumes the sample is representative of the population. To determine if the sample is representative in this study, the frequency tables of the important respondent demographics were examined and compared to the population demographics. Demographic characteristics of online shoppers have been collected for many years to develop a representative profile of the Web population and to observe changes in the type of individuals shopping online (Gupta and Chatterjee 1997). Gender, age, marital status, income, education, ethnic identity, and occupation are the typical demographic characteristics collected about online shoppers (Ernst and Young 1999; GVU's Tenth WWW User Survey 1988; Kunz 1997). Current population demographic variables were compared to the demographics of this sample to determine if significant differences existed between the two groups. Only the demographic variables for gender, education, ethnic identity, and

marital status could be compared between the two groups due to differences in how the other demographic variables were categorized in this study and the studies used for the population data (GVU 1988; Kunz 1997). A Chi-square test of significance was conducted between the two groups on the demographic variables of gender, education, ethic identity, and marital status (see Appendix 6). No significant differences were found between this sample and the population in terms of gender, education, and ethnic identity. This sample had significantly more married individuals and fewer single people than in the population. The results indicate that this sample is representative of current U.S. Internet shoppers because there were no significant differences between the two groups for at least three demographic variables.

#### **Demographics**

Demographic characteristics are a common way for marketers to describe the market. Researchers have been collecting demographic information on Internet users since the beginning of studying this phenomenon. Gupta and Chatterjee (1997) recorded the trend in selected characteristics of Web users from 1994 to 1996 and noticed an increase in the percentage of female users and in the average age of users. A recent study also concluded that the gender gap is continually narrowing with approximate equal proportions of men and women shopping online (Kunz 1998). In this study of online shoppers, approximately 45 percent were male and 54 percent were female (one percent did not indicate their gender). The average age of the respondents in this study was between 30 and 49 years old. Gupta and Chatterjee (1997) reported that the average income levels fluctuated between \$59,000 in 1994, \$69,000 in early 1995, and back to \$59,000 in late 1995. The Kunz (1998), Ernst and Young (1999), and GVU (1998) Internet shopper studies also reported Web users to have higher income levels than the U.S. population in general. The average income level reported in this study ranged from \$55,000 to \$74,999, with seventy-six percent of the respondents reporting their annual income to be \$45,000 or greater. Higher education levels for Internet shoppers were also noted in the above studies (Ernst and Young 1999; Gupta and Chatterjee 1997; GVU 1998; Kunz 1998), with approximately one third of online users having earned a college degree, as was found in this study. This sample consisted primarily of white Americans, as typically found in all of the studies cited. See Table 16 for the demographic profile of the respondents.

#### **Product Categories**

The categories of products purchased by this sample are presented in Table 17 and were similar to those reported in other studies (Ernst and Young 1999; Gupta and Chatterjee 1997; GVU 1998; Kunz 1998; Szymanski and Hise 1999). The top five product categories were:

- Books 16.3 percent
- Computer Accessories, Hardware and Software 12.9 percent
- Clothing 10.4 percent
- CD's; Electronics; Video/DVD's 5.5 percent each

Products grouped in the Other category were those in which only one respondent indicated purchasing the product. The majority of these products were nondurable goods, such as a ruler, pen, checks, cookie cutters, stationary, and disposable contact lenses.

DEMOGRAPHIC VARIABLES	LEVEL	FREQUENCY	PERCENT
GENDER	Male	90	44.8%
	Female	108	53.7%
AGE	Under 18 Years Old	2	1.0%
	Between 18 and 24	3	1.5%
	Between 25 and 29	13	6.5%
	Between 30 and 39	74	36.8%
	Between 40 and 49	60	29.9%
	Between 50 and 59	33	16.4%
	Between 60 and 69	12	6.0%
	Between 70 and 79	3	1.5%
	80 Years or older	0	0.0%
MARITAL STATUS	Single	32	15.9%
	Married	137	68.2%
	Divorced/Separated	16	8.0%
	Widowed	4	2.0%
INCOME	Under \$25,000	8	4.0%
	\$25,000 to \$34,999	17	8.5%
	\$35,000 to \$44,999	19	9.5%
	\$45,000 to \$54,999	20	10.0%
l	\$55,000 to \$64,999	32	15.9%
	\$65,000 to \$74,999	24	11.9%
	\$75,000 to \$95,999	36	17.9%
	\$100,000 to \$149,999		14.9%
	\$150,000 to \$199,999	8	4.0%
	\$200,00 & Higher	3	1.5%
ETHNIC IDENTITY	Asian American	9	4.5%
	African American	11	5.5%
	Caucasian	174	86.65%
	Hispanic American	1	0.5%
{	Native American	4	2.05%
	Other	1	0.5%
EDUCATION	Graduated from High School	16	8.0%
	Graduated from Trade School	3	1.5%
	Attended Some College	55	27.5%
	Graduated from College	61	30.3%
	Attended Graduate School	17	8.5%
1	Earned a Graduate Degree	36	17.9%
1	Earned a Professional Degree	6	3.0%
	Earned a Doctorate	3	1.5%
L	Other	3	1.5%

Table 16: Demographic Profile of Respondents

(Note: Due to non-response, some categories total less than 100 percent.)

PRODUCT	FREQUENCY	PERCENT
Book(s)	33	16.3%
Clothing	21	10.4%
Computer - Hardware	15	7.4%
CD(s)	11	5.5%
Electronics	11	5.5%
Video/DVD	11	5.5%
Collectibles	9	4.5%
Transportation Tickets	8	4.0%
Cosmetics/Skin Care	7	3.5%
Computer – Accessories	6	3.0%
Pet Supplies	6	3.0%
Computer	5	2.5%
Computer - Software	5	2.5%
Hobby Supplies	5	2.5%
Flowers	4	2.0%
Food	4	2.0%
Appliances	3	1.5%
Furniture	3	1.5%
Jewelry	3	1.5%
Toys	3	1.5%
Automobile supplies	2	1.0%
Bedding	2	1.0%
Other*	25	12.4%
TOTAL	202**	100%

Table 17: Categories of Product by Frequency and Percentage

(\*See Appendix 12 for the specific product types that respondents reported they had purchased. \*\*One respondent reported purchasing two different items.)

## **Internet Activities**

According to the findings, the respondents participate in a variety of different Internet activities (see Table 18). This data reports how the individuals in this sample use the Internet for both utilitarian and experiential purposes. Nearly all the respondents use the Internet for e-mail (97.5%), shopping (94%), and browsing for information (94%). The next most reported activity was surfing the Web (74%), with less than 50 percent of the respondents claiming participation in the other activities. Fewer than one third of the respondents use this medium to pay their bills and even less buy their personal investments or insurance online. Close to seventy-five percent do not play games online and over 80 percent do not participate in chat rooms. This suggests that few, if any, individuals from this sample are only experiential users. From the data, it is clear that all individuals comprising this sample use the Internet for utilitarian purposes (communication, shopping, and seeking information), while less than one half conduct their financial activities online.

INTERNET ACTIVITY	NUMBER OF INDIVIDUALS WHO REPORTED PARTICIPATION	PERCENT OF INDIVIDUALS WHO REPORTED PARTICIPATION
E-mail	196	97.5%
Browsing for Information	189	94.0%
Shopping	189	94.0%
Surfing	148	73.6%
Check Stock Quotes	95	47.3%
Banking	77	38.3%
Pay bills	65	32.3%
Game Playing	55	27.4%
<b>Buy Personal Investments</b>	42	20.9%
Chat Rooms	37	18.4%
Buy insurance	5	2.5%

**Table 18: Individual Participation in the Different Internet Activities** 

## **Instrument Validation**

Composite scales were created for use in the data analyses. An assessment of the reliability and construct validity of the composite scales is needed to evaluate their appropriateness to accurately measure the constructs of interest. Assessing item and scale

reliability, unidimensionality, and convergent and discriminant validity were the procedures employed to validate the measurement instrument (Doney and Cannon 1997). Reliability is concerned with measuring the accuracy of a composite scale and the extent to which the measure is consistent (Schumacker and Lomax 1996). Construct validity considers the ability of the scale to accurately define the construct (Schumacker and Lomax 1996). Convergent validity assesses the degree that items of the same construct are measuring the same theoretical dimension. Discriminant validity measures the degree that the items of one construct are different from the items of other constructs. The analyses that were conducted to help assess the structure of the measurement scales included:

- calculating the coefficient alphas;
- conducting exploratory and confirmatory factor analyses;
- examining the correlation matrix of the variables and furthering analyzing any questionable correlations between items of different constructs;
- constructing confidence intervals around the estimates of the correlation between the latent variables.

The data from the analyses of the reliability and validity assessment of the measurement scales are presented in Appendix 10.

## Item and Scale Reliabilities

The degree to which a composite scale is error free is indicated by the internal consistency reliability of the scale (Bollen 1989). The use of Cronbach's alphas is the traditional method for evaluating reliability. Cronbach's alphas assess the measurement error related to how close each scale item is to its individual true score. Table 19 presents the internal consistency reliability results for the variables in this study using the Cronbach's alpha and standardized item alpha. With the exception of one construct, FRUST (pre-

transaction frustration), the Cronbach's alphas for all other proposed constructs ranged between 0.7679 and 0.9191. These alphas fall comfortably within the .70 rule of thumb threshold used in applied research studies, indicating acceptable reliabilities (Nunnally 1978). The Cronbach's alpha for FRUST is .6091, indicating that it does not have acceptable reliability.

CONSTRUCT	CRONBACH ALPHA	STANDARDIZED ITEM ALPHA
FUTURE WEB SHOPPING (2 items) n=200	.8119	.8216
OVERALL SATISFACTION (2 items) n=195	.7733	.7735
COMPANY IMAGE (4 items) n=191	.8433	.8559
INFORMATION QUALITY (6 items) n=199	.9138	.9139
EASE OF USE (5 items) n=197	.8838	.8856
VALUE (12 items) n=187	.8836	.8904
CONVENIENCE VALUE (7 items) n=192	.8837	.8922
ECONOMIC VALUE (5 items) n=196	.7679	.7715
EXPECTATION CONGRUENCY (6 items) n=198	.8837	.8848
PRE-TRANSACTION FRUSTRATION (2 items) n=198	.6091	.6312
PERCEIVED RISK (4 items) n=200	.8352	.8352
EXPECTATIONS (6 items) n=190	.8606	.8891

#### Table 19: Scale Reliabilities

#### **Convergent and Discriminant Validities**

Construct validity, assessing convergent and discriminant validity, was evaluated using both exploratory factor analysis (principle components analysis) and confirmatory factor analysis, which employed the maximum likelihood method with the Chi-square goodness of fit statistic. The results of the exploratory factor analysis using Principal Component Analysis, with orthogonal rotation of the independent variables, provided evidence of both convergent and discriminant validity due to the high loadings on the hypothesized factors and low cross-loadings (see Table 20). Each item in the proposed FRUST (pre-transaction frustration) and EASY (ease of use) scales loaded on its hypothesized factor with no high cross-loadings. For the INFOQ (information quality) and EXCON (expectation congruency) scales, each item except one for each scale (INFOQ5 and EXCON4, respectively) loaded highly on its hypothesized factor with no high cross-loadings. To further test convergent validity of the proposed scales, a separate factor analysis was conducted for each composite scale that included only the items for that single construct. For each analysis of the independent variables except VALUE, the items loaded highly on one factor, indicating that the scale items did converge as a construct.

The items for the VALUE scale loaded highly on two different factors, with only one item loading high on two factors, indicating a high cross-loading. Upon further examination of the VALUE items, it can be logically explained why the items loaded onto the two different factors. The VALUE items (VALUE 3, 4, 6, 7, 9, 10, and 12) that loaded highly on one factor are dissimilar from the VALUE items (VALUE 2, 5, 8, 11, and 1X) that loaded highly on a different factor. These distinctly different factor loadings suggest that VALUE
			aptica Qa			
		4 H				
1	1	2	3		5	6
FRUST1	356	216	-8.755E-02	.124	260	.606
FRUST2	583	102	198	190	175	.430
INFOQ1	.284	.236	.707	.177	3.607E-02	-1.771E-02
INFOQ2	.110	.104	.868	.139	.135	-2.974E-02
INFOQ3	.249	.204	.780	.197	.130	-2.465E-02
INFOQ4	.253	.160	.842	.191	8.915E-02	-1.633E-02
INFOQ5	.667	.128	.439	9.608E-02	-1.544E-02	8.983E-02
INFOQ6	.369	.138	.740	7.355E-02	.132	4.473E-02
EASY1	.736	.257	.127	.274	9.812E-02	101
EASY2	.693	.238	.194	2.662E-02	7.766E-02	136
EASY3	.608	.245	.269	.100	.230	.200
EASY4	.671	.187	.299	.331	3.963E-02	243
EASY5 ;	.776	.173	.277	.280	8.963E-02	-4.871E-03
VALUE1	.559	.151	.162	.137	.451	.126
VALUE2	3.710E-03	3.096E-02	8.515E-03	.109	.756	240
VALUE3	.132	.707	.301	.130	9.385E-02	-9.849E-02
VALUE4	.149	.801	2.450E-02	.110	-2.424E-02	232
VALUE5	.127	.247	5.879E-02	.134	.728	7.251E-02
VALUE6	.144	.644	.196	.101	.248	.229
VALUE7	.270	.721	5.454E-02	.324	.151	-1.836E-02
VALUE8	.168	.242	.326	-8.175E-03	.522	-4.703E-02
VALUE9	.207	.691	.233	.299	.195	-1.926E-02
VALUE10	.196	.540	.206	6.627E-02	.274	.413
VALUE11	.303	.292	.171	.118	.581	.278
VALUE12	.230	.738	.164	.207	.208	-3.141E-02
EXCONI	.214	9.422E-02	.218	.404	.377	.197
EXCON2	.350	.135	.156	.759	.174	-6.706E-02
EXCON3	.120	.357	.161	.783	.138	1.773E-02
EXCON4	1.365E-02	5.718E-02	5.296E-02	.397	.775	139
EXCON5	6.044E-02	.272	.239	.822	.131	4.141E-02
EXCON6	.315	.175	134	.801	.229	5.424E-02

Table 20: Exploratory Factor Analysis of Independent Variables

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization (orthogonal rotation).

a. Rotation converged in 15 iterations.

The items loading highly on the convenience value factor include:

VALUE3: time to search for information

VALUE4: time to purchase

VALUE6: enjoyable

VALUE7: convenient

VALUE9: ease of purchase

VALUE10: freedom

VALUE12: effort

The items loading highly on the economic value factor include:

VALUE2: price paid for the product

VALUE5: worth of product

- VALUE8: comparison pricing
- VALUE11: benefits versus cost of product

VALUE1X: benefits of purchasing greater than costs

The two-factor result corresponds to classifying perceived rewards of Internet shopping into convenience factors and economic factors (Burke 1997). The convenience benefits cited in the literature (Alba et al. 1997; Bakos 1997; Burke 1997; Hoffman and Novak 1996; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997), which pertain to factors that facilitate and simplify the shopping and purchasing activities, can be accounted for by the items that loaded highly on the convenience value factor. For example:



The economic benefits resulting from shopping online include reducing the total costs of the shopping experience (Alba et al. 1997; Bakos 1997; Burke 1997; Hoffman and Novak 1996; Jarvenpaa and Todd 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997). These include lower prices (VALUE 1, 2, 5, 11) and reducing information search costs (VALUE 8).

The results of the confirmatory factor analyses for all model variables are presented in Appendix 10, along with the results from the reliability analyses. For model verification purposes, the VALUE construct was split into two distinct constructs – Value based on convenience factors (VALUCONV) and Value based on economic factors (VALUECON) – due to the results of both the exploratory factor analysis and the confirmatory factor analysis. Additionally, the Cronbach Alphas for the new VALUE constructs are still quite acceptable –.8837 for VALUCONV and .7679 for VALUECON.

Two other methods were employed to assess discriminant validity. The correlation matrix for all independent variables was examined to determine if any correlations of items between different constructs were greater than the correlation of items within the construct. The investigation found a few worrisome correlations between items of different constructs that were greater than between items within their own construct (see Appendix 7). These included:

- ♦ FRUST2 → EASYX1, EASY2, EASY4, EASY5
- ♦ INFOQ5 → EASY1X, EASY5
- ♦ VALUE items → items from all other CONSTRUCTS

To further evaluate the relationship between these worrisome items a pairwise factor

analysis was conducted between FRUST items and EASY items; EASY items and INFOQ items; and VALUE items with each of the other independent variables individually. The outcome of these analyses provided additionally evidence for discriminant validity. All pairwise factor analyses, except between FRUST and EASY, resulted in high factor loadings on the hypothesized factors and low cross-loadings (see Appendix 8).

For model verification purposes, the FRUST construct was eliminated from the model because of the results from the various instrument validation analyses that were conducted. The composite scale yielded a Cronbach's alpha of .6091, which is below the minimum acceptable level of .70 (Nunnally 1978). This indicates the scale does not possess high internal consistency reliability. Upon examination of the correlation matrix, it was noted that FRUST2 had a higher correlation with each of the EASY items than it did with FRUST1. The results of the pairwise factor analysis between FRUST and EASY generated a single factor (see Appendix 8), indicating poor discriminant validity between the two constructs. Additionally, the FRUST construct demonstrated weakness as a scale during the pretest due to its low Cronbach's alpha. Elimination of one of the items from the original scale was performed in an attempt to improve the scale. The resulting two-item scale generated a Cronbach's alpha of .7293 in the pretest, which falls within the acceptable range for internal consistency reliability. However, the scale was not as reliable when the sample sized increased to 201. It does not appear that the idea of frustration during the pretransaction activity has been adequately captured by the items in this survey. For these reasons, the FRUST construct was removed from the model of customer satisfaction with an Internet purchase.

A 95% confidence interval was constructed around each of the estimates of correlations between the independent constructs using the standard errors as another method to assess discriminant validity (Doney and Cannon 1997; Jöreskog and Sörbom 1993). Since the confidence intervals do not include the value 1, it is concluded that the constructs are not highly correlated, indicating acceptable discriminant validity (see Appendix 9).

Construct validity assessment was also conducted on the proposed dependent constructs – FUTWEB (future online shopping), SAT (satisfaction with an Internet shopping experience), and COMPIMAG (company image) – using the same procedures as with the independent constructs. The output of the exploratory factor analysis using Principal Component Analysis, with orthogonal rotation of the dependent variables, provides mixed results of validity. When running an exploratory factor analysis on all three constructs, only one factor emerged (see Appendix 8). Each construct was then analyzed separately to investigate what would emerge as factor loadings. The two items for SAT loaded highly on only one factor, accounting for 81.5% of the variance. The same results occurred with the two items measuring the FUTWEB construct, high loadings on one factor that explained 84.8% of the variance. The four items measuring the COMPIMAG construct each loaded highly on one factor and accounted for 68.4 percent of the variation.

The results of the confirmatory factor analysis provided evidence of construct validity for each of the dependent variables (see Appendix 10). Since each of the proposed scales for FUTWEB and SAT consist of fewer than three items, the two scales were tested together. The Chi-square goodness of fit and other measures indicated that the two constructs are indeed two distinctly different constructs. The results of the confirmatory factor analysis for the COMPIMAG scale produced a high goodness of fit measure, .991, providing support for construct validity. Additionally, the items for all dependent variables were analyzed together to test for discriminant validity between the three scales. The results indicated the three constructs are distinctly different (see Appendix 10).

The validation procedures conducted and described above clearly indicate the adequacy of the composite scales for measuring the constructs of interest in this research. Averaging the items within each construct created composite scales that measure the same range as the original items. These composite scales created a single indicator representing each construct, which is the preferred and acceptable practice to use when the number of required estimates is large (Price, Arnold, and Tierney 1995).

#### Formal Testing of the Proposed Satisfaction Model

#### and the Research Hypotheses

Structural equation modeling was used to specify the model in terms of cause and effect variables and their indicators due to its proven usefulness in numerous research studies (Baggozzi and Yi 1989). Structural equation modeling possesses several advantages over traditional multi-variant techniques and includes the ability to:

- investigate multiple relationships,
- estimate multiple and interrelated dependent relationships,
- examine cause and effect relationships and assign causal relationships between constructs,
- incorporate unobserved constructs into the analysis, and
- depict a causal link in each of the model's equations instead of a mere empirical association. (Jöreskog and Sörbom 1989)

The LISREL methodology is particularly accommodating to models that contain latent variables, measurement errors, reciprocal causation, simultaneity, and interdependence. Additionally, three specific situations are noted in which structural equations are superior to regression analysis:

- when the observed variables contain measurement errors and the interesting relationship is among the true or disattenuated variables;
- when there is interdependence or simultaneous causation among the observed response variables; and
- when important explanatory variables have not been observed. (Jöreskog and Sörbom 1989, p. 1).

One objective of this study is to test a model about people's feelings toward a shopping experience in order to provide a better understanding of how this affects future behavior. As such, this research study would benefit by employing structural equations to analyze the data because it is measuring unobserved behavior. Latent variables are theoretical constructs that can not be directly measured or observed because they are measuring abstractions such as people's attitudes, feelings, or behavioral intention. The majority of measures attempting to capture these abstract constructs contain sizable measurement errors. To account for these errors, measurement models are used to "...describe how well the observed indicators serve as a measurement model designates how the hypothetical constructs or latent variables are measured in terms of the observed variables and includes validities and reliabilities. The structural equation model defines the theoretical relationship between the constructs, describing the causal effects and the amount of unexplained variance.

Path analysis is a technique employed to assess any direct casual contribution of one

variable to another variable (Jöreskog and Sörbom 1993). The procedure involves:

- solving the structural equations for the dependent variables in terms of both the independent variables and random disturbance terms in order to obtain the reduced equation;
- 2) estimating the regression of the dependent variables on the independent variables;
- generating the solution for the structural parameters in terms of the regression coefficients. (Jöreskog and Sörbom 1993, p. 11)

LISREL8 can estimate all the structural coefficients directly because it considers the model as a system of equations rather than estimating each equation individually. The results of a path analysis provides an illustration of the relationships among the variables by showing the paths from latent variables to other latent variables or observed variables and includes diagrams of the structural model, correlated errors, t-values, modification indices, and estimate changes.

#### Analyses of the Proposed Satisfaction Model

In structural equation modeling, the theoretical model to be tested is specified as a set of paths, or relationships between the variables. The test estimates how well the specified model fits the observed data and evaluates the strength of the relationship between the model components. Various techniques for covariance structure analyses are employed to test whether the model is consistent with the data and distinguish between models that fit the data reasonable well and those that fit the data very poorly (Jöreskog and Sörbom 1993). The output from the LISREL program provides the information needed to evaluate the model and assess its fit. To evaluate the output information the following procedures are suggested:

- Examine the measurement model to determine if the estimates of the parameters agree with a prior specified signs and if the strength of the relationships are large. The squared multiple correlation R<sup>2</sup> for each relationship specified in the model measures the strength of the linear relationship. A larger R<sup>2</sup> indicates a stronger relationship and suggests the model is effective.
- 2) Evaluate the measures of overall fit to determine if the model can be considered an adequate representation of reality. The Chi-square test is used to measure the overall fit, as well as other measures that are functions of Chi-square.
  - Chi-square The Chi-square is a measure of overall fit of the model to the data, measuring the distance (difference, discrepancy, or deviance) between the sample correlation (covariance) matrix and the fitted correlation (covariance) matrix. It tests whether the specified model is better than a model with no specified structural relationships. A small Chi-square corresponds to a good fit, whereas a large chi-square indicates a bad fit. A small, or nonsignificant, Chi-square value means that the observed matrix and the estimated matrix are not significantly different, indicating that the data fit the model.
  - Goodness-of-Fit Index The GFI measures how much better the model fits compared to no model and does not depend explicitly on sample size. It is a ratio of the explained variance of the fitted model over the explained variance of the unfitted model (total variance). The ratio should be between zero and one, with higher measures indicating better fit. A value of .90 or higher is acceptable.
  - Adjusted Goodness-of-Fit Index The AGFI adjusts the GFI for the degrees of freedom of a model relative to the number of variables. It is similar to an adjusted R<sup>2</sup>.
  - Population Discrepancy Function The PDF is a measure of fit that considers the error of approximation in the population and the precision of the fit measure itself. It has been suggested that values up to 0.08 represent reasonable errors of approximation in the population.
  - Normed Fit Index The NFI measure rescales the Chi-square into a 0 (no fit) to 1.0 (perfect fit) range.
  - Comparative Fit Index The CFI improves on the NFI and uses the noncentral Chi-square distribution to define the comparative fit. Measures closer to 1.0 are considered good. (Jöreskog and Sörbom 1993; Schumacker and Lomax 1996)



Figure 10: Model of Consumer Satisfaction with an Internet Purchasing Experience

Note: A positive relationship exists between the constructs.

The proposed model that was tested using LISREL8 to estimate the parameters and goodness of fit is presented in Figure 10. This model suggests the indicators of satisfaction with an Internet shopping experience and the relationship between satisfaction that was derived from shopping on the firm's Web site and future shopping on that Web site. It also illustrates the indicators of how company image is affected by the purchasing experience and its relationship to behavioral intentions to shop on the Web site.

Overall satisfaction is conceptualized as an affective state resulting from a positive emotional reaction (Cadotte et al. 1987; Cardozo 1965; Oliver 1980, 1989; Rust and Oliver 1994; Spreng et al. 1996; Westbrook 1981; Westbrook and Reilly 1983) to the Internet purchasing experience. The level of overall satisfaction with the Internet purchasing experience pertains to the feeling of accomplishment that the correct purchasing decision has been achieved, resulting from the successful execution of the activities involved in the process of obtaining the desired product over the Internet. It is conceptualized that this occurs when consumers have a positive assessment of information quality, ease of use, value, and expectation congruency. Company image results from the consumer's evaluation of the company's reputation and the level of trust (Anderson and Weitz 1989; Doney and Cannon 1997). It is proposed that the information quality, ease of use, and value will positively impact the consumer's evaluation of the company image.

Information quality (INFOQ) pertains to the perception of how useful and accurate the information from the firm's Web site is for the consumers in making the purchasing decision. Ease of use (EASY) reflects the consumer's perception of how easy, convenient, and free from difficulty conducting the purchase transaction is from the firm's Web site.

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Value is defined in this model as a positive assessment of the trade-off between the perceived rewards received and the total costs incurred when conducting the purchase from a Web site as compared to making the same purchase in a retail store. Consideration is given to two different types of value – one reflecting convenience factors (VAULCONV) and the other reflects economic factors (VALUECON). The outcome of the comparison process between expectations and the perceived performance of the Internet purchasing experience is considered to be expectation congruency (EXCON). The model proposes that the constructs have a positive, direct effect on satisfaction. It also asserts that INFOQ, EASY, VALUCONV, and VALUECON have a positive direct effect on company image. Additionally, the model also suggests that both satisfaction, as well as company image, positively and directly effect consumers' desire to shop on the firm's Web site in the future.

The model was analyzed using structural equation modeling by employing the LISREL8 program to estimate the measurement models, the parameters of the structural equations, and determine the goodness of fit of the data to the model. The first run of the model produced a Chi-square goodness of fit (GFI) of 0.68001, with df=7. The modification indices suggested adding error covariances between the latent variables of COMPIMAG and SAT and the observed variables of *compimag* and *sat* to improve the model fit. It suggests that the two equation prediction errors may be correlated or covary, perhaps because some unmeasured latent variable is leading to error in both equations (Schumacker and Lomax 1996). These makes theoretical sense because there may well be other latent variables associated with satisfaction and company image. Since the covariance terms are assumed by the LISREL8 program to be set to zero, any covariance terms to be estimated must be

specified (Jöreskog and Sörbom 1993; Schumacker and Lomax 1996). The model was reestimated to allow the error covariances between the latent variables of COMPIMAG and SAT and the observed variables of *compimag* and *sat* to be free. Table 21 presents some of the fit statistics given in the output of the reestimated formal testing of the model using the LISREL 8 program to run the structural equation modeling (see Appendix 11 for all output goodness of fit statistics).

Table 21: Results of Full Model Testing

						ECST	STFATER	STICS	
	ین د. دین ۱ <u>۹</u> ۹۹ - ۲۰	MODE		and the second second	X	GFL	AGFI	NFL	CEI
FUTWEB=SA SAT=INFO+I COMPIMAG	AT COMP EASY+VA =INFO+E	IMAG LUCONV ASY+VAI	+VALUEC	ON+EXCON /ALUECON	29.910 df=5	0.964	0.743	0.973	0.977
		STILU(		POUATIO	NSMO	DEL			
FUTWEB = ( (1 4	).531*SAT ).117) I.550	+ 0.430*C (0.120) 3.593	COMPIMA	G, Errorvar.=	• 0.151, R <sup>a</sup>	<sup>2</sup> = 0.849	)		
SAT = 0.0356 (0.090 0.393 Errorvar.= 0	5) ).302, R <sup>2</sup> =	0.363*EAS (0.1236) 2.945 0.698	SY+0.174*\ (0.0952 1.831	/ALUCONV4 )	+0.428*VA (0.137) 3.117	ALUEC(	ON-0.057 (0.09 -0.5	/*EXCC 975) 85	DN,
COMPIMA Errorvar.= (	G=- 0.0327 (0.0833 - 0.393 ).232, R <sup>2</sup> =	*INFOQ+ )) ( 0.768	0.667*EAS` (0.134) 4.977	Y-0.00248*V/ (0.0865) -0.0286	ALUCON	V+0.31( (0.10 3.15	5*VALUI 0) 52	ECON,	

The results of the structural equations modeling indicate that the model fit is acceptable and represents a reasonably close approximation in the population. This conclusion is made for the following reasons. The Chi-square test of fit is 29.910, with 5 degrees of freedom. A small or nonsignificant Chi-square value indicates that the observed matrix and the estimated matrix are not significantly different, indicating that the data fit the model (Jöreskog and Sörbom 1993; Schumacker and Lomax 1996). The goodness of fit index (GFI) of .964 also reflects a good model fit. The acceptable normed fit index (NFI) of 0.973, comparative fit index (CFI) of 0.977, and incremental fit index (IFI) of 0.978 indicate additional evidence of a good fit. The R<sup>2</sup> is a measure of the strength of the linear relationship and the R<sup>2</sup> measures (0.849, 0.698, and 0.768) indicate acceptable strengths in the proposed relationships.

The loadings, or parameter estimates, in front of each latent variable are interpreted as validity coefficients (Jöreskog and Sörbom 1993; Schumacker and Lomax 1996). The structural equations produced from the model testing include the parameter estimates in front of each latent independent variable that provides information about its relative importance to its corresponding dependent variable. Satisfaction and company image resulting from an online shopping experience are proposed to positively impact the consumer's intention to shop from that Web site in the future. The parameter estimate of 0.531 for satisfaction indicates that consumers' feeling of satisfaction has a greater influence on their decision to shop from that Web site again than company image. However, company image also has a relatively high factor loading (0.430), also suggesting its importance in consumer's decision to revisit the Web site and conduct additional purchases.

The factor loadings in front of the latent variables for satisfaction provide data about the relative importance of each indicator. It can be seen that VALUCONV, with a parameter estimate of 0.428, is the most valid indicator of SAT. This is interpreted to mean that the economic benefits of shopping online (lower prices and reduced search costs) has a greater affect on satisfaction than the other constructs. Ease of use (0.363 loading) appears to be the next important indicator of satisfaction with an online purchase. The usefulness and accuracy of a Web site's information appears to be the weakest indicator of satisfaction with online shopping. The negative estimate for EXCON suggests a negative relationship between expectations and satisfaction with Internet shopping. Further analyses will indicate if these are a significant relationships.

The parameter estimates for company image tell a somewhat different story. The high factor loading of 0.667 for EASY suggests that ease of use is the most important factor affecting consumer's evaluation of the company image when shopping online. The parameter estimate of 0.316 for VALUECON suggests that economic value is the next important indicator of company image. The loadings for INFOQ and VALUECONV are quite low (-0.0327 and -0.00248) and their significance as indicators is questionable. To determine the significance of each independent latent variable to the model, formal testing of each hypotheses was conducted.

# Testing of the Hypotheses – Independent and Dependent Variables within the Model

To test the stated hypotheses in this research, the *t*-value associated with each parameter estimate was evaluated (Dabholkar 1996; Schumacker and Lomax 1996). Table 22 presents the parameter estimates, standard errors, and *t*-values. Table 23 presents each the hypotheses and the summarized results.

	A TAROLUDON			
H <sub>1</sub> :	positive relationship between INFOQ and SAT	0.0356	0.0905	0.393
H <sub>2</sub> :	positive relationship between EASY and SAT	0.363	0.123	2.945*
H <sub>4a</sub> :	positive relationship between VALUCONV and SAT	0.174	0.0952	1.831
H <sub>4b</sub> :	positive relationship between VALUECON and SAT	0.428	0.137	3.117*
H3:	positive relationship between EXCON and SAT	-0.0570	0.0975	-0.585
H₀:	positive relationship between SAT and FUTWEB	0.531	0.117	4.550*
H <sub>7a</sub> :	positive relationship between			
	INFOQ,	-0.0327	0.0833	-0.393
	EASY,	0.667	0.134	4.977*
	VALUCONV,	-0.00248	0.0865	-0.0286
	VALUECON and COMPIMAGE	0.316	0.100	3.152*
Н <sub>76</sub> :	positive relationship between COMPIMAG and FUTWEB	0.430	0.120	3.593*

Table 22: Test of the Hypotheses

\* Significant at p < 0.05.

### Table 23: Model Hypotheses and Results

	HYPOTHESISTOTETESTED	RESUERS
H <sub>i</sub> :	Consumers' perceived information quality is positively related to overall satisfaction with an Internet purchasing experience.	NOT SUPPORTED
H <sub>2</sub> :	Consumers' perceived ease of use is positively related to overall satisfaction with an Internet purchasing experience	SIPPORIED
H3:	Consumers' level of pre-transaction frustration is negatively related to overall satisfaction with an Internet purchasing experience.	
H <sub>4a</sub> :	Consumers' perceived convenience value is positively related to overall satisfaction with an Internet purchasing experience.	NOI NUL OFFICI
H46:	Consumers' perceived economic value is positively related to overall satisfaction with an Internet purchasing experience.	SUPPORTED-
H5:	Consumers' perceived expectations congruency is positively related to overall satisfaction with an Internet purchasing experience.	NOMNUTOTINSDA
H6:	Consumers' overall satisfaction with the Internet purchasing experience is positively related to intentions to shop from the Web site.	
H <sub>7a</sub> :	Consumers' perceived information quality, perceived ease of use, and perceived value are positively related to company image.	NUTRONIA NUTRONIA
Н <sub>76</sub> :	Consumers' perceived company image is positively related to intentions to shop from the Web site.	

#### Hypothesis H<sub>1</sub>

 $H_1$  proposes there is a positive direct relationship between information quality and satisfaction with an Internet purchasing experience; however, the insignificant *t*-value does not support this relationship. This finding is rather surprising, given the easy access to virtually unlimited information the Internet provides consumers. However, consumers often use little information when engaging in purchasing decisions (Beatty and Smith 1987; Maynes and Assum 1982; Widing and Talarzky 1993). Additionally, the respondents may have obtained their information about the purchased product from other Web sites, prior to the purchase occasion.

#### Hypothesis H<sub>2</sub>

 $H_2$  asserts that an easy to use Web site for consumers to shop at positively affects satisfaction with the shopping experience. The significant *t*-value in Table 22 suggests that the data support this hypothesis (*t*-value=2.945, p<.05). The factor loading in the full model indicates that ease of use is an important indicator of satisfaction with an online shopping experience.

#### Hypothesis H<sub>4s</sub> and Hypothesis H<sub>4b</sub>

The next two hypotheses,  $H_{4a}$  and  $H_{4b}$ , are concerned with the relationship between satisfaction and value. The data indicate that convenience value is not significantly related to satisfaction; however, economic value does positively influence satisfaction (*t*value=3.117, p<.05). Economic value appears to be the most important indicator of satisfaction due to its high factor loading.

#### Hypothesis H<sub>5</sub>

 $H_5$  predicts that expectation congruency is positively related to satisfaction. This is interpreted to mean that when consumer expectations about the online shopping experience are congruent, it positively affects satisfaction. However, the data do not support this prediction, as indicated by an insignificant the *t*-value. This is another surprising finding because the satisfaction literature has found in numerous studies that expectations disconfirmation is positively related to satisfaction.

#### Hypothesis H<sub>6</sub>

It was hypothesized that satisfaction positively influences consumers to continue shopping at the firm's Web site (H<sub>6</sub>). This hypothesis is also supported as indicated by a significant *t*-value (*t*-value=4.550, p<.05). The high factor loading of SAT (0.531) provides evidence that satisfaction is indeed an important indicator of behavioral intent to continue shopping on the firm's Web site.

#### Hypothesis H<sub>7a</sub>

This hypothesis predicts that INFOQ, EASY, VALUCONV, and VALUECON have a positive effect on company image after engaging in an online shopping experience. The results indicate the EASY (*t*-value=4.977, p<.05) and VALUECON (*t*-value=3.152, p<.05) are significant indicators of a positive company image. EASY emerged as the strongest indicator (0.667) of positive company image. INFOQ and VALUCONV were found to be insignificant indicators. This suggests that the information on the firm's Web site is not as important as the ability to easily maneuver and conduct the transaction when evaluating a firm's reputation a trust.

#### Hypothesis H<sub>7b</sub>

Finally, it was hypothesized that company image positively and directly effects the consumer's desire to continue shopping from the firm's Web site (H<sub>6</sub>) and this prediction is supported by the data (*t*-value=3.593, p<.05). The parameter estimate of 0.430 for COMPIMAG substantiates that a positive company image is an important indicator of consumer's desires to continue shopping on a firm's Web site.

The results of the structural equations modeling analyses provide evidence about the factors that influence satisfaction with an Internet shopping experience and company image. It has been shown that economic value and ease of use have a positive and direct effect on consumer's feelings of satisfaction with shopping on a firm's Web page. The factors provide different degrees of influence, with economic value emerging as the strongest indicator of satisfaction. It was also found that satisfaction with the online purchasing experience positively influences behavioral intentions to continue shopping at the same Web site for future purchases. A positive company image has also been empirically shown to have a direct influence on whether consumers will shop at the same Web site in the future. Positive company image results from an easy to use Web site and consumers receiving economic value from the online transaction. This study provides empirical support for what influences satisfaction with an Internet shopping experience, company image, and future purchasing behavior from a firm's Web site.

#### Testing of the Hypotheses – Exogenous Variables

In addition to examining the indicators of satisfaction with an Internet purchasing experience, this dissertation investigated other factors that may affect the degree of

satisfaction experienced by the consumer. These factors are considered to be exogenous variables because they are not proposed to produce satisfaction, but they may enhance or inhibit the feeling of satisfaction the consumer experiences from the online shopping activity. These factors include personal characteristics (interest in shopping, time constraints, demographics), Internet experience (usage frequency, user type, Internet shopper type), expectations, perceived risks, and product type.

To analyze the affect of the exogenous variables on ratings of satisfaction with the Internet purchasing experience, ANOVA was employed. Analysis of variance, or ANOVA, models are statistical tools for examining the relationship between a dependent variable and one or more independent variables, without the need to specify the nature of the statistical relationship (Neter, Wasserman, and Kutner 1990). One analysis of a single factor study is to determine if the factor level means are equal. This test will be applied to determine whether or not there is a significant difference between the factor level means of each of the different variables in their ratings of satisfaction (dependent variable). The results of the ANOVA tests are presented in Appendix 12. Each hypothesis related to the exogenous variables is presented in Table 24 along with a summary of the results. A discussion of the findings for each hypothesis follows.

### Table 24: Results of Testing the Exogenous Variables Hypotheses

	NEW MORE CONSIGNATION AND A STREET	
H <sub>8a</sub> :	The responses of those individuals who have a product oriented interest in shopping will be different from those who have an experiential oriented interest in shopping, with product oriented shoppers being more satisfied with the Internet purchasing experience.	NO CULOTID NO CULOTID
Н <sub>8b</sub> :	The responses of those individuals who have high time constraints will be different from those who do not, with consumers who have high time constraints being more satisfied with the Internet purchasing experience.	A TATTATAA Sula Oktob Sula Oktob
H <sub>8c</sub> :	There is no difference in overall satisfaction with the Internet purchasing experience due to consumers' individual demographic characteristics.	SUPPORTED
H <sub>8d</sub> :	The responses of high Internet users will be different from low Internet users, with high Internet users being more satisfied with the Internet purchasing experience.	
H <sub>8c</sub> :	The responses of those individuals who are Internet experiential users will be different from those who are utilitarian users, with Internet experiential users being more satisfied with the Internet purchasing experience.	USERS
H <sub>8f</sub> :	The responses of frequent Internet shoppers will be different from infrequent Internet shoppers, with frequent Internet shoppers being more satisfied with the Internet purchasing experience.	SUPPORTED
H <sub>8g</sub> :	Consumers who have higher expectations will be more satisfied with the Internet purchasing experience.	SUPONIED
H <sub>8h</sub> :	The responses of consumers who perceive low risk will be different from consumers who perceive high risk, with consumers who perceive low risk being more satisfied with the Internet purchasing experience.	NOT SUPPORTED
H <sub>8i</sub> :	The responses of consumers purchasing convenience and specialty goods will be different from consumers purchasing shopping goods, with consumers who purchase shopping goods being more satisfied with the Internet purchasing experience.	Could not run analysis because intable to distant GP between product (speak and the set proposition (speak and the set proposition (setter and the set

#### Hypothesis H<sub>8a</sub>

A consumer engages in shopping activities for fundamentally two primary motives: to purchase a product or acquire product information (product oriented) or for the sheer pleasure inherent in the experience itself (experiential oriented) (Bloch, Ridgeway and Dawson 1994; Dawson, Bloch and Ridgeway 1990; Westbrook and Black 1985).  $H_{8a}$ proposes that product oriented shoppers would be more satisfied than experiential oriented shoppers for two reasons. The Internet is a source of a vast amount of easily accessible information that can facilitate product-oriented shoppers in achieving their goal of purchasing a product or obtaining information. Additionally, shopping online provides fewer opportunities for pursuing some of the pleasurable non-purchasing activities found in a retail store-shopping environment, such as socializing or interacting with the physical product. The *F* test for equality of factor level means did not provide support for the hypothesis (F = .169, p = .682). There was no significant difference between product-oriented shoppers and experiential-oriented shoppers in their ratings of satisfaction with an Internet purchasing experience.

Several explanations may account for these findings. The Internet does provide easy access to virtually unlimited information. However, studies have reported consumers use very little information when engaging in purchasing decisions (Beatty and Smith 1987; Maynes and Assum 1982; Widing and Talarzky 1993). In fact, information quality was found to be an insignificant indicator of overall satisfaction. Additionally, the enjoyment of interacting in a computer mediated environment, experiencing telepresence, and/or control may provide the hedonic pleasures that experiential shoppers are seeking (Hoffman and Novak 1996).

#### Hypothesis H<sub>8b</sub>

Due to changing lifestyles, many consumers have time constraints that may restrict the time they have for participating in shopping activities. The 24-hour availability of the Internet provides time-constrained consumers with a venue to pursue shopping activities at their time and convenience.  $H_{8b}$  asserts that consumers with high time constraints are likely to be more satisfied with online shopping because it provides a way to ease the time restrictions they are experiencing. The sample was divided into three different groups based

on their responses:

- 1) time constrained shoppers: those who strongly agreed or agreed to the statement that they have little time available for shopping;
- 2) somewhat time constrained shoppers: those who neither agreed nor disagreed or somewhat agreed with the statement; and
- 3) not at all time constrained shoppers: those who disagreed in any way with the statement.

The data indicated that there is significant differences in mean ratings of satisfaction between the groups (F = 3.640, p = .028). However, the significant difference in the mean ratings of satisfaction is only between the somewhat time constrained shoppers and the those that are not at all time constrained. There is no significant difference between the high time constrained shoppers and the other two groups in their mean satisfaction ratings. Another curious finding is that those that are not time constrained shoppers had the highest mean rating of satisfaction – 8.33 versus 7.57 for somewhat constrained and 8.06 for high time constrained shoppers. The result may indicate that consumers with no time constraints for shopping may enjoy the activity of shopping in general more than time constrained consumers.

#### Hypothesis H<sub>8c</sub>

Demographic variables are important when segmenting certain markets. However, they have not been found to explain attitudes toward online shopping (Jarvenpaa and Todd (1997). H<sub>8b</sub> predicts that demographic characteristics will not have an impact of satisfaction with an Internet shopping experience. This prediction is supported by the results of the oneway ANOVA test for the different demographic variables of gender (F = 1.198, p = .275), age (F = .738, p = .530), marital status (F = .720, p = .397), and income (F = .271, p = .763).

#### Hypothesis H<sub>8d</sub>

 $H_{sd}$  predicts that frequent users of the Internet would be more satisfied with their online shopping experience. There are several reasons for this assertion. Frequent usage allows consumers to become more experienced and familiar with the Internet technology and its capabilities. Experience allows users to become more effective and efficient navigators within Web sites to extract more valuable information. Frequent Internet usage also provides opportunities to learn what information, retailers, products, and services are available online. This increased knowledge, improved ability, and advanced navigation skills will simplify the shopping effort and increase confidence in the activity, thereby enhancing satisfaction. Unfortunately, over 85 percent of the individuals in this sample were frequent Internet users. The analysis revealed insignificant differences of mean rating of satisfaction between frequent and infrequent Internet users (F = .041, p = .840). A more equal sample size between the two groups may reveal different results.

#### Hypothesis H<sub>8e</sub>

It is predicted that experiential users would derive a greater degree of satisfaction with an online purchasing experience than utilitarian users. The types of activities experiential users would be performing on the Internet include surfing, game playing, and participating in chat rooms. Utilitarian users would utilize the Internet for goal directed activities, such as shopping, e-mail, browsing for information, banking, bill paying, and other financial transactions. This hypothesis could not be analyzed because all individuals in this sample were categorized as utilitarian users. Very few engaged in any experiential activities and those that did also conducted many more utilitarian functions on the Internet.

#### Hypothesis H<sub>81</sub>

This hypothesis proposes that frequent Internet shoppers are likely to be more satisfied with their online purchase than those who have shopped less often. This prediction is made because the level of Internet shopping experience a consumer possesses will also have an impact on the performance of the activities necessary to engage in an Internet transaction. As usage of the Internet for shopping increases, shoppers become more experienced and learning progresses to a point where they can more effectively and efficiently navigate to and through search engines and/or Web sites to extract more valuable information about the specific purchase transaction. Additionally, prior experience has been found to be a relevant factor in consumers' satisfaction with the current purchase and future purchase intentions (Bolten and Drew 1991; Oliver 1980). The data supports this prediction as indicated by a significant difference between frequent and infrequent Internet shoppers mean level of satisfaction (F = 13.841, p = .000). The mean level of satisfaction for frequent online shoppers (ten or more products purchase online last year) was higher than infrequent ones (8.2417 versus 7.4625).

#### Hypothesis H<sub>8g</sub>

It is proposed in hypothesis  $H_{8g}$  that consumers who have higher expectations will experience higher levels of satisfaction with an Internet shopping experience. Expectations have been found to be significantly and positively related to satisfaction (Bearden and Teel 1983; Churchill and Surprenant 1982; Olshavsky and Miller 1972; Spreng, MacKenzie and Olshavsky 1996). The more realistic the expectations about the Internet, the more likely they will be confirmed by the online purchasing experience. The results of the analysis provide support for this prediction (F = 15.283 p = .000). It was found that consumer's with higher expectations reported a higher mean value of satisfaction with the Internet shopping experience (8.2534 versus 7.0481). The mean ratings of each of the expectations and the percent that strongly held each expectation is as follows:

EXPECTATION	MEAN RATING	% RATING STRONGLY AGREE
Internet shopping is very convenient.	6.5779	65.7%
Internet shopping is easy to do.	6.4422	57.2%
Internet shopping is fast.	6.2935	51.7%
I can find any kind of product on the Internet.	6.0707	46.3%
I can shop any time I want to on the Internet.	6.6497	70.1%
I can save money by shopping on the Internet.	5.7136	34.8%

#### Hypothesis H<sub>8b</sub>

Perceived risk is predicted to be negatively related to consumer's level of satisfaction with an online purchasing experience. Other studies have reported that perceived risks have negatively impacted consumer's attitudes toward shopping on the Internet (Gupta and Chatterjee 1997; Jarvenpaa and Todd 1997). It is proposed here that consumers with low perceived risks about shopping online will be more satisfied with the Internet shopping experience than consumers with high perceived risks. The data do not support this position due to a non-significant *F*-test (F = 1.095, p = .337). To investigate the perceived risk phenomena further a one-sample t-test was conducted to determine if there were any significant differences in the mean rating of the various types of perceived risk. The results indicated there was indeed a significant difference ( $\alpha = .95$ ) in the mean ratings of perceived risks. The mean ratings of all of the perceived risk is as follows:

TYPE OF RISK	MEAN RATING	% RATING STRONGLY AGREE OR AGREE
<b>PRIVACY:</b> risk of Internet activities being monitored without knowledge of permission	6.05	74.6%
SECURITY: risk of stolen or misused credit card information	5.74	64.7%
FINANCIAL: risk of losing money from poor purchase choice	4.47	28.3%
PERFORMANCE: risk of purchased product not working properly	4.75	37.8%

The significant disparity among the respondents in their ratings of the different types of risks did not appear to affect their level of overall satisfaction. The average satisfaction ratings were 8.28 for those with no perceived risks (16 percent), 7.83 for individuals with moderate levels of perceived risks (46 percent), and 7.90 for those who had high perceptions of risks (38 percent). Even though 84 percent of the consumers in this sample had a perception of risk with Internet shopping, especially for the risk of privacy invasion and security, it did not appear to impact their overall feeling of satisfaction with the experience. This may be due to the fact that there are several safeguards in place when shopping online, especially when using major credit cards and shopping with well-known and reputable companies.

#### Hypothesis H<sub>8i</sub>

This hypothesis asserts that the type of product a consumer purchases will impact the degree of satisfaction experienced from shopping online. Shopping goods require more information and search effort in terms of time, money and energy than either convenience goods or specialty goods. Expending greater shopping effort has been found to positively affect satisfaction (Cardozo 1965). Since shopping effort and the probable gain from

comparison are greatest for shopping goods, it is predicted that satisfaction will be enhanced if the best possible product was purchased due to the Internet shoppers' own successful selfeffort. However, this analysis could not be conducted. It was not possible to adequately categorize the products into the various product types based on the proposed criteria, which included:

- the number of Web sites investigated before purchasing;
- shopping time devoted to the purchase;
- the frequency of purchasing the type of product; and
- the actual product purchased.

#### Summary

The purpose of this chapter was to explain the research methodology and present the results from the analyses. To accomplish this objective, this chapter explained the data collection strategy and described how the data were validated and analyzed. The results from the structural equation modeling were also presented, as well as explanations of the findings. The hypotheses were tested for significance and the results were reported. The next chapter will summarize the findings of this chapter and conclude with suggests for future research.

## CHAPTER 5 SUMMARY AND IMPLICATIONS

#### **Overview**

This dissertation study investigated the indicators of customer satisfaction with an Internet purchasing experience and the factors influencing company image, as well as the effect satisfaction and company image have on consumers' desires to continue shopping at the firm's Web site. Empirical evidence was presented to support the findings. The results of this research have broad implications for both researchers and practitioners. Chapter five presents a summary of the major findings, as well as discusses the implications for managers and the contributions to the field of marketing and business. Future research possibilities will be suggested. As with any research study, limitations exist. Prior to summarizing and discussing the implications, the limitations of the study are presented.

#### Limitations of the Study

There are two important issues regarding the sample that could be considered as possible limitations. The random sample generated for this study consisted of 2000 individuals from a population of known Internet shoppers living in specified regional area in the United States. The population was limited to eight states on the East Coast. Expanding the population frame to include the entire United States could have produced a richer, more representative sample. However, generating a large random sample of Internet shoppers from the general population has been noted as a limitation in other studies (GVU 1998). Additionally, data analysis provided evidence that this sample was representative of the general U.S. population of Internet shoppers. An international sample including several other countries that have large populations of Internet shoppers would have made crosscultural analyses possible.

The number of completed surveys, 201, used to analyze the data was well within the acceptable range for structural equation modeling; however, a larger sample would have been preferable. A larger sample size would have allowed for structural equation modeling to be applied to subsets of the sample for comparison purposes. For example, a multiple-sample analysis to test whether specified parameters are equivalent across different groups or a structural means analysis to analyze whether there were group mean differences for the indicator variables and/or for any of the structural equations could have been conducted. The ANOVA tests indicated that there is a significant difference in the mean ratings of satisfaction between frequent and infrequent Internet shoppers. However, the group sizes of 80 for infrequent shoppers and 120 for frequent shoppers prevented either of these multiple-sample analyses to be conducted. Additionally, cross validation of the results could have been conducted with a sample size that was twice as large as this one by splitting the sample and running the analysis on the two smaller samples. Cross validation of the model can still be conducted by obtaining a second set of data.

Secondly, though the model suggests several indicators of satisfaction, company image, and future purchasing behavior related to online shopping that were verified by the data, other important variables may have been omitted. It is quite possible that additional important factors are influencing satisfaction, company image, and purchasing intentions. These factors may be unique to each dependent variable or there may be factors that jointly impact both satisfaction and company image. Further investigation into this phenomenon would reveal if there are other variables impacting consumer behavior with online shopping related to satisfaction, company image, and future shopping activity.

#### **Major Findings**

One of the primary objectives of this dissertation research was to gain an understanding of how consumers become satisfied with an Internet purchasing experience and how satisfaction relates to future online purchasing behavior from a firm's Web site. This study was successfully able to model the indicators of satisfaction with an Internet purchasing experience and company image, confirming there is a direct effect among some of the variables. Additionally, satisfaction and company image were found to be positive indicators of behavioral intentions to continue shopping at the firm's Web site. The major findings will be summarized by the research questions:

- RQ 1: What factors influence satisfaction with the Internet purchasing experience?
- RQ 2: Which of the proposed factors have the greatest impact in explaining satisfaction?
- RQ 3: How well does satisfaction with the Internet purchasing experience predict future shopping from the firm's Web site?
- RQ 4: How is company image impacted by the consumers' interaction on a firm's Web site?
- RQ 5: How does company image influence future Internet shopping behavior?
- RQ 6: To what degree do the exogenous variables impact overall satisfaction with the Internet purchasing experience?

#### **Factors Influencing Satisfaction**

The results of the study provide empirical evidence for the factors that have a direct positive effect on consumers' satisfaction with an Internet purchasing experience. Economic value concerns the price or worth of a product, as well as the benefits exceeding the costs when compared to the product being purchased at a retail store. In this study economic value was the strongest indicator of satisfaction with an Internet purchasing experience. Other studies have found product value (price) to be positively related to Internet shopping attitudes and satisfaction (Jarvenpaa and Todd 1997; Szymanski and Hise 1999). These findings underscore the importance of low prices to consumers who shop on the Internet and reinforce Sheth and Sisodia's (1997) prediction that consumers are becoming more value conscious shoppers due to lifestyle changes. Value conscious consumers demand greater value for their money, time, and effort.

However, convenience value was insignificant indicator of satisfaction with an Internet purchasing experience. This value concerns the rewards of saving time and effort, and having a more enjoyable and convenient experience that allowed for more freedom and ease of shopping than when shopping at a retail store. The mean scores for the convenience value items ranged from 5.8 to 6.5, compared to the economic value mean scores of 5.3 to 5.8. This means that on average the consumers in this sample agreed with the statements that they were saving time and effort and that shopping online was more convenient, enjoyable, and allowed greater freedom and ease than retail shopping. However, it appears that these attributes did not impact their feelings of satisfaction. Saving money while shopping online is more important to satisfaction than saving time and effort.

Ease of use in this study refers to consumers' perception of how easy and free from difficulty conducting an Internet purchase is for them. It concerns how easily they can learn to purchase the product from the Web site, the ease of purchasing, and the ability to control the transaction process. The results reveal that for the online shoppers in this sample, ease of use is an important and significant indicator of satisfaction with an Internet purchasing experience. The participants generally agreed with the statement that it was easy to purchase the product from the Web site. The ability to easily learn, complete, and control the transaction on the Web site positively influenced their feelings of satisfaction with the purchasing experience. This finding supports other studies that have reported that positive feelings are created when consumers can easily interact in a computer environment (Dabholkar 1996; Hoffman and Novak 1996). The easier it is for consumers to maneuver within the Web site and reach their goal of making a purchase, the more enjoyable the experience, which leads to positive perceptions and satisfaction.

Information quality refers to the usefulness of the information for consumers when making a purchasing decision on the Internet. It considers whether the information was accurate, enabled them to shop more quickly, and improved their decision making and shopping effectiveness. Generally the consumers in this sample agreed that the information on the Web site was useful to them in making their purchasing decision. However, the results also revealed that useful information is not a significant indicator of satisfaction with an Internet purchasing experience. Other studies have found information to be positively related to satisfaction (Crosby and Stephens 1987; Spreng et al. 1996). For the online shoppers in this sample, the information was considered to be useful, but it did not impact their feelings of satisfaction.

The concept of positive disconfirmation of expectations has been found to be significantly related to satisfaction in a number of studies (Bearden and Teel 1983; Cardozo 1965; Churchill and Surprenant 1982; Oliver 1980; Oliver and DeSarbo 1988; Olshavsky and Miller 1972). However, other research studies have concluded the opposite, that disconfirmation is not significantly related to customer satisfaction (Spreng and Olshavsky 1993; Spreng et al. 1996). The results of this study revealed that expectation congruency is not significantly related to satisfaction for consumers engaging in online purchasing. It was also found in this study that having higher expectations resulted in a higher mean rating of satisfaction for this sample. This provides evidence that expectations are important. However, congruency of expectations with performance did not significantly impact satisfaction.

#### Factors Influencing Company Image

The findings provide empirical evidence that engaging in an Internet shopping experience influences consumers' perception of company image. Ease of use was found to be the primary driver for formulating a positive company image for the individuals in this study. This means that as a result of being able to easily learn to maneuver within the Web site, and easily complete and control the transaction process, a favorable company image was formed by the consumers in this sample. Additionally, the results revealed that economic value is a significant and important indicator of company image. Online shoppers in this study that felt they received greater benefits than costs incurred and a lower price than if they shopped at a retail store viewed the company favorably after shopping at its Web site.

It was predicted that information quality and convenience value would also positively influence company image after consumers shopped at a firm's Web site. The results revealed that neither of these variables are significant indicators of company image. The majority of the online shoppers in this study felt the information was useful to them and that they received convenience value; however, this did not significantly impact how they felt about the firm's image.

# The Influence of Satisfaction and Company Image on Future Internet Purchasing Behavior

It has been empirically shown that satisfaction and company image both directly and positively impact consumer's desires to continue shopping at a firm's Web site. Satisfaction was the strongest indicator for consumers in this study to continue to purchase online from the firm's Web site. This supports the findings from other studies that investigated the relationship between satisfaction and behavioral intentions (Bearden and Teel 1983; Cronin and Taylor 1992; LaBarbera and Mazursky 1983; Oliver 1980; Taylor and Baker 1994; Swan and Trawick 1981; Zeithaml, Berry and Parasuraman 1993). For the online shoppers in this study, a positive emotional feeling or reaction to the shopping experience resulted in a desire to continue shopping at the firm's Web site when purchasing similar products.

The results also provide evidence that a positive company image has a strong influence on the consumer's willingness to shop at the firm's Web site in the future. After engaging in the Internet shopping experience, the consumers in this study that reported high level of firm trust and a favorable company image expressed a desire to shop at the site in the future when purchasing similar products.

#### The Impact of the Exogenous Variables on Overall Satisfaction

Several other variables were examined in this study to determine if they had an impact on the ratings of satisfaction with an Internet shopping experience. The mean satisfaction ratings of frequent Internet shoppers, those who had made greater than ten purchases online within the last year, were compared to infrequent Internet shoppers. It was found that frequent Internet shoppers reported significantly higher ratings of than did infrequent shoppers. It was also discovered that Internet shoppers with higher expectations rated satisfaction with their online purchase as significantly higher than those with moderate levels of expectations. Other studies have concluded similar findings that higher expectations lead to higher levels of satisfaction (Bearden and Teel 1983; Churchill and Surprenant 1982; Olshavsky and Miller 1972; Spreng, MacKenzie and Olshavsky 1996).

There were differences among the consumers in this sample in terms of their demographic variables, their interest in shopping, time constraints, and perceived risks. However, the results revealed that these variables did not significantly impact the mean ratings of satisfaction for an online purchasing experience. As expected, there were no significant differences in the mean satisfaction rating of an online shopping experience due to demographic variables. The interest a consumer has in shopping - utilitarian versus experiential – also did not impact the mean ratings of satisfaction with an Internet purchase. The results likewise revealed that time constrained consumers did not rate satisfaction with an Internet purchase significantly higher than consumers not constrained by time. This finding supports the conclusion concerning time-constrained consumers reported in another study of customer satisfaction with online shopping (Szymanski and Hize 1999). The
consumers' level of perceived risks related to online shopping also did not influence mean satisfaction scores in this study. For the individuals in this sample, as was found in other studies (Javenpaa and Todd 1997; Szymanski and Hize 1999), perceived risks do not appear to be a major deterrent to shop online. Security risk was rated as high among the majority of online shoppers in this sample, but this risk was not a major deterrent to shopping online, which is similar to what other online shoppers have reported (Javenpaa and Todd 1997).

## Implications for Researchers

The findings from this research study are useful to researchers and theory development for several reasons. This study provides empirical evidence supporting the theoretical constructs that directly effect customer satisfaction, company image, and future purchasing behavior involving Internet shopping. The data revealed that the model fit is acceptable and represents a reasonably close approximation of satisfaction with an Internet shopping experience. The data further clarifies the role of value as a key determinant of satisfaction with online purchasing. This supports other studies that have investigated the role of value in influencing satisfaction (Bolten and Drew 1991; Churchill and Surprenant 1982; Oliver and Swan 1989; Ostrom and Iacobucci 1995; Taylor 1993; Tse and Wilton 1988). This finding is an important addition to the satisfaction literature, because it illustrates there is some similarity between the satisfaction process of shopping in a computer-mediated environment and satisfaction resulting from traditional shopping venues.

## Implications for Practitioners

The findings from this research have direct relevance for marketing practitioners;

especially those involved with Internet marketing. It provides concrete evidence in which marketing managers can improve the customer-firm relationship via the Internet. The Internet, because of its interactive characteristic, has the potential for altering the relationship between the firm and the customer. Several scholars have expounded on the contribution of the Internet in encouraging and improving the customer-firm relationship because of its interactive properties (Hoffman and Novak 1996; Peterson 1997; Peterson et al. 1997; Phillips et al. 1997; Sheth and Sisodia 1997). Interactive marketing has been designated as "the dominant function for relationship building" (Bitner 1995, p. 248). The enhanced ability of buyers and sellers to engage in two-way communication contributes to the practical application of relationship marketing (Hair and Keep 1997; Peterson 1997; Phillips et al. 1997; Sheth and Sisodia 1997). It has been recommended that marketers develop strategies to maintain customer loyalty and to practice interactive one-to-one marketing to be successful in the future (Sheth and Sisodia 1997). The findings from this study provide practitioners with evidence on how to enhance the customer-firm relationship on the Internet through improving customer satisfaction and company image.

Knowing that economic value positively impacts satisfaction and company image in the context of online purchasing provides marketers with a strong incentive to offer products at lower prices for purchase over the Internet. The attributes of the Internet can facilitate cost reduction as a way to provide lower prices to consumers shopping online. Internet technology permits the integration of advertising, sales promotion, and physical distribution, and the ability to realize maximum market coverage with lower inventory levels (Sheth and Sisodia 1997). This translates into the potential to reduce marketing operating expenses, labor costs, and selling expenses directly related to responding to customers. Additionally, cost savings can occur because of fewer markdowns, improved buying efficiencies, and faster inventory turnovers that can result from selling products to consumers on the Internet (Phillips et al. 1997). The reduction in costs for sellers resulting from Internet technology and usage translates into the ability to offer lower prices for quality products to buyers shopping online. Sharing with consumers the benefits of cost savings in technology or innovations made possible by the Internet can result in an improved company image and satisfied customers who will continue to shop at the firm's Web site.

Ease of use is also an important indicator of satisfaction and company image when engaging in Internet purchasing. This is a significant finding because marketers can design Web sites to improve both satisfaction and company image. Web sites that allow the consumer to easily learn how to purchase the product and complete and control the transaction process produce positive feelings and reactions in consumers, resulting in satisfaction and positive company image. Since satisfied customers will return to shop at the Web site, easy to use Web sites for consumers can improve the customer-firm relationship and customer loyalty.

The study revealed that consumers with higher expectations had greater mean ratings of satisfaction than consumers with lower expectations. This is an important finding because marketing managers can influence expectations through their marketing communication efforts (i.e., Spreng et al. 1996; Westbrook and Reilly 1983; Zeithaml et al. 1988, 1993). It emphasizes the importance of marketers to present truthful information in their communications about online shopping at their Web site so that realistic expectations are formed. Additionally, past experience has been described as influencing expectation formulation (Zeithaml et al. 1993). A satisfying shopping experience resulting from an easy to use Web site and from receiving economic value can contribute to higher expectations. These higher expectations positively impact satisfaction.

Frequent Internet shoppers in this study also reported a higher rating of satisfaction with their online shopping experiences. This finding is important because frequent online shopping can mean the generation of more sales for companies and at the same time increased satisfaction for consumers. Firms can encourage consumers to become frequent shoppers at their Web site by designing easy to use sites and by providing economic value.

The finding that ease of use enhances satisfaction and company image also has implications for practitioners regarding the customer-firm relationship. Consumer acceptance is vital to the success of Internet shopping (Burke 1997; Peterson 1997). Ease of use as an significant indicator of satisfaction and company image provide evidence for the importance of considering the consumers' technology needs and experience when deciding to market on the Internet. Low barriers to entry allow firms to easily and successfully enter the Internet arena, thus increasing the competitive pressure. Customer satisfaction and a positive company image can work to counter this competition. Creating Web sites that are easy for consumers to learn how to select and purchase the product, control the transaction, and be able to do what they want on the site will enhance satisfaction and improve company image. This motivates the consumer to continue purchasing from the Web site.

The findings that information quality and expectation congruency do not significantly influence satisfaction with Internet purchasing contradict the influencing role of these

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constructs reported in other satisfaction studies (Bearden and Teel 1983; Cardozo 1965; Churchill and Surprenant 1982; Crosby and Stephens 1987; Oliver 1980; Oliver and DeSarbo 1988; Olshavsky and Miller 1972; Spreng et al. 1996). This also has important implications for satisfaction theory. It may mean that different thought processes are involved in satisfaction formation when shopping online than when shopping in retail stores. The findings concerning company image provide empirical support for the theories related to this domain. It can be considered a starting point for further research into how interacting on a firm's Web site can influence the consumer's perception of company image, which involves trust, credibility, and reputation.

## **Future Research**

Several of the findings uncovered in this study could be tested further to gain additional insight into the relationships among satisfaction, company image, and future purchasing behavior related to online shopping. First, further evidence of the model fit can be obtained by conducting cross validation analysis. Securing a second sample to complete the survey would provide another data set large enough to conduct cross validation analysis. Longitudinal studies could reveal any changes over time in consumers' attitudes toward Internet shopping. Additionally, it would be interesting to determine if the significant indicators found in this study are also important to or influence other activities that businesses and consumers conduct on the Web. Can these indicators be generalized to other activities, such as business marketing or sales force training and management on the Internet?

The study found that ease of use and economic value are important and significant

indicators of satisfaction and company image for Internet shopping. It is important to gain a better understanding of the factors that influence ease of use for online shoppers. The next question to explore is; what attributes must a Web site possess to be easy to use for consumers? In this study, ease of use was operationalized as how easy and free from difficulty shopping at the Web site is for the consumer. This involved ease of learning, ease of purchasing, and ease of controlling the process within the Web site. Additional research can be designed to explore which attributes contribute to making it easy for the consumer to shop at the site.

Further research is needed in the area of company image and its influence on future online shopping from the firm's Web site. For example; are there other or more accurate items to capture the construct of improving company image through interacting and completing an exchange transaction at a firm's Web site? Company image results from consumers' perception of firm trust and the reputation of the firm. What aspects that contribute to a feeling of trust can be included into a Web site? A research project could be designed that incorporates the factors found in this study that are positively related to company image, as well as introduce other variables that may be equally as significant to generating a positive company image after shopping at a firm's Web site.

The finding that information quality does not significantly affect either satisfaction or company image was surprising, given the unique and positive characteristics of Internet information. After further review of this construct and phenomenon, a new thought occurred. It may not necessarily be information on the Internet, but its unique communicative characteristics that will influence consumer's feeling of satisfaction with the Internet shopping experience and company image. Internet information permits a two-way flow of communication between the buyer and seller, allowing the buyer to initiate communication and the seller to specifically target and tailor the communication to the customer's needs. This communicative characteristic is unlike the information that is provided by firms to customers through other media. It may be that a usefulness construct refers to the communication of information and rather than the information itself. The quality, or usefulness, of the communication of information between the consumers and the firm that may impact satisfaction and company image could include:

- the consumer's ability to initiate communication;
- the timeliness of the response from the firm;
- the appropriateness of the response from the firm;
- the action of the firm associated with the consumer's communication;
- the quality of announcements the firm sends to customers i.e., annoying, informative, customized, generic; and
- the personal communication link between the customer and the firm.

Further research into this phenomenon may shed light on the impact of how the information that is communicated between customers and firms impacts satisfaction, company image, and future purchasing behavior.

The Internet and the World Wide Web are important components for creating a borderless and truly global society (Sheth and Sisodia 1997). Expanding this research to other cultures and countries may provide evidence of universal factors influencing satisfaction, company image, and future purchasing with Internet shopping. It should be noted that research designed for other countries needs to follow the guidelines and practices for acceptable cross-cultural research.

## Conclusion

The Internet's full potential impact on society and the customer-firm relationship is still unknown at this time. Dynamic changes in technology, consumer behavior, and lifestyles will constantly alter how firms and customers relate to each other. It is known that consumers and firms have embraced the Internet, accepting it into their homes and businesses as a viable means to conduct various types of exchange transactions. The exchange of information, products, and services on the Internet has altered how consumers and firms relate to one another. However, customer satisfaction has long been a fundamental and important influence on the customer-firm relationship and the exchange process.

Firms must make significant investments to acquire and maintain loyal customers. Satisfied customers are more likely to be loyal customers, thereby increasing their value to firms. By understanding which factors contribute to customer satisfaction, firms can focus their efforts and investments to increase satisfaction and loyalty. This study reveals that for Internet shopping, customers become satisfied by shopping at easy to use Web sites that offer economic value and that satisfied consumers desire to continue shopping from the firm's Web site. The predicted result of satisfied consumers is the development of a long-term, mutually beneficial customer-firm relationship. Company image also plays a role in influencing customers to continue the customer-firm relationship. For online shoppers, company image can be improved if firms provide them with, at the very least, ease of use and economic value. A positive company image fosters trust and also contributes to a long-term customer-firm relationship. The implications and insights that have been presented can be valuable to both practitioners and researchers.

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# APPENDICES

- Appendix 1: Web Survey
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# **APPENDIX 1: Web Survey**

web.odu.edu/survey

**DIRECTIONS:** Thank you for agreeing to complete this survey. Your input is important and necessary in helping us learn more about how consumers feel about Internet shopping. You will be asked questions concerning your most recent Internet purchase - one that you made within the LAST THREE MONTHS. Additionally, we would like to know your opinion about Internet shopping and retail store shopping in general. Please respond to every statement and question as honestly as possible.

Please indicate how you were directed to this survey: o Email o Phone call o Postcard o Other

1. I bought my last product over the Internet from the following Web site \_\_\_\_\_

2.	The product I purchased from this Web s	ite was						·
Cor indi wit	acerning your last Internet purchase, icate your agreement or disagreement h the following:	Strongly-/ Agree	Agree-S	omewhat-N Agree	eutral-S	Somewhat-Di Disagree	sagree	-Strongly Disagree
3.	I am happy with the product I purchased from this Web site.	٥	٥	٥	0	۵	۵	٥
4.	The company I purchased this product from has a favorable reputation.	٥	٥	٥	٥	۵	۵	۵
5.	The company I bought this product from is known to be concerned about its customers.		۵		٥		۵	٥
6	The company I purchased this product from is not always honest.	a	0		٥	٥	۵	٥
7.	Logging on to the Internet when I bought this product was frustrating for me.		٥	0		۵	۵	٥
Col	ncerning the Web site you last bought							
fro	m, indicate your agreement or	Strongly-	Agree-S	omewhat-N	eutral-	Somewhat-Di	isagree	-Strongly
disa	agreement with the following:	Agree		Agree		Disagree		Disagree
δ.	was easy to do.	0	۵	٥	۵	۵	۵	٥
9.	For this purchase, I enjoyed shopping from this Web site.	٥		۵	۵	٥	٥	٥
10.	The information on this Web site: a) enabled me to shop more quickly.		۵	٥	٥	o	٥	٥
	b) improved my decision-making ability for this purchase.	٥	D	۵		٥	a	
	<ul><li>c) improved my shopping effectiveness.</li><li>d) made it easy for me to make a</li></ul>	G	٥	٥		٥		
	purchase decision.							
	e) was accurate for this purchase.	a	۵	۵			a	
	f) was useful to me in making my purchasing decision.	٥	۵		۵			۵

		Strongly-A	gree-S	omewhat-N	eutral-S	iomewhat-Di	sagree	Strongly
11.	Learning how to purchase the product from this Web site was easy for me.	Agree	۵	Agree	٥	Disagree		Disagree
12.	This Web site has a reputation for being honest.	٥	۵	٥	۵	٥	٥	۵
13.	It was easy for me to be in control of the purchasing transaction on this Web site.	D	٥			٥	0	٥
14.	For this purchase, I experienced no problem with connecting to the Web site that I bought from.	٥	٥	0		٥	٥	٥
15.	This company's Web site made it easy for me to purchase the product.	۵		٥	0	۵	٥	٥
16.	For this purchase, I regret shopping from this Web site.	۵	٥	٥	•	۵	۵	٥
17.	It was easy for me to do what I wanted to do on this Web site.			۵		۵	۵	٥
18.	I believe that the information on this Web site was true.	٥	٥	٥	۵	٥		
19.	I am satisfied with the experience of purchasing this product from this Web site.	٥		٥		٥	٥	
20.	If I had to do it all over, I would shop on the same Web site again.	o	٥		٥	٥	۵	٥
21.	For this purchase, the benefits I received by purchasing from this Web site were greater than the costs.	٥	0			۵	۵	۵

# For each of the following statements, mark the ONE response which best describes how you feel about each statement concerning your last Internet purchase.

- 22. Compared to buying this product in a retail store, the price I paid for the product I bought from this Web site was less  $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$  **more**.
- 23. Compared to getting the information while shopping at a retail store, searching for information about the product on this Web site took me less time  $\Box \Box \Box \Box \Box \Box \Box \Box \Box more time.$
- 24. Overall, considering all the time it takes to shop in a retail store, such as driving, parking, in-store searching, waiting, check-out time, etc., purchasing this product from this Web site rather than from a retail store took me less time  $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$  **more time**.
- 25. Compared to what I paid for this product, it was worth more  $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$  worth less.

- 26. Compared to shopping in a retail store, I found shopping for this product on this Web site to be more enjoyable  $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$  less enjoyable.
- 27. Compared to shopping at a retail store, buying the product from this Web site was more convenient  $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$   $\Box$  less convenient.
- 28. Compared to shopping in a retail store, I found comparing prices for this product on this Web site to be easier  $\square \square \square$  more difficult.
- 29. Compared to shopping in a retail store, I found purchasing the product from this Web site to be easier  $\square \square \square \square \square \square \square \square \square \square$  more difficult.
- 31. For this particular purchase, the benefits I received from the product were greater than  $\square \square \square \square \square \square \square$  less than all of the costs involved in purchasing it.
- 32. From this purchasing experience, compared to shopping in a retail store, I found that to shop from this Web site takes less effort  $\Box \Box \Box$
- 33. Because of this shopping experience with this Web site, I have a favorable  $\Box \Box \Box \Box \Box \Box \Box unfavorable$  image of this company.

For each of the following, mark the ONE response which best describes your feelings about your last Internet purchase:

- 34. The product I received was [better  $\Box \Box \Box \Box \Box \Box \Box \Box worse]$  than I expected.
- 35. The ordering process to purchase this product was [better  $\square \square \square \square \square \square \square \square \square worse]$  than I expected.
- 36. The time I saved shopping from this Web site was [better  $\square \square \square \square \square \square \square \square worse]$  than I expected.
- 37. The price I paid was [better 🗆 🗆 🗆 🗆 🗆 🗆 🗆 worse] than I expected.
- 38. The convenience of shopping from this Web site was [better  $\Box \Box \Box \Box \Box \Box \Box worse]$  than I expected.
- 39. Overall, this purchase experiences was [better 🗆 🗆 🗆 🗆 🗆 🗆 🗠 worse] than I expected.
- 40. After shopping from this Web site, my image of this company is [better  $\Box \Box \Box \Box \Box \Box \Box worse$ ].
- 41. For this particular purchase, how many different Web sites did you examine before purchasing this product?
- 42. For this particular purchase, how much time did you spend over the Internet comparing different brands before deciding to purchase this product?
  - □ More than two hours
  - Between one hour and two hours
  - Between 30 minutes and one hour
  - Between 15 minutes and 30 minutes
  - Less than 15 minutes

## 43. How often do you purchase this type of product in general?

- □ At least once a week
- At least once a month
- □ At least once every 6 months
- At least once a year
- $\square$  Less than once a year

### Indicate your agreement or disagreement

wit Inte	h the following concerning your last ernet purchase:	Strongly- Agree	Agree	-Somewhat-N Agree	eutral-S	omewhat- Disagree	Disagre	e-Strongly Disagree
44.	I feel good about the product I bought from this Web site.	٥		٥	۵	٥	٥	٥
45.	The company I bought this product from seems to be trustworthy.	٥		٥	۵	٥		۵
46.	My encounters with this company have been mostly positive.	٥	٥	٥	٥	٥	۵	0
47.	This company can be relied upon to keep its promises.	٥		۵	۵	۵	۵	۵
48.	If I had to do it all over, I would purchase this same product again.	٥	۵	٥	۵		۵	

## For each of the following statements and questions MARK ONLY ONE RESPONSE.

- 49. How do you feel about your overall Internet shopping experience? very happy
- 50. I plan to **Shop more Shop about the same amount Shop less Stop shopping** over the Internet in the future.
- 51. Considering everything, the product you bought and the purchasing experience, how satisfied are you with your last purchasing experience? very satisfied  $\Box \Box \Box \Box \Box \Box \Box \Box \Box \Box very dissatisfied$
- 52. When buying the some type of product, I will continue to shop from this Web site in the future. very likely
- 53. Because of this Internet shopping experience, I will be doing more shopping over the Internet in the future. very likely
- 54. How many purchases have you made over the Internet in the last year?

   □ This is my first purchase.
   □ Less than 3 purchases
   □ Between 4 and 9 purchases

   □ Between 10 and 15 purchases
   □ Between 16 and 20 purchases
   □ Over 20 purchases
- 55. How often do you spend time on the Internet?

  Every day

  Between 5 and 6 days a week

  Between 1 and 2 days a week

  Between 1 and 2 days a week

## MARK ALL THAT APPLY:

56. WI	hich of the Surfing Shopping Buy perso	following activities Game playing Banking nal investments	do you Chat Chec Buy	conduct rooms k stock q insuranc	over th Juotes C	ie Internet? D Browsin D Pay bill	g for inf s	ormation	o E	-mail
Indicat with th shoppi	te your ag ne followin ng in gene	reement or disagre g concerning Inter ral:	ement net	Strongly- Agree	Agree	Somewhat-N Agree	veutral-So I	omewhat-Di Disagree	isagree	-Strongly Disagree
57. It c act my	concerns m tivities cou y knowledg	e that my Internet Id be monitored wit e or permission.	hout	۵		۵	۵	٥		G
58. It o inf wh	concerns m formation n hile I am sh	te that my credit car night be stolen or m opping over the Inte	d isused ernet.	۵	٥		۵	٥	٥	
59. It o by wh	concerns m making a p nile shoppin	the that I might lose is poor purchase decising on the Internet.	noney ion			٥	٥	٥	۵	
60. It o pu Int it v	concerns m rchase whi ternet may would.	te that a product I m le shopping over the not work the way I	iight e thought				۵	۵	٥	
Indica with th shoppi	te your ag he followin ing in gene	reement or disagroups of the second sec	eement rnet	Strongly Agree	-Agree	-Somewhat-! Agree	Neutral-S	omewhat-D Disagree	isagree	-Strongly Disagree
61. Sh co	nopping over nvenient.	er the Internet is ver	У	٥	٥		٥		۵	٥
62. Sh	opping ov	er the Internet is eas	iy to do	. ¤	۵	٥	۵	۵	۵	۵
63. Sh	nopping ov	er the Internet is fas	t.	۵		۵	D			
64. I c In	can find any ternet.	y kind of product or	n the	٥	۵	٥	٥	٥	۵	٥
65. I c In	can shop ar iternet.	ny time I want to over	er the		۵		٩			0
66. I c In	can save me ternet.	oney by shopping o	ver the	a		۵	۵	۵		

## Indicate your agreement or disagreement

with	the following concerning shopping in	Strongly-	Agree-So	omewhat-N	ieutral-So	mewhat-I	Disagree-S	Strongly
gen	eral:	Agree	-	Agree	I	)isagree	D	lisagree
67.	The primary reasons I go shopping are to buy products and/or get information about products I might want to buy in the future.	۵			۵	0	a	٥
68.	The primary reason I go shopping is to have a good time.	۵	٥	D	۵	۵	۵	
69.	With everything else I have to do, I have little time available for shopping.	٥	٥		٥	٥	٥	
Plea	ase tell us about yourself.	<u> </u>						
70.	Are you: 🗆 Male 🛛 Female							
71.	What is your age? Under 18 years old Between 30 and 39 Between 60 and 69	Between Between Between	18 and 40 and 70 and	24 49 79		Between : Between : 30 years (	25 and 2 50 and 5 or older	9 9
72.	Are you: Single Married I	Divorced/	Separat	ed 🗆 W	/idowed			
73.	3. Which of the following best represents your total household income before taxes?         □ Under \$25,000       □ \$25,000 to \$34,999       □ \$35,000 to \$44,999         □ \$45,000 to \$54,999       □ \$55,000 to \$64,999       □ \$65,000 to \$74,999         □ \$75,000 to \$99,999       □ \$100,000 to \$149,999       □ \$150,000 to \$199,999         □ \$200,000 & Higher       □ \$100,000 to \$149,999       □ \$150,000 to \$199,999							
74.	4. Which of the following best represents your ethnic identity?							
75.	75. Which of the following describes your highest level of education?         □ Graduated from high school       □ Graduated from trade school       □ Attended some college         □ Graduated from college       □ Attended some graduate school       □ Earned a graduate degree         □ Earned a professional degree       □ Earned a doctorate       □ Other							
76.	What is your occupation?							
77.	Please feel free to write any additional	comments	you hav	e concern	ing your	Internet s	hopping	

Thank you very much for taking the time to complete this survey.

## Submit

experience:\_

# **APPENDIX 2: E-Mail Message for Pretest**

E-mail message sent to individuals who had purchased over the Internet and volunteered to complete the survey online:

Thank you for agreeing to complete the survey about your online purchasing experience. You must have purchased something from a Web site over the Internet to be able to participate in the survey. The URL for the survey is

## http://www.odu.edu/surv.html

Just read the statements, then select and click on the most accurate response for you. It should take about 15 minutes. Your purchase experience does not have to be within the last month as stated in the directions. Think about just one particular purchase when completing the survey. When you finish, just click on submit and you re done.

As an extra THANKS you can submit your name for a chance to win \$50.

After completing the survey and submitting it, send me an e-mail to kvanscoy@odu.edu. Include the most convenient way for me to reach you (phone or e-mail). You must complete and submit the survey by Sunday, April 25, midnight, to be eligible for the \$50 drawing. Also, please let me know what you though about the survey by answering these few questions:

Did you have any problems accessing the survey? Did you have any problems completing the survey? Were there any questions you could not answer? Were there any questions you did not understand? Did you have any problems submitting the survey?

Thank you very much and happy online shopping!

Kathleen VanScoyoc Old Dominion University

# APPENDIX 3-A: Postcard Message Sent to Sample – 1<sup>st</sup> Mailing





# **APPENDIX 3-B: Postcard Message Sent to Sample – 2nd Mailing**





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# APPENDIX 4: Variables by Name, Question Number, Description, and Construct

VAR#- NAME	QU#	DESCRIPTION
VAR00- DATE		DATE & TIME OF SUBMISSION
VAR01- CONTACT		HOW PARTICIPATE WAS INFORMED
VAR02- WEB SITE	1	WEB SITE ADDRESS
VAR03- PROD1	2	PRODUCT NAME/TYPE
VAR04- SATPROD1	3	HAPPY W/PRODUCT
VAR05- COMPREP1	4	FAVORABLE REPUTATION
VAR06- COMPREP2	5	CONCERNED ABOUT CUSTOMERS
VAR07- COMPREP3	6	NOT ALWAYS HONEST
VAR08- FRUST1	7	FRUSTRATION TO LOG ON
VAR09- EASY1	8	EASY TO DO
VAR10- SATPROC1	9	ENJOYED SHOPPING
VAR11- INFOQ1	10A	SHOP MORE QUICKLY
VAR12- INFOQ2	10 <b>B</b>	IMPROVED DECISION MAKING ABILITY
VAR13- INFOQ3	10C	IMPROVED SHOPPING EFFECTIVENESS
VAR14- INFOQ4	10D	EASY TO MAKE PURCHASE DECISION
VAR15- INFOQ5	10E	ACCURATE INFO
VAR16- INFOQ6	10F	USEFUL TO MAKE DECISION
VAR17- EASY2	11	EASY TO LEARN TO PURCHASE
VAR18- COMPREP4	12	HONEST REPUTATION – WEB SITE
VAR19- EASY3	13	EASY TO CONTROL PURCHASE
VAR20- FRUST2	14	PROBLEM CONNECTING TO WEB SITE
VAR21-EASY4	15	EASY TO PURCHASE
VAR22-SAT6	16	<b>REGRET SHOPPING FROM WEB SITE</b>
VAR23- EASY5	17	EASY TO DO WHAT I WANTED TO DO
VAR24- COMP1	18	TRUE INFO ON WEB SITE
VAR25-SATPROC2	19	SATISFYING EXPERIENCE
VAR26- FUTWEB1	20	SHOP AGAIN ON SAME WEB SITE
VAR27-VALUE1	21	BENEFITS GREATER THAN COSTS
VAR28- VALUE2	22	PRICE
VAR29- VALUE3	23	TIME TO SEARCH FOR INFO
VAR30- VALUE4	24	TIME TO PURCHASE
VAR31- VALUE5	25	WORTH OF PRODUCT
VAR32- VALUE6	26	ENJOYABLE
VAR33- VALUE7	27	CONVENIENT
VAR34- VALUE8	28	COMPARING PRICES
VAR35- VALUE9	29	EASE OF PURCHASE
VAR36- VALUE10	30	FREEDOM
VAR37- VALUE11	31	BENEFITS VS COST
VAR38- VALUE12	32	EFFORT
VAR39- COMP2	33	COMPANY IMAGE

VAR#- NAME	QU#	DESCRIPTION
VAR40- EXCON1	34	EXPECTED PRODUCT
VAR41- EXCON2	35	EXPECTED ORDERING PROCESS
VAR42- EXCON3	36	EXPECTED TIME SAVED
VAR43- EXCON4	37	PRICE PAID
VAR44- EXCON5	38	EXPECTED CONVENIENCE
VAR45- EXCON6	39	OVERALL EXPECTATIONS
VAR46- COMP3	40	CHANGE IN COMPANY IMAGE
VAR47- PROD2	41	NUMBER OF WEB SITES
VAR48- PROD3	42	SHOPPING TIME
VAR49- PROD4	43	PURCHASE FREQUENCY
VAR50- SATPROD2	44	FEEL GOOD ABOUT PRODUCT
VAR51-COMP4	45	COMPANY IS TRUSTWORTHY
VAR52- COMPREP5	46	POSITIVE ENCOUNTERS W/COMPANY
VAR53- COMPREP6	47	COMPANY KEEPS PROMISES
VAR54- SATPROD3	48	PURCHASE SAME PRODUCT
VAR55- SAT1	49	FEELINGS ABOUT SHOPPING EXPERIENCE
VAR56- FUTINT1	50	SHOPPING PLANS
VAR57- SAT2	51	SATISFACTION W/SHOPPING EXPERIENCE
VAR58- FUTWEB2	52	SHOP ON SAME SITE
VAR59- FUTINT2	53	FUTURE INTERNET PURCHASING
VAR60- WEBSHOP	54	NUMBER OF PURCHASES IN LAST YEAR
VAR61- WEBFREQ	55	TIME ON INTERNET
VAR62- WEBEXPL1	56	SURFING
VAR63- WEBEXPL2	56	GAME PLAYING
VAR64- WEBEXPL3	56	CHAT ROOMS
VAR65- WEBUTIL1	56	INFO BROWSING
VAR66- WEBUTIL2	56	E-MAIL
VAR67- WEBUTIL3	56	SHOPPING
VAR68- WEBUTIL4	56	BANKING
VAR69- WEBUTIL5	56	STOCK QUOTES
VAR70- WEBUTIL6	56	PAY BILLS
VAR71- WEBUTIL7	56	INVESTMENTS
VAR72- WEBUTIL8	56	INSURANCE
VAR73- RISK1	57	PRIVACY
VAR74- RISK2	58	SECURITY
VAR75- RISK3	59	FINANCIAL
VAR76- RISK4	60	PERFORMANCE
VAR77- EXPECT1	61	CONVENIENCE
VAR78- EXPECT2	62	EASY
VAR79- EXPECT3	63	FAST
VAR80- EXPECT4	64	ANY PRODUCT
VAR81- EXPECT5	65	ANY TIME
VAR82- EXPECT6	66	SAVE MONEY
VAR83- SHOPPER1	67	PRODUCT

VAR12- INFOQ2	10 <b>B</b>	IMPROVED DECISION MAKING ABILITY
VAR13-INFOQ3	10C	IMPROVED SHOPPING EFFECTIVENESS
VAR14- INFOQ4	10D	EASY TO MAKE PURCHASE DECISION
VAR15- INFOO5	10E	ACCURATE INFO

VAR15- INFOQ5 VAR16-INFOQ6

10F

QU#	DESCRIPT	ION
-----	----------	-----

**QU# DESCRIPTION** 

10A SHOP MORE QUICKLY

- EASY TO DO
- 11 **EASY TO LEARN TO PURCHASE**

**USEFUL TO MAKE DECISION** 

- 13 EASY TO CONTROL PURCHASE
- 15 EASY TO PURCHASE
- 17 EASY TO DO WHAT I WANTED TO DO

## PRE-TRANSACTION FRUSTRATION

VAR#- NAME	QU#	DESCRIPTION
VAR08- FRUST1	7	FRUSTRATION TO LOG ON
VAR20- FRUST2	14	PROBLEM CONNECTING TO

PROBLEM CONNECTING TO WEB SITE 14

73 VAR89-INCOME SELECT FROM INCOME LEVELS VAR90- ETHNIC 74 SELECT ONE 75 VAR91-EDUC SELECT HIGHEST LEVEL OBTAINED VAR95-OCCUP 76 OPEN-ENDED; LIST 77 VAR93- COMMENTS **OPEN-ENDED** 

68

69

70

71

72

**OU# DESCRIPTION** 

**EXPERIENTIAL** 

MALE/FEMALE

NO TIME FOR SHOPPING

SELECT MARITAL STATUS

SELECT FROM RANGE OF AGES

# VARIABLES BY CONSTRUCT

# **INFORMATION QUALITY**

VAR#- NAME

EASE OF USE VAR#- NAME

VAR09-EASY1

VAR17-EASY2

VAR19-EASY3

VAR21-EASY4

VAR23-EASY5

VAR11-INFOO1 VAR12-INFOO2

VAR#- NAME

VAR84- SHOPPER2

VAR85- TIMECON

VAR86- GENDER

VAR88- MARITAL

VAR87-AGE

# 8

## VAR#- NAME

- VAR27- VALUE1 VAR28- VALUE2 VAR29- VALUE3 VAR30- VALUE4 VAR31- VALUE5 VAR32- VALUE5
- VAR32- VALUE6 VAR33- VALUE7
- VAR34- VALUE8
- VAR35- VALUE9
- VAR36- VALUE10
- VAR37- VALUE11
- VAR38- VALUE12

VAR#- NAME

30 FREEDOM 31 BENEFITS VS COST OF PRODUCT

21

22

23

24

25

26

27

28

29

- VALUEII
  - ALUE12 32

# EXPECTANCY CONGRUENCY

# **QU# DESCRIPTION**

EFFORT

**OU# DESCRIPTION** 

ENJOYABLE

CONVENIENT

PRICE

**BENEFITS VS COSTS OF PURCHASE** 

TIME TO SEARCH FOR INFO

TIME TO PURCHASE

WORTH OF PRODUCT

**COMPARING PRICES** 

EASE OF PURCHASE

VAR40- EXCON1 34 EXPECTED PRODUCT VAR41- EXCON2 35 EXPECTED ORDERING PROCESS VAR42- EXCON3 36 EXPECTED TIME SAVED VAR43- EXCON4 37 PRICE PAID 38 **EXPECTED CONVENIENCE** VAR44- EXCON5 VAR45- EXCON6 39 **OVERALL EXPECTATIONS** 

# SATISFACTION

VAR#- NAME VAR55- SAT1 VAR57- SAT2 VAR04- SATPROD1 VAR50- SATPROD2 VAR54- SATPROD3 VAR10- SATPROC1 VAR22- SATPROC2 VAR25- SATPROC3

- **QU# DESCRIPTION**
- 49 FEELINGS ABOUT SHOPPING EXPERIENCE
- 51 SATISFACTION W/SHOPPING EXPERIENCE
- 3 HAPPY W/PRODUCT
- 44 FEEL GOOD ABOUT PRODUCT
- 48 PURCHASE SAME PRODUCT
- 9 ENJOYED SHOPPING
- 16 REGRET SHOPPING FROM WEB SITE
- **19 SATISFYING EXPERIENCE**

# FUTURE ONLINE PURCHASING INTENTIONS

VAR#- NAME VAR26- FUTWEB1 VAR58- FUTWEB2 VAR59- FUTINT1 VAR56- FUTINT2

- 20 SHOP AGAIN ON SAME WEB SITE52 SHOP ON SAME SITE
- 53 FUTURE INTERNET PURCHASING
- 50 SHOPPING PLANS

**OU# DESCRIPTION** 

# **COMPANY IMAGE**

VAR#- NAME

QU#	DESCRIPTION
-----	-------------

VAR24- COMP118TRUE INFO ON WEB SITEVAR39- COMP233COMPANY IMAGEVAR46- COMP340CHANGE IN COMPANY IMAGEVAR51- COMP445COMPANY IS TRUSTWORTHY

# **COMPANY REPUTATION**

VAR#- NAME	QU#	DESCRIPTION
VAR05- COMPREP1	4	FAVORABLE REPUTATION
VAR06- COMPREP2	5	CONCERNED ABOUT CUSTOMERS
VAR07- COMPREP3	6	NOT ALWAYS HONEST
VAR18- COMPREP4	12	HONEST REPUTATION – WEB SITE
VAR52- COMPREP5	46	POSITIVE ENCOUNTERS W/COMPANY
VAR53-COMPREP6	47	COMPANY KEEPS PROMISES

## **EXOGENOUS VARIABLES**

## PERSONAL CHARACTERISTICS

## **INTEREST IN SHOPPING**

VAR#- NAME	QU#	DESCRIPTION
VAR83- SHOPPER1	67	PRODUCT
VAR84- SHOPPER2	<b>68</b>	EXPERIENTIAL

## TIME CONSTRAINTS

VAR#- NAME	QU#	DESCRIPTION

VAR85- TIMECON	69	NO TIME FOR SHOPPING

## **DEMOGRAPHICS**

VAR#- NAME	QU#
VAR86- GENDER	70
VAR87- AGE	71
VAR88- MARTIAL	72
VAR89- INCOME	73
VAR90- ETHNIC	74
VAR91- EDUC	75
VAR95- OCCUP	76

# INTERNET EXPERIENCE

USAG	E FRE	QUENCY	l

VAR#- NAME	QU#	DESCRIPTION
VAR61- WEBFREQ	55	TIME ON INTERNET

VAR#- NAME	QU#	DESCRIPTION
VAR62-WEBEXPL1	56	SURFING
VAR63- WEBEXPL2	56	GAME PLAYING
VAR64- WEBEXPL3	56	CHAT ROOMS
VAR65- WEBUTIL1	56	<b>INFO BROWSING</b>
VAR66- WEBUTIL2	56	E-MAIL
VAR67- WEBUTIL3	56	SHOPPING
VAR68- WEBUTIL4	56	BANKING
VAR69- WEBUTIL5	56	<b>STOCK QUOTES</b>
VAR70- WEBUTIL6	56	PAY BILLS
VAR71, WEBUTH 7	56	INVESTMENTS

- VAR/I-WEBUTIL/ 56 INVESTMENTS
- VAR72- WEBUTIL8 56 INSURANCE

## **INTERNET SHOPPER TYPE**

VAR#- NAME	QU#	DESCRIPTION
VAR60- WEBSHOP	54	NUMBER OF PURCHASES IN LAST YEAR

# **EXPECTATIONS**

VAR#- NAME	QU#	DESCRIPTION
VAR77- EXPECT1	61	CONVENIENCE
VAR78- EXPECT2	62	EASY
VAR79- EXPECT3	63	FAST
VAR80- EXPECT4	64	ANY PRODUCT
VAR81- EXPECT5	65	ANY TIME
VAR82- EXPECT6	66	SAVE MONEY

## **PERCEIVED RISKS**

VAR#- NAME	
VAR73- RISK1	
VAR74- RISK2	
VAR75- RISK3	
VAR76- RISK4	

## **PRODUCT TYPE**

VAR#- NAME
VAR03- PROD1
VAR47- PROD2
VAR48- PROD3
VAR49- PROD4

# **QU# DESCRIPTION**

57	PRIVACY
58	SECURITY

- 58 SECURITY 59 FINANCIAL
- 60 PERFORMANCE

## **QU# DESCRIPTION**

- 2 **PRODUCT NAME/TYPE**
- 41 NUMBER OF WEB SITES
- 42 SHOPPING TIME
- 43 PURCHASE FREQUENCY
# APPENDIX 5: Non-Response Bias for Sample

eandan						
gender	70	57 600%	36	20	0 120291502	0 7090062
iciliaic	70 61	15 00%	31	20	0.155261392	0.7009903
non-response	2	1 50%	51	29	0.000302157	0.0921327
total	133	100.00%	68	68	0.000392137	0.7042000
	155	100.0070				
age			•			
18	1	0.80%	1	1	0.382235294	0.5364094
20	2	1.50%	I	1	0.000392157	0.9842006
25	10	7.50%	5	3	0.864705882	0.3524251
30	49	36.80%	25	25	2.30179E-05	0.996172
40	41	30.80%	21	19	0.180440031	0.6709954
50	20	15.00%	10	13	0.768627451	0.380642
60	7	5.30%	4	5	0.540736959	0.4621275
70	2	1.50%	I	l	0.000392157	0.9842006
non-response	1	0.80%	1	0	0.544	0.4607797
total	133	99.20%	68	68	0.544392157	
					10.22.01/1	
marital status						
	10	7 50%	5	6	0 158823529	0 690242
, u , m	93	69.90%	48	44	0.262455272	0.6084383
	21	15 80%	11	11	0.006099777	0.9377477
w		0.00%	••	4	0.000077777	0.5577777
non-response	9	6.77%	5	3	0.557386112	0.4553153
total	133	99.97%	68	68	0.557386112	
income						
100	21	15.80%	11	9	0.283091586	0.594682
150	5	3.80%	3	3	0.066972136	0.7957975
200	3	2.30%	2	0	1.564	0.2110806
24	4	3.00%	2	4	1.883137255	0.1699781
25	11	8.30%	6	6	0.022454996	0.880883
35	14	10.50%	7	5	0.64140056	0.4232041
45	14	10.50%	7	6	0.182016807	0.6696457
55	20	15.00%	10	12	0.317647059	0.5730251
65	14	10.50%	7	10	1.145602241	0.2844719
75	23	17.30%	12	. 13	0.129861952	0.7185752
non-response	4	3.00%	2	0	2.04	0.1532097
total	133	100.00%	68	68	3.315464193	

Table 25: Sample Non-Response Bias

Table 25 (continu	ued)					
				<del>بر سنب</del> بر افراد .		<u> </u>
ethnic						
aa	4	3.00%	2	5	4.294901961	0.0382268
afr	8	6.00%	4	3	0.285882353	0.5928714
C	117	88.00%	60	57	0.134786096	0.7135204
ha	0	0.00%	0	1		
na	2	1.50%	1	2	0.941568627	0.3318748
0	1	0.80%	1	0	0.544	0.4607797
non-response	I	0.80%	1	0	0.544	0.4607797
total	133	100.10%	68	68	2.029568627	
education						
col	39	29.30%	20	22	0.216310781	0.6418654
doct	2	1.50%	1	I	0.000392157	0.9842006
grad	21	15.80%	11	15	1.685921072	0.1941396
hgsch	15	11.30%	8	l	5.814140552	0.0158978
other	1	0.80%	1	2	3.896941176	0.0483741
prof	5	3.80%	3	I	0.970996904	0.3244317
smcol	36	27.10%	18	19	0.017754721	0.8939982
smgrad	12	9.00%	6	5	0.20496732	0.6507409
trdsch	I	0.80%	1	2	3.896941176	0.0483741
non-response	1	0.80%	1	0	0.544	0.4607797
total	133	100.2%	68	68	17.24836586	
					CCC 6775	

# **APPENDIX 6: Sample Representativeness**

				201		
	Denulation	P	Kesponse	2VI		
	Population	Expected n	Actual n	test stat	p-value	
	JU70 6004	100.5	<del>1</del> 00	1.09/013	0.294922	l
Female	3070	100.5	108	0.559/01	0.454581	1
			Total	1.656710		ļ
			T-VALUE -			
	- • .• .		Response	201		
	Population	Expected n	Actual n	test stat	p-value	
HIGH SCHOOL	6.0%	12	16	1.287197	0.256565	
TRADE SCHOOL	3.1%	6	3	1.675391	0.195538	
SOME COLLEGE	30.4%	61	55	0.609761	0.434878	
COLLEGE GRAD	33.6%	68	61	0.632541	0.426425	1
MASTERS	17.2%	35	36	0.058984	0.80811	1
PROF DEGREE	3.5%	7	6	0.152271	0.696375	1
DOCTORATE	3.4%	7	3	2.150945	0.142482	1
OTHER	0.8%	2	3	1.205015	0.272322	
			Total	7.772104		
				<u>CECE</u>		
			Response	201		
	Population	Expected n	Actual n	test stat	p-value	
CAUCASIAN	. 86.0%	173	174	0.007518	0.930904	
ALL OTHER	10.0%	20	27	2.368657	0.123794	
			Total	2.368657		
					J	
		1				
The True True State State State Street and State Sta	and the second sec	الشروعيات فبسر فعوان الم	المناسق وسالم	and the second second		
		یک از ایک	and the second		A DESCRIPTION OF A DESC	A Designed to the second secon
			Response	201		
	Population	Expected n	Response Actual n	201 test stat	D-value	
SINGLE	Population 30.0%	Expected n 60	Response Actual n 32	201 test stat 13.28176	<b>p-value</b> 0.000268	
SINGLE MARRIED	Population 30.0% 50.1%	Expected n 60	Response Actual n 32 137	201 test stat 13.28176 13.08445	<b>p-value</b> 0.000268 0.000298	
SINGLE MARRIED DIVORCE/SEPARATED	Population 30.0% 50.1% 10.0%	Expected n 60 101	Response Actual n 32 137 16	201 test stat 13.28176 13.08445 0.836318	<b>p-value</b> 0.000268 0.000298 0.360452	
SINGLE MARRIED DIVORCE/SEPARATED WIDOWED	Population 30.0% 50.1% 10.0% 1.1%	Expected n 60 101 20	Response Actual n 32 137 16 4	201 test stat 13.28176 13.08445 0.836318 1.447545	<b>p-value</b> 0.000268 0.000298 0.360452 0.228922	
SINGLE MARRIED DIVORCE/SEPARATED WIDOWED	Population 30.0% 50.1% 10.0% 1.1%	Expected n 60 101 20	Response Actual n 32 137 16 4 Total	201 test stat 13.28176 13.08445 0.836318 1.447545 28.65007	<b>p-value</b> 0.000268 0.000298 0.360452 0.228922	
SINGLE MARRIED DIVORCE/SEPARATED WIDOWED	Population 30.0% 50.1% 10.0% 1.1%	Expected n 60 101 20	Response Actual n 32 137 16 4 Total	201 test stat 13.28176 13.08445 0.836318 1.447545 28.65007	<b>p-value</b> 0.000268 0.000298 0.360452 0.228922	

# Table 26: Response Bias of Sample

# **APPENDIX 7: Correlation Matrix of Independent Variables**

	. INFOE	INEO2	REPR		-	#IREOC	49.CST	gp, (57)	H / (5) E	20/57/	"EASYS
FRUSTL	179	187	213	220	255	213	338	351	219	306	327
FRUST2	391	302	408	381	399	385	479	493	441	651	530
INFOQI	1.000	.689	.679	.644	.559	.542	.446	.398	.458	.477	.537
INFOQ2	.689	1.000	.697	.764	.440	.719	.323	.284	.350	.404	.389
INFOQ3	.679	.697	1.000	.777	.548	.661	.408	.397	.467	.484	.495
INFOQ4	.644	.764	.777	1.000	.573	.756	.367	.384	.493	.531	.534
INFOQ5	.559	.440	.548	.573	1.000	.543	.591	.537	.511	.527	.635
INFOQ6	.542	.719	.661	.756	.543	1.000	.393	.454	.449	.564	.523
EASYI	.446	.323	.408	.367	.591	.393	1.000	.566	.551	.670	.774
EASY2	.398	.284	.397	.384	.537	.454	.566	1.000	.448	.604	.561
EASY3	.458	.350	.467	.493	.511	.449	.551	.448	1.000	.469	.656
EASY4	.477	.404	.484	.531	.527	.564	.670	.604	.469	1.000	.740
EASY5	.537	.389	.495	.534	.635	.523	.774	.561	.656	.749	1.000
VALUEI	.323	.339	.399	.364	.455	.449	.472	.421	.473	.446	.497
VALUE2	.113	.100	.165	.112	.049	.081	.220	.162	.225	.143	.145
VALUE3	.476	.365	.429	.404	.328	.350	.436	.315	.270	.374	.362
VALUE4	.217	.146	.244	.214	.241	.258	.349	.315	.231	.359	.284
VALUES	.247	.236	.225	.204	.171	.206	.279	.192	.263	.252	.278
VALUE6	.389	.295	.367	.338	.306	.292	.337	.282	.415	.262	.309
VALUE7	.324	.248	.380	.312	.304	.320	.458	.355	.433	.471	.453
VALUE8	.292	.299	.412	.419	.285	.373	.318	.276	.380	.312	.355
VALUE9	.437	.364	.417	.444	.365	.397	.485	.342	.441	.464	.451
VALU10	.358	.261	.374	.341	.283	.347	.310	.355	.421	.237	.352
VALUÍI	.282	.329	.351	.319	.340	.426	.329	.256	.427	.300	.405
VALU12	.397	.326	.409	.389	.312	.337	.419	.419	.498	.418	.418
EXCONI	.240	.327	.342	.354	.249	.392	.283	.266	.276	.378	.340
EXCON2	.406	.296	.419	.384	.404	.333	.537	.365	.337	.534	.552
EXCON3	.364	.296	.388	.401	.287	.316	.398	.289	.323	.444	.433
EXCON4	.183	.229	.229	.199	.071	.193	.242	.160	.264	.225	.222
EXCONS	.392	.361	.434	.441	.247	.293	.368	.204	.368	.395	.408
EXCON6	.355	.329	.410	.389	.416	.324	.537	.270	.403	.510	.527

 Table 27: Correlation Matrix of Independent Variables

Table 27 (continued)

	FRUSTL	FRUSEZ	12(00),11	12,601,2	13,60,83	1.2.(0.2),(1	EXCONS	12,0026
FRUSTI	1.000	.453	145	192	093	201	042	147
FRUST2	.453	1.000	256	409	286	305	318	348
INFOQ1	179	391	.240	.406	.364	.183	.392	.355
INFOQ2	187	302	.327	.296	.296	.229	.361	.329
INFOQ3	213	408	.342	.419	.388	.229	.434	.410
INFOQ4	220	381	.354	.384	.401	.199	.411	.389
INFOQ5	255	399	.249	.404	.287	.071	.247	.416
INFOQ6	213	385	.392	.333	.316	.193	.293	.324
EASY1	338	- 479	.283	.537	.398	.242	.368	.537
EASY2	351	-,493	.266	.365	.289	.160	.204	.270
EASY3	219	441	.276	.337	.323	.264	.368	.403
EASY4	306	- 651	.378	.534	.444	.225	.395	.510
EASY5	327	- 530	.340	.552	.433	.222	.408	.527
VALUEI	278	458	.406	.400	.303	.402	.276	.490
VALUE2	193	182	.195	.220	.201	.643	.200	.236
VALUE3	267	284	.286	.354	.389	.180	.365	.338
VALUE4	273	262	.181	.253	.389	.128	.261	.290
VALUE5	198	253	.355	.315	.332	.555	.287	.354
VALUE6	146	244	.375	.283	.363	.271	.369	.321
VALUE7	244	362	.303	.420	.542	.305	.515	.502
VALUE8	257	193	.288	.299	.237	.352	.218	.294
VALUE9	259	288	.294	.470	.539	.316	.519	.502
VALUE10	089	131	.311	.274	.362	.262	.352	.315
VALUEII	245	289	.438	.351	.391	.439	.324	.404
VALUE12	285	334	.287	.397	.521	.318	.434	.426
EXCONI	145	256	1.000	.478	.420	.388	.392	.522
EXCON2	192	409	.478	1.000	.683	.423	.662	.801
EXCON3	093	286	.420	.683	1.000	.429	.798	.720
EXCON4	201	305	.388	.423	.429	1.000	.444	.480
EXCON5	042	318	.392	.662	.798	.444	1.000	.758
EXCON6	147	348	.522	.801	.720	.480	.758	1.000

Table 27 (continued)

able 2	/ (conu	muea)										
	VALUEI	VAEUEZ	V.10.9 ×	17.1002	VZIANZ	WEDE	12013	WILLIE.	VANAL	77,10110	N. LINI	17,13019
FRUSTI	278	193	267	- 273	198	146	244	257	259	089	245	285
FRUST2	458	182	284	262	253	244	362	- 193	288	131	289	334
INFOQI	.323	.113	.476	.217	.247	.389	.324	.292	.437	.358	.282	.397
INFOQ2	.339	.100	.365	.146	.236	.295	.248	.299	.364	.261	.329	.326
INFOQ3	.399	.165	.429	.244	.225	.367	.380	.412	.417	.374	.351	.409
INFOQ4	.364	.112	.404	.214	.204	.338	.312	.419	.444	.341	.319	.389
<b>INFOQ5</b>	.455	.049	.328	.241	.171	.306	.304	.285	.365	.283	.340	.312
INFOQ6	.449	.081	.350	.258	.206	.292	.320	.373	.397	.347	.426	.337
EASYI	.472	.220	.436	.349	.279	.337	.458	.318	.485	.310	.329	.419
EASY2	.421	.162	.315	.315	.192	.282	.355	.276	.342	.355	.256	.419
EASY3	.473	.225	.270	.231	.263	.415	.433	.380	.441	.421	.427	.498
EASY4	.446	.143	.374	.359	.252	.262	.471	.312	.464	.237	.300	.418
EASY5	.497	.145	.362	.284	.278	.309	.453	.355	.451	.352	.405	.418
VALUEI	1.00	.230	.341	.235	.468	.309	.401	.311	.408	.322	.567	.381
VALUE2	.230	1.000	.126	.074	.439	.210	.201	.389	.191	.180	.281	.206
VALUE3	.341	.126	1.000	.598	.323	.489	.509	.308	.627	.461	.372	.537
VALUE4	.235	.074	.598	1.000	.201	.429	.626	.251	.556	.334	.233	.577
VALUES	.468	.439	.323	.201	1.000	.352	.336	.405	.415	.364	.556	.379
VALUE6	.309	.210	.489	.429	.352	1.000	.554	.290	.516	.514	.413	.586
VALUE7	.401	.201	.509	.626	.336	.554	1.000	.278	.645	.467	.447	.706
VALUES	.311	.389	.308	.251	.405	.290	.278	1.000	.411	.349	.391	.363
VALUE9	.408	.191	.627	.556	.415	.516	.645	.411	1.000	.473	.449	.677
VALUIO	.322	.180	.461	.334	.364	.514	.467	.349	.473	1.000	.431	.470
VALUII	.567	.281	.372	.233	.556	.413	.447	.391	.449	.431	1.000	.433
VALU12	.381	.206	537	.577	.379	.586	.706	363	.677	.470	433	1.000
EXCONI	.406	.195	.286	.181	.355	.375	.303	.288	.294	.311	.438	.287
EXCON2	.400	.220	.354	.253	.315	.283	.420	.299	.470	.274	.351	.397
EXCON3	.303	.201	.389	.389	.332	.363	.542	.237	.539	.362	.391	.521
EXCON4	.402	.643	.180	.128	.555	.271	.305	.352	.316	.262	.439	.318
EXCON5	.276	.200	.365	.261	.287	.369	.515	.218	.519	.352	.324	.434
EXCON6	.490	236	.338	.290	.354	.321	.502	.294	.502	.315	.404	.426

Table 27 (continued)

	VALU	VALU	VAEU			AV.	N/U	1 V/10	17/101 10/101	AV/103	113	
FRISTI	279	102	109	25000	ECCATORIA CONTRACTORIA			ACONYO		20.2.X.E	002110	CONVIE
TRUST	470	- 193	170	23/	243	20/	2/3	140	244	259	089	285
INFOOI	272	102	247	173	207	204	202	244	302	288	131	334
NEOO	.343	100	.247	.292	.464	.4/0	.217	.389	.324	.437	.358	.397
INFOQ2	.337	.100	.230	.277	.343	.303	.140	.295	.248	.364	.261	.326
DECOM	.397	.103	.223	.412	.551	.429	.244	.307	.380	.417	.374	.409
DIEOOG	.304	.112	.204	.417	.515	.404	.214	.338	.312	.444	.341	.389
INFOQ3	.433	.045	.1/1	.283	.540	.528	.241	.300	.304	.365	.283	.312
EACVI	.447	.001	.200	.3/3	.420	.550	.238	.292	.320	.397	.347	.337
EASV	.4/2	.440	.275	.510	.529	.430	.349	.337	.458	.485	.310	.419
CADI2 CADVO	.441	.104	.192	.2/0	.230	.515	.313	.282	.355	.342	.355	.419
EASIS	.4/3	.225	.203	.180	.427	.270	.231	.415	.433	.441	.421	.498
LAST4	.440	.143	.252	.312	.300	.374	.359	.262	.471	.464	.237	.418
EASTS	.491	.145	.278	.355	.405	.362	.284	.309	.453	.451	.352	.418
ECONI	1.00	.230	.468	.311	.567	.341	.235	.309	.401	.408	.322	.381
VALU	220	1 000	430	389	.281	126	074					
ECON2	.230	1.000	.439				.074	.210	.201	.191	.180	.206
VALU	.468	.439	1.000	.405	.556	.323	.201	352	336	415	364	379
				1 000	1 201	200						
ECONS	.311	.389	.405	1.000	.371	.308	.251	.290	.278	.411	.349	.363
VALU	567	291		.391	1.000	.372	.233	413				422
ECONII	.30/	.201	.330					.413	.447	.449	.451	.433
VALU	.341	.126	.323	.308	.372	1.000	.598	.489	.509	.627	.461	.537
VALU				251	222	509	1 000					
CONV4	.235	.074	.201	ا ده.	.233	.370	1.000	.429	.626	.556	.334	.577
VALU	300	210	352	.290	.413	.489	.429	1 000				896
CONVO		.414	عرد.					1.000	.334	.310	.514	.580
CONV	.401	.201	.336	.278	.447	.509	.626	.554	1.000	.645	.467	.706
VALU	100			411	449	627	556					•
CONV9	.408	. 191	.413	••••	••••	.047	.330	.516	.645	1.000	.473	.677
VALU	.322	180	.364	.349	.431	.461	.334	.514	467	473	1 000	470
CONVIU											1.000	
CONV12	.381	.206	.379	.303	.433	.53/	.577	.586	.706	.677	.470	1.000
EXCON1	.406	.195	.355	.288	.438	.286	.181	.375	303	294	311	287
EXCON2	.400	.220	.315	.299	.351	354	.253	.283	420	470	274	397
EXCON3	.303	.201	.332	237	.391	389	389	363	542	530	367	521
EXCON4	.402	.643	555	352	439	180	128	271	305	316		319
EXCONS	.276	200	287	218	324	365	261	360			.202	.310
EXCON6	.490	.236	354	294	404	338	290	321	507	507	334	.737

# **APPENDIX 8: Exploratory Factor Analysis of Variables**

#### Table 28: Pairwise Factor Analysis of EASY and FRUST

Сотр	
EASY1	.838
EASY2	.756
EASY3	.714
EASY4	.852
EASY5	.880
FRUSTL	512
FRUST2	753

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

# Table 29: Pairwise Factor Analysis of EASY and INFOQ

Rotated Component Matrix								
	Com	<b>oicit</b>						
		2						
EASY1	.868	.153						
EASY2	.743	.194						
EASY3	.661	.320						
EASY4	.765	.327						
EASY5	.853	.303						
INFOQT	.366	.726						
INFOQ2	.132	.901						
INFOQ3	.306	.821						
INFOQ4	.301	.863						
INFOQ5	.645	.448						
INFOQ6	.353	.771						

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 3 iterations.

		4.Comician	
VALUECONI	.356	.247	.546
VALUECON2	-3.223E-02	1.893E-02	.737
VALUECONS	6.387E-02	.245	.785
VALUDCONA	.307	.197	.574
VAEDECONS	.251	.317	.657
VALUCONVE	.308	.712	.115
VALUCONV2	6.075E-02	.828	-2.287E-02
VALUCONV3	.205	.658	.254
VALUCONV4	.148	.802	.217
VALUCONV5	.287	.734	.264
VALUCONV6	.233	.533	.327
VALUCONV7	.216	.775	.244
INFOQ1	.762	.272	8.744E-02
INFOQ2	.852	.107	.129
INFOQ3	.819	.234	.171
INFOQ4	.876	.188	.129
INFOQ5	.670	.218	.116
INFOQ6	.812	.172	.177

Table 30: Pairwise Factor Analysis of VALUE and INFOQ

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

	T.C. TrailConne		
		Component	
		2	<b>3</b>
VALUECONI	.258	.538	.427
VALUECON2	-2.883E-02	.702	.102
VALUECON3	.226	.771	9.942E-02
VALUECON4	.251	.618	9.789E-02
VALUECONS.	.345	.669	.167
VALUCONVI	.745	.145	.184
VALUCONV2	.785	-7.313E-02	.249
VALUCONV3	.697	.301	-2.275E-02
VALUCONV4	.782	.191	.223
VALUCONVS	.763	.285	.162
VALUCONVG	.614	.413	187
VALUCONVE	.778	.242	.203
FRUST	128	131	787
FRUST2	189	178	792

Table 31: Pairwise Factor Analysis of VALUE and FRUST

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

Table 32:	Pairwise	Factor	Analysis	of VALUE	and EASY
Laute Jat	I MIL WISC	THEIDT	7 Mary 313	UL VALUE	

		-Cirrin-Cha	
		2.5	
5X.8511	.261	.806	.153
10/100	.219	.724	8.675E-02
13/ 51/	.239	.631	.335
152,637	.244	.822	7.006E-02
-102XSS72	.197	.867	.184
MY/LUIZBON	.186	.503	.500
NY LUISOUT	-3.032E-03	5.393E-02	.708
NY DUDCOUT	.242	8.441E-02	.773
<b>NATION</b>	.214	.239	.590
<b>N</b> ALL CONTRACTOR	.316	.227	.667
<b>私知道</b> 的 (A)	.744	.210	.135
MYLUCON V	.805	.175	-6.295E-02
NYINGONVE	.679	.116	.305
NTUCO TY	.751	.312	.180
TITUCE C.C.	.726	.304	.265
NIL CONVE	.546	.170	.372
版对印度百万万日	.751	.285	.240

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.

	Roster Corn		
		Composed.	
		2	3
VALUECONE	.292	.266	.535
VALUECON2.	-2.405E-02	8.100E-02	.746
W ISUIDCORSE	.252	.135	.744
VARUDCORA	.313	5.182E-02	.581
VATEUECONS	.372	.202	.618
VALUCONVID	.755	.170	.133
VALUCONV2	.793	.125	-2.945E-02
VALUCONN3	.675	.137	.272
VALUCONV4	.737	.356	.159
VALUCONV5	.728	.344	.224
VALUCONV6	.591	.122	.321
VALUCONV7	.761	.261	.220
EXCONE	.161	.479	.403
EXCON2	.184	.827	.213
EXCON3	.348	.805	.131
EXCON4	1.149E-02	.389	.742
EXCON5	.270	.839	.119
EXCON6	.215	.859	.255

Table 33: Pairwise Factor Analysis of VALUE and EXCON

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 34:	Exploratory	Factor.	Analysis	of Dep	endent <b>V</b>	ariables
						ABK 24692 2444

and the second design of the s	
Compone	t Matrix
	Component
SATI	.750
SAT2	.863
COMP1	.687
COMP2	.885
COMP3	.811
COMP4	.759
FUEWEBE	.836
FUTWICH2	.857

Extraction Method: Principal Component Analysis.

a. I components extracted.

# **APPENDIX 9: Correlations of Model Constructs**

CORRELATION MATRIX OF INDEPENDENT CONSTRUCTS							
INFOQ	<b>INFOQ</b> 1.000	EASY	VALUCONV	VALUECON	EXCON	FRUST	
EASY	0.679 (0.044)	1.000					
	15.325						
VALUCONV	0.549	0.630	1.000				
1	(0.056)	(0.050)					
	9.820	12.612					
VALUECON	0.541	0.612	0.682	1.000			
	(0.062)	(0.057)	(0.051)				
	8.768	10.761	13.329				
EXCON	0.520	0.630	0.640	0.614	1.000		
	(0.057)	(0.049)	(0.048)	(0.056)			
	9.094	12.839	13.227	10.948			
FRUST	-0.518	-0.747	-0.465	-0.530	-0.447	1.000	
	(0.070)	(0.060)	(0.074)	(0.076)	(0.074)		
	-7.353	-12.388	-6.281	-6.945	-6.059		

Table 35: Correlation Matrix of Independent Constructs

Table 36:	Correlation	Estimates	Between	Constructs

CORRELA	TED CONSTRU	UCTS	CONFIDENCE
AND C	ORRELATION	1	INTERVAL
INFOQ	EASY	0.679	$\pm 2 \times (0.044/\sqrt{201})$
			0.673, 0.685
INFOQ	VALUCONV	0.549	$\pm 2 \times (0.056/\sqrt{201})$
			0.541, 0.557
INFOQ	VALUECON	0.541	$\pm 2 \times (0.062/\sqrt{201})$
			0.532, 0.550
INFOQ	EXCON	0.520	±2 x (0.057/√201)
			0.512, 0.528
INFOQ	FRUST	-0.518	± 2 x (0.070/√201)
			-0.528, -0.508
VALUCONV	EASY	0.630	$\pm 2 \times (0.044/\sqrt{201})$
			0.623, 0.637
VALUECON	EASY	0.612	± 2 x (0.044/√201)
			0.604, 0.620
VALUECON	VALUCONV	0.682	$\pm 2 \times (0.051/\sqrt{201})$
			0.675, 0.689
EXCON	EASY	0.630	$\pm 2 \times (0.049/\sqrt{201})$
			0.623, 0.637
EXCON	VALUCONV	0.640	$\pm 2 \times (0.048/\sqrt{201})$
			0.633, 0.647
EXCON	VALUECON	0.614	$\pm 2 \times (0.056/\sqrt{201})$
			0.606, 0.622
FRUST	EASY	-0.747	± 2 x (0.060/√201)
			-0.755, -0.739
FRUST	VALUCONV	-0.465	± 2 x (0.074/√201)
			-0.475, -0.455
FRUST	VALUECON	-0.530	$\pm 2 \times (0.076/\sqrt{201})$
			-0.541, -0.519
FRUST	EXCON	-0.447	$\pm 2 \times (0.074/\sqrt{201})$
			-0.457, -0.437
SAT	FUTWEB	.976	± 2 x (0.032/√201)
			0.981, 0.971

# APPENDIX 10: Reliability and Validity Analyses of Scale Items

Table 37: Info	rmation Qu	ality Scale						
	The information	tion on this Wel	b site:					
1 INFOO1	a) enabled me to shon more quickly							
2 INFOO2	b) imp	roved my decisio	on-making ahili	ty for this purchase				
3 INF003	c) imp	roved my shonni	ing effectivenes	s				
4 INF004	d) mad	e it easy for me	to make a purch	use decision				
5 INFOOS	e) was	accurate for this	nurchase					
6 INFOO6	f) was	useful to me in r	naking my purc	hasing decision				
	.)		inaxing iny pure	numb deelsten				
	RELIA	BILITY AN	ALYSIS-SC	ALE (ALPHA)				
		Mean	S	td Dev	Cases			
1. INFOQ1		6.1206	1	.0277	199			
2. INFOQ2		5.8291	1	.2436	199			
3. INFOQ3		5.9598	1.2054		199			
4. INFOQ4		6.0452	1.0885		199			
5. INFOQ5		6.2965	.9731		1 <b>99</b>			
6. <b>INFOQ6</b>		6.1005	.9949		199			
Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N			
SCALE:	36.3518	30.0878	5.4852	6	6.0586			
		Reliabil	ity Coefficie	nts				
N of Case	s = 199	N o	of Items = $6$	Alph	a = .9138			
	CON	FIRMATOR	<b>Y FACTOR</b>	ANALYSIS				
Confirmat Number o	ory Factor An f Iterations = 6	alysis for <b>Infor</b> n 5	nation Quality					
LISREL E	STIMATES (	MAXIMUM LI	KELIHOOD)					
infoq1 = 0 (1	).809*infoq, E 0.0586) 13.798	rrorvar.= 0.327 (0.042) 7.734	, R² = 0.667 3)					
infoa2 = 0	).854*infoa. E	rrorvar.= 0.272	$R^2 = 0.728$					
(	0.0572)	(0.030	7)					
	14.923	8.860						
infoa3 = 0	835tinfoa F	rrorvar = 0.302	R2 = () 608					
	0.0578)	(0.033	9)					
Ì	14.456	8.914	-					

infoq	4 = 0.90 <b>6*</b> i	infoq, Errorvar.	= 0.179 , R <sup>2</sup>	= 0.823			
	(0.0551	)	(0.0269)				
	16.452		6.545				
infoc	15 = 0.657*i	infoq, Errorvar.	= 0.570 , R <sup>2</sup>	= 0.431			
	(0.0639	))	(0.0573)				
	10.280	, )	9.957				
infoc	<b>16 = 0.823*</b>	infoq, Errorvar.	= 0.311 , R <sup>2</sup>	= 0.685			
	(0.0580	))	(0.0371)				
	14.182	•	8.387				
		GOOD	NESS OF	FIT STAT	ISTICS		
χ²	df	p-value	GFI	AGFI	NFI	CFI	IFI
7 677	9	0 567	0.987	0.971	0.991	1.000	1 002

	Dt		11 P - 1	. <b>.</b>			
I. EASYI	Buying the product from this web site was easy to do.						
2. EASY2	Learning how	v to purchase the	product from the	his Web site was easy fo	or me.		
3. EASY3	It was easy fo	or me to be in cor	ntrol of the purc	hasing transaction on t	nis Web site.		
4. EASY4	This company	y's Web site mad	le it easy for me	to purchase the produce	zt.		
5. EASY5	It was easy fo	or me to do what	I wanted to do	on this Web site.			
	RELIA	BILITY ANA	LYSIS-SCA	LE (ALPHA)			
		Mean	Std	Dev	Cases		
1. EASY1		6.3959	1.0280		197		
2. EASY2	6.4112		.7616		1 <b>97</b>		
3. EASY3		6.2030	1.0783		197		
4. EASY4		6.2893	.9807		197		
5. EASY5		6.1980	1.	0382	197		
Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N		
SCALE:	31.4975	16.5166	4.0641	5	6.2995		
		Reliabilit	v Coefficien	ts			
N of Cases = $197$		Nof	N of Items = 5		= 8838		

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1. FRUST1 2. FRUST2	Logging or For this pu bought from	n to the Internet v rchase, I experies m.	when I bought th nced no problen	is product was frustration with connecting to the	ng for me. Web site that
	RELIA	BILITY ANA	ALYSIS-SCA	LE (ALPHA)	
		Mean	St	d Dev	Cases
1. FRUST1		1.8636	1.	1.3354	
2. FRUST2		1.6364	.9660		198
Statistics for SCALE:	<b>Mean</b> 3.5000	<b>Variance</b> 3.9061	<b>Std Dev</b> 1.9764	N of Variables 2	<b>Mean/N</b> 1.75
		Reliabili	ity Coefficier	nts	
N of Cases	= 198	N o	f Items = $2$	Alpha	= .6091
	CON	FIRMATOR	Y FACTOR	ANALYSIS	
Confirmatory F the scale contain	actor Analys ined less than	is for <b>Pre-transs</b> three variables.	action Frustrat	ion could not be calcula	ited because

# Table 39: Pre-Transaction Frustration Scale

Table 40: Perceived Value Scale - Convenience

1.VALUCONV1	Compared for inform	I to getting the in ation about the p	formation whil product on this	e shopping at a retail s Web site took me less	tore, searching time - more	
2.VALUCONV2	time. Overall, c parking, i product fi	onsidering all the n-store searching rom this Web site	e time it takes to , waiting, check e rather than fro	o shop in a retail store, k-out time, etc., purcha m a retail store took m	, such as driving, Ising this ne less time -	
3.VALUCONV3	Compared Web site	z. 1 to shopping in a to be more enjoy	a retail store, I f able - less enjo	found shopping for this vable.	s product on this	
4.VALUCONV4	Compared was more	to shopping at a convenient - less	retail store, bu convenient.	lying the product from	this Web site	
5.VALUCONV5	Compared	to shopping in a	a retail store, I	found purchasing the p	roduct from this	
6.VALUCONV6	Web site Compared this Web	to be easier - mon 1 to shopping in a site gave me mon	re difficult. a retail store, I f re freedom - les	found that buying this s freedom over the sho	product from opping	
7.VALUCONV7	7.VALUCONV7 From this purchasing experience, compared to shopping in a retail store, I found that to shop from this Web site takes less effort - more effort.					
RELIABILITY ANALYSIS-SCALE (ALPHA)						
		Mean	Std	Dev	Cases	
1. VALUCONV	1	5.9010		456	192	
2. VALUCONV	2	6.5208	1.0	024	192	
3. VALUCONV	3	5.7708	1.5	073	196	
4. VALUCONV	4	6.4740	.9:	596	192	
5. VALUCONV	5	6.0417	1.2	815	196	
6. VALUCONV	6	5.8490	1.3	354	192	
7. VALUCONV	7	6.1406	1.1	377	192	
Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N	
SCALE:	42.6976	45.3847	6.7368	7	6.0997	
		Reliability	Coefficient	3		
N of Cases =	192	N of I	tems = $7$	Alpha	= .8837	
CONFIRMATORY FACTOR ANALYSIS						
Confirmatory Factor Analysis - Perceived Value - Convenience Number of Iterations = 7						
LISREL ESTIMATES (MAXIMUM LIKELIHOOD)						
LISKEL EST	MATES (M	AXIMUM LIKE	LIHOOD)			
LiSKEL EST $valueonv1 = 0$	MATES (M	AXIMUM LIKE	$LIHOOD)$ $495 \cdot R^2 = 0.5$	12		
valuconv1 = 0	(MATES (M ).720*valuco ).0641)	AXIMUM LIKE nv, Errorvar.= 0. (0	ELIHOOD) 495 , R <sup>2</sup> = 0.5 .0523)	12		
valuconvl = 0 (0	(MATES (M ).720*valuco ).0641) 1.242	AXIMUM LIKE nv, Errorvar.= 0. (0 9	ELIHOOD) 495 , R <sup>2</sup> = 0.5 .0523) .468	12		

valuo	:onv2 = 0.699	9*valuconv, Ei	torvar.= 0.51	$6, R^2 = 0.48$	36		
	(0.06	38)	(	0.0509)			
	10.9	55		10.153			
value	:onv3 = 0.668	3*valuconv, Ei	torvar.= 0.55	57, R <sup>2</sup> = 0.44	14		
	(0.064	48)	(0.05	61)			
	10.30	)2	9.92	7			
valu	conv4 = 0.84	l*valuconv, E	rrorvar.= 0.2	95, $R^2 = 0.76$	06		
	(0.0	595)	(0.0	418)			
	14.1	40	7.0	45			
valuo	conv5 = 0.801	7*valuconv, Ei	rrorvar.= 0.34	$18 , R^2 = 0.65$	52		
	(0.060	01)	(0.04	30)			
	13.42	28	8.08	4			
value	conv6 = 0.57	5*valuconv. E	rrorvar.= 0.6	$73 \cdot R^2 = 0.32$	29		
	(0.67)	3)	(0.0	656)			
	8.540	Ď	10.2	251			
value	conv7 = 0.824	4*valuconv, E	rrorvar.= 0.32	$R^2 = 0.67$	79		
	(0.05	95)	(0.0	410)			
	13.84	44	7.8	27			
		<u> </u>					
		GOOD	NESS OF	FIT STAT	ISTICS		
$\chi^2$	df	p-value	GFI	AGFI	NFI	CFI	IFI
18.902	14	0.169	0.974	0.949	0.974	0.993	0.993
					L		

#### Table 41: Perceived Value Scale - Economic

1. VALUECON1	For this purchase, the benefits I received by purchasing from this Web site were greater than the costs.
2. VALUECON2	Compared to buying this product in a retail store, the price I paid for the product I bought from this Web site was less - more.
3. VALUECON3	Compared to what I paid for this product, it was worth more - worth less.
4. VALUECON4	Compared to shopping in a retail store, I found comparing prices for this product on this Web site to be easier - more difficult.
5. VALUECON5	For this particular purchase, the benefits I received from the product were greater than - less than all of the costs involved in purchasing it.
	RELIABILITY ANALYSIS-SCALE (ALPHA)

	Mean	Std Dev	Cases
1. VALUECON1	5.7500	1.4228	196
2. VALUECON2	5.3622	1.5179	196
3. VALUECON3	5.3112	1.3550	196
4. VALUECON4	5.7653	1.4836	196
5. VALUECON5	5.5102	1.3793	196

Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N
SCALE:	27.6990	26.6217	5.1596	5	5.5398

	Reliability Coefficients
N of Cases = $196$	N of Items $= 5$

Alpha = .7679

#### **CONFIRMATORY FACTOR ANALYSIS**

Confirmatory Factor Analysis – **Value - Economic** Number of Iterations = 9

#### LISREL ESTIMATES (MAXIMUM LIKELIHOOD)

valuecon 1 =  $0.541^{\circ}$  valuecon, Errorvar.= 0.718, R<sup>2</sup> = 0.290(0.0733) (0.0661) 7.380 10.867 valuecon 2 =  $0.490^{\circ}$  valuecon, Errorvar.= 0.766, R<sup>2</sup> = 0.238

(0.0747) (0.0775) 6.560 9.886

valuecon3= 0.856\*valuecon, Errorvar.= 0.267, R<sup>2</sup> = 0.733(0.0725) (0.0826) 11.814 3.234

valuecon4= 0.503\*valuecon, Errorvar.= 0.753, R<sup>2</sup> = 0.252(0.0745) (0.0767) 6.757 9.814

(0.0717) 9.097			(0.0600) 9.722				
		GOOD	NESS OF	FIT STAT	ISTICS		
$\chi^2$	df	p-value	GFI	AGFI	NFI	CFI	IFI
		0.440	0.000	0.071	0.001	1 000	1 000

# Table 42: Expectancy Congruency Scale

<ol> <li>EXCON1</li> <li>EXCON2</li> <li>EXCON3</li> <li>EXCON4</li> <li>EXCON5</li> <li>EXCON6</li> </ol>	EXCON1The product I received was better – worse than I expected.EXCON2The ordering process to purchase this product was better – worse than I expected.EXCON3The time I saved shopping from this Web site was better – worse than I expected.EXCON4The price I paid was better – worse than I expected.EXCON5The convenience of shopping from this Web site was better – worse than I expected.EXCON6Overall, this purchase experience was better – worse than I expected.											
	RELIABILITY ANALYSIS-SCALE (ALPHA)											
		Mean	Std	Dev	Cases							
1. EXCON1		4.9192	1.2	639	200							
2. EXCON2		5.5505	1.3	723	200							
3. EXCON3		5.8535	1.3	457	200							
4. EXCON4		5.4040	1.3	809	200							
5. EXCON5		5.9899	1.1	620	200							
6. EXCON6		5.7980	1.3	629	200							
Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N							
SCALE:	33.5152	39.4795	6.2833	66	5.5859							
		Reliabili	ty Coefficient	S								
N of Cases	= 198	N of	f Items $= 6$	Alpha	= .8837							
CONFIRMATORY FACTOR ANALYSIS												
Confirmato Number of LISREL ES	ry Factor Ana Iterations = 6 STIMATES (N	lysis - <b>Expectar</b> /IAXIMUM LIF	acy Congruency KELIHOOD)									

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exc	nn6 = 0.030*e	voor Errory	r = 0.118 P	2 = 0 882		
	13.356		(0.0313)			
exce	on5 = 0.798*e	xcon, Errorva	ur.=0.364 , R	$x^2 = 0.637$		
	7.705		9.707			
	(0.0679)		(0.0748)			
exce	on4 = 0.523*e	xcon, Errorva	ur.=0.726 , R	$x^2 = 0.274$		
	12.842		11.8/3			
	(0.0605)		(0.0334)			
exce	on3 = 0.777*e	xcon, Errorva	ır.=0.397 , R	<sup>2</sup> = 0.603		
	14.640		7.552			
	(0.0582)		(0.0364)			
exco	on2 = 0.852*e	xcon, Errorva	ur.=0.275 , R	<sup>2</sup> = 0.725		
	8.288	_	9.049			
	(0.0672)		(0.0715)			

# Table 43: Dependent Variables - Satisfaction and Future Web Site Shopping Scales

1. SAT1 2. SAT2	How do you feel about your ov very happy - very unhappy Considering everything, the pr how satisfied are you with you very satisfied - very dissatisfie	verall Internet shopping expe oduct you bought and the pu r last purchasing experience? d	rience? rchasing experience, ?
1. FUTWEB1	If I had to do it all over, I wou	ld shop on the same Web site	e again.
	When huving the same type of	nroduct. I will continue to s	hop from this Web site
2. FUTWEB2	the future.	product, i will contaile to a	
2. FUTWEB2	RELIABILITY ANAL	YSIS-SCALE (ALPH	A)
2. FUTWEB2	RELIABILITY ANAL Mean	YSIS-SCALE (ALPHA	A) Cases
<ol> <li>FUTWEB2</li> <li>1. SAT1</li> </ol>	RELIABILITY ANAL Mean 7.8500	YSIS-SCALE (ALPH) Std Dev 1.6281	A) <u>Cases</u> 200

SCALE:	15.85	5 8.9422	<u>2.99</u>	04	01 variadies	s M. 7.	ean/N .9250
N of Ca	ses = 195	Kel	N of Item	$\frac{\text{Defilicients}}{1s = 2}$	<u>s</u>	lpha = .77	33
	RE	LIABILITY	ANALYS	SIS-SCAI	LE (ALPHA	)	
		Mean		Std	Dev	Cas	ies
1. FUTWEI	31	8.1218	ł	1.3	974	20	1
2. FUTWE	32	7.8950	)	1.7	113	20	0
Statistics for SCALE:	or Me 16.0	<b>an Varia</b> 191 8.23	<b>nce S</b> 18 2	<b>td Dev</b> 2.8691	N of Varia 2	ables N	<b>1ean/N</b> 8.0010
<u> </u>		Re	liability Co	oefficients	;		
N of C	ases = 200		N of Iten	ns = 2	A	lpha = .81	19
		CONFIRMA	TORY FA	ACTOR A	NALYSIS		
Confir Numbe	matory Facto er of Iteration	or Analysis – De Si ns = 2	ependent Vi ite Shopping	ariables: Sa g	tisfaction and	Future Wel	D
LISRE	L ESTIMA	TES (MAXIMU	M LIKELI	HOOD)			
satl =	0.766*sat. E	rrorvar.= 0.414	$R^2 = 0.58$	6			
	(0.0628)	(0.051	6)	-			
	12.201	8.027	,				
sat2 =	0.823*sat, E	Errorvar.= 0.323	, R <sup>2</sup> = 0.67	7			
(	(0.614) 13 396	(0.048 6 725	0) 7				
		0.721					
futweb	0 = 0.747 * f	utweb, Errorvar	= 0.443, R	<b>₹</b> <sup>2</sup> = 0.557			
	11.930	l	<b>8.596</b>				
£		Sutural Eman		D2 - 0 971			
Intwo	0.934* (0.0575)	)	(0.0431)	n - v.o/l			
l	16.234		2.983				
		GOODN	ESS OF F	TIT STAT	ISTICS		
χ <sup>2</sup>	df	p-value	GFI	AGFI	NFI	CFI	IFI
0 00008	1	0.920	1.00	1.00	1 100	1 000	

2. COMP2	Because of thi	is shopping expe	erience with this	s Web site, I have a fav	orable -
2 COMD2	unfavorable ir	nage of this con	npany. Sito mujimaga	of this company is hot	
A COMPA	The company	I hought this wet	oduct from see	of units company is been	ter • worse.
	The company	i bought uns pr	oduct from seen	ns to be trustworthy.	
	RELIAB	ILITY ANA	LYSIS-SCA	LE (ALPHA)	
		Mean	Std	l Dev	Cases
1. COMP1		6.3089	.8	608	191
2. COMP2		6.2513	1.2	2310	191
3. <b>COMP3</b>		5.7016	1.3	3992	191
4. COMP4		6.2304	1.0	0153	191
Statistics for	Mean	Variance	Std Dev	N of Variables	Mean/N
SCALE:	24.4663	14.1981	3.7680	4	6.1166
		Reliabilit	y Coefficien	ts	
N of Case	s = 191 CONF	Reliabilit N of	y Coefficien Items = 4 (FACTOR )	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o	cory Factor Analy f Iterations = 5	Reliabilit N of IRMATORY ysis – Company	y Coefficien Items = 4 ( FACTOR , / Image	ts Alpha = ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E	cony Factor Analy f Iterations = 5	Reliabilit N of IRMATORY ysis – Company AXIMUM LIK	y Coefficien Items = 4 ( FACTOR / / Image ELIHOOD)	ts Aipha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = 0	conv Factor Analy f Iterations = 5 STIMATES (M 0.606*compimag	Reliabilit N of IRMATORY ysis – Company AXIMUM LIK	y Coefficien Items = 4 (FACTOR / Image ELIHOOD) 33 , R <sup>2</sup> = 0.367	ts Alpha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = (	CONF cory Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674)	Reliabilit N of IRMATORY ysis – Company AXIMUM LIK g, Errorvar.= 0.6 (0.0	y Coefficien Items = 4 (FACTOR / / Image ELIHOOD) 33 , R <sup>2</sup> = 0.367 0684)	ts Alpha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = (	cony Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674) 8.990	Reliabilit N of IRMATORY ysis – Company (AXIMUM LIK) g, Errorvar.= 0.6 (0.0 9.2	y Coefficien Items = 4 (FACTOR / Image ELIHOOD) 33 , R <sup>2</sup> = 0.367 (684) 255	ts Alpha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = (	CONF CONF Fory Factor Analy f Iterations = 5 CSTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag	Reliabilit N of IRMATORY ysis – Company (AXIMUM LIK) g, Errorvar.= 0.6 (0.0 9.2 g, Errorvar.= 0.1	y Coefficien Items = 4 (FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367 (684) 255 79, R <sup>2</sup> = 0.821	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( ((	CONF cory Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag 0.0589)	Reliabilit N of IRMATORY ysis – Company (AXIMUM LIK) g, Errorvar.= 0.6 (0.0 9.2 g, Errorvar.= 0.1 (0.0	y Coefficien Items = 4 / FACTOR / / Image ELIHOOD) ///////////////////////////////////	ts Alpha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = ( ((	CONF CONF Tory Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag 0.0589) 15.392	Reliabilit N of IRMATORY ysis – Company (AXIMUM LIK) g, Errorvar.= 0.6 (0.0 9.2 g, Errorvar.= 0.1 (0.0 3.9	y Coefficien Items = 4 (FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367 (684) 255 79, R <sup>2</sup> = 0.821 (449) 989	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = (	CONF CONF Cory Factor Analy f Iterations = 5 CONF Cory Factor Analy f Iterations = 5 CONF	Reliabilit N of IRMATORY ysis – Company AXIMUM LIK g, Errorvar.= 0.6 (0.0 9.2 g, Errorvar.= 0.1 (0.0 3.9 g, Errorvar.= 0.3	y Coefficien Items = 4 (FACTOR / FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367 (684) 255 79, R <sup>2</sup> = 0.821 (949) 989 34, R <sup>2</sup> = 0.666	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = ( ((	CONF CONF	Reliabilit           N of           IRMATORY           ysis - Company           AXIMUM LIKI           g, Errorvar.= 0.6 (0.0 9.2           g, Errorvar.= 0.1 (0.0 3.2           g, Errorvar.= 0.1 (0.0 3.2           g, Errorvar.= 0.3 (0.0	y Coefficien Items = 4 (FACTOR / FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367 (684) 255 79, R <sup>2</sup> = 0.821 (449) 989 (34, R <sup>2</sup> = 0.666 (481)	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = ( ((	CONF cory Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag 0.0589) 15.392 0.816*compimag 0.0615) 13.268	Reliabilit           N of           IRMATORY           ysis - Company           (AXIMUM LIK)           g, Errorvar.= 0.6           (0.0           9.2           g, Errorvar.= 0.1           (0.0           3.1           (0.0           3.1           (0.0           3.1           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0           (0.0	y Coefficien Items = 4 (FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367) (684) (255) 79, R <sup>2</sup> = 0.821) (449) (989) (34, R <sup>2</sup> = 0.666) (481) (953)	ts Alpha ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = ( (( comp3 = (	CONF CONF CONF CONF Cory Factor Analy f Iterations = 5 CSTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag 0.0589) 15.392 0.816*compimag 0.0615) 13.268 0.723*compimag	Reliabilit           N of           IRMATORY           ysis - Company           (AXIMUM LIK)           g, Errorvar.= 0.6           (0.0           9.2           g, Errorvar.= 0.1           (0.0           3.9           g, Errorvar.= 0.3           (0.0           3.9           g, Errorvar.= 0.3           (0.0           6.9	y Coefficien Items = 4 (FACTOR / FACTOR / Image ELIHOOD) (33, R <sup>2</sup> = 0.367 (684) 255 79, R <sup>2</sup> = 0.821 (449) 989 (34, R <sup>2</sup> = 0.666 (481) 953 (77, R <sup>2</sup> = 0.523)	ts Alpha : ANALYSIS	= .8433
N of Case Confirmat Number o LISREL E comp1 = ( (( comp2 = ( (( comp3 = ( ((	CONF cory Factor Analy f Iterations = 5 ESTIMATES (M 0.606*compimag 0.0674) 8.990 0.906*compimag 0.0589) 15.392 0.816*compimag 0.0615) 13.268 0.723*compimag 0.0641)	Reliabilit           N of           IRMATORY           ysis - Company           (AXIMUM LIK)           g, Errorvar.= 0.6           (0.0           9.2           g, Errorvar.= 0.1           (0.0           3.1           (0.0           3.2           g, Errorvar.= 0.3           (0.0           6.1           g, Errorvar.= 0.4           (0.0	y Coefficien Items = 4 (FACTOR $x^{2}$ ELIHOOD) (33, R <sup>2</sup> = 0.367) (684) 255 79, R <sup>2</sup> = 0.821) (449) 989 (34, R <sup>2</sup> = 0.666) (481) 953 (77, R <sup>2</sup> = 0.523) (561)	ts Alpha : ANALYSIS	= .8433

# Table 44: Company Image Scale

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		GOOD	NESS OF	FIT STAT	ISTICS						
$\chi^2$	df	p-value	GFI	AGFI	NFI	CFI	IFI				
3.511	2	0.173	0.991	0.956	0.990	0.996	0.996				
	CONFIRMATORY FACTOR ANALYSIS										
Confi Shop Numi	irmatory Facto ping, Compa ber of Iteratio	or Analysis –       ny <b>[mage</b>   ns = 9	Dependent V	ariables: Sat	isfaction, Fu	ture Web Sit	e				
LISI	REL ESTIMA	TES (MAXIN	IUM LIKEL	.IHOOD)							
satl	= 0.681*sat, 1	Errorvar.= 0.5	$37, R^2 = 0.4$	163							
	(0.0634)	(0.	0567)								
	10.738	9.4	467								
sat2	= 0.919*sat,	Errorvar.= 0.1	$59, R^2 = 0.8$	342							
	(0.0596)	(0.	0500)								
	15.422	3.	173								
com	pl = 0.616*c	ompimag, Erro	orvar.= 0.617	$R^2 = 0.381$							
	(0.0660)		(0.06	57)							
	9.333		9.38	34							
com	p2 = 0.919*c	ompimag, Err	orvar.= 0.155	$R^2 = 0.845$							
	. (0.0556)		(0.03	06)							
	16.528		5.06	59							
com	p3 = 0.794*c	ompimag, Err	orvar.= 0.370	$R^2 = 0.630$							
	(0.0602)		(0.04	32)							
	13.187		8.50	53							
com	104 = 0.720*c	ompimag, Err	orvar.= 0.483	$R^2 = 0.518$							
	(0.0631)	• •	(0.05	39)							
	11.406		8.9	52							
futw	vebl = 0.829*	futweb, Error	var.= 0.302	$R^2 = 0.695$							
	(0.0601	l)	(0.0451	)							
	13.803	5	6.702								
futw	veb2 = 0.826*	futweb, Error	var.= 0.317	$R^2 = 0.683$							
	(0.0596	5)	(0.0415	)							
	13.863	5	7.646								
		GOOD	NESS OF	FIT STAT	ISTICS						
$\chi^2$	df	p-value	GFI	AGFI	NFI	CFI	IFI				
15.566	12	0.212	0.981	0.944	0.986	0.997	0.997				
	1										

#### APPENDIX 11: LISREL Output of Model Testing

```
Measurement Model - FULL MODEL
Number of Iterations = 15
LISREL ESTIMATES (MAXIMUM LIKELIHOOD)
futweb = 1.001 * FUTWEB_{11} R^2 = 1.000
        (0.0968)
         10.336
sat = 0.887*SAT, Errorvar.= 0.227, R<sup>2</sup> = 0.776
    (0.0956)
     9.278
compimag = 0.917*COMPIMAG, Errorvar.= 0.157, R<sup>2</sup> = 0.843
            (0.0984)
             9.326
infoq = 0.956*INFOQ, Errorvar.= 0.0860, R<sup>2</sup> = 0.914
      (0.0523)
       18.280
easy = 0.938*EASY, Errorvar.= 0.117, R<sup>2</sup> = 0.883
      (0.0531)
       17.654
valucony = 0.940*VALUCONV, Errorvar.= 0.116, R<sup>2</sup> = 0.884
          (0.0532)
           17.680
valuecon = 0.869*VALUECON, Errorvar.= 0.232, R<sup>2</sup> = 0.765
          (0.0568)
           15.309
excon = 0.940*EXCON, Errorvar.= 0.116, R<sup>2</sup> = 0.884
        (0.0532)
        17.680
Error Covariance for compimag and sat = 0.0938
                                        (0.0501)
                                         1.870
FUTWEB = 0.531*SAT + 0.430*COMPIMAG, Errorvar.= 0.151, R<sup>2</sup> = 0.849
            (0.117)
                         (0.120)
                          3.593
            4.550
SAT = 0.0356*INFOQ + 0.363*EASY + 0.174*VALUCONV + 0.428*VALUECON - 0.0570*EXCON,
      (0.0905)
                                                              (0.137)
                                                                                   (0.0975)
                        (0.123)
                                       (0.0952)
       0.393
                         2.945
                                        1.831
                                                              3.117
                                                                                    -0.585
Errorvar.= 0.302, R<sup>2</sup> = 0.698
COMPIMAG = -0.0327*INFOQ + 0.667*EASY - 0.00248*VALUCONV + 0.316*VALUECON,
                                  (0.134)
                                                  (0.0865)
                                                                          (0.100)
                 (0.0833)
                 -0.393
                                   4.977
                                                  -0.0286
                                                                           3.152
Errorvar.= 0.232, R<sup>2</sup> = 0.768
Error Covariance for COMPIMAG and SAT = 0.123
                                             (0.0557)
                                              2.213
```

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#### **GOODNESS OF FIT STATISTICS**

CHI-SQUARE WITH 5 DEGREES OF FREEDOM = 29.910 (P = 0.0000154) ESTIMATED NON-CENTRALITY PARAMETER (NCP) = 24.910

MINIMUM FIT FUNCTION VALUE = 0.150 POPULATION DISCREPANCY FUNCTION VALUE (F0) = 0.125 ROOT MEAN SQUARE ERROR OF APPROXIMATION (RMSEA) = 0.158 P-VALUE FOR TEST OF CLOSE FIT (RMSEA < 0.05) = 0.000585

EXPECTED CROSS-VALIDATION INDEX (ECVI) = 0.460 ECVI FOR SATURATED MODEL = 0.360 ECVI FOR INDEPENDENCE MODEL = 5.704

CHI-SQUARE FOR INDEPENDENCE MODEL WITH 28 DEGREES OF FREEDOM = 1124.774 INDEPENDENCE AIC = 1140.774 MODEL AIC = 91.910 SATURATED AIC = 72.000 INDEPENDENCE CAIC = 1175.201 MODEL CAIC = 225.312 SATURATED CAIC = 226.919

> ROOT MEAN SQUARE RESIDUAL (RMR) = 0.0274 STANDARDIZED RMR = 0.0274 GOODNESS OF FIT INDEX (GFI) = 0.964 ADJUSTED GOODNESS OF FIT INDEX (AGFI) = 0.743 PARSIMONY GOODNESS OF FIT INDEX (PGFI) = 0.134

NORMED FIT INDEX (NFI) = 0.973 NON-NORMED FIT INDEX (NNFI) = 0.873 PARSIMONY NORMED FIT INDEX (PNFI) = 0.174 COMPARATIVE FIT INDEX (CFI) = 0.977 INCREMENTAL FIT INDEX (IFI) = 0.978 RELATIVE FIT INDEX (RFI) = 0.851

CRITICAL N (CN) = 101.894 CONFIDENCE LIMITS COULD NOT BE COMPUTED DUE TO TOO SMALL P-VALUE FOR CHI-SQUARE

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# **APPENDIX 12: ANOVA Output of Hypotheses Testing**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.419	1	.419	.169	.682
Within Groups	337.808	136	2.484		
Total	338.226	137	_		

# SATISFACTION and INTEREST IN SHOPPING (H1a)

# SATISFACTION and TIME CONSTANTS (H<sub>8b</sub>)

	Sum of Squares	df	Mean Square	F	Sig.
Between	15.816	2	7.908	3.640	.028
Groups	420.200	109	2 1 7 2		
Groups	430.209	198	2.173		
Total	446.025	200			

# **Multiple Comparisons**

### **SATISFACTION and TIME CONSTANTS - 3 GROUPS**

			Mean			95%	
			Difference	Std. Error	Sig.	Confidence	
	-		( <b>I-J</b> )		_	Interval	
	(I) TIME	(J) TIME				Lower Bound	Upper Bound
Tukey HSD	1	2	.7629*	.3153	.041	2.403E-02	1.5018
		3	.2731	.2994	.632	4285	.9748
	2	1	7629*	.3153	.041	-1.5018	-2.4034E-02
		3	4898	.2307	.085	-1.0304	5.088E-02
	3	1	2731	.2994	.632	9748	.4285
		2	.4898	.2307	.085	-5.0882E-02	1.0304
Bonferroni	1	2	.7629*	.3153	.049	1.716E-03	1.5241
		3	.2731	.2994	1.000	4497	.9960
	2	1	7629*	.3153	.049	-1.5241	-1.7162E-03
		3	4898	.2307	.105	-1.0468	6.721E-02
	3	1	2731	.2994	1.000	9960	.4497
		2	.4898	.2307	.105	-6.7213E-02	1.0468

\* The mean difference is significant at the .05 level.

# Satisfaction and Selected Demographic Variables (H<sub>3c</sub>)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.694	1	2.694	1.198	.275
Within Groups	440.681	196	2.248		
Total	443.375	197			

ø

# **SATISFACTION and GENDER**

# **SATISFACTION and AGE**

	Sum of Squares	df	Mean Square	F	Sig.
Between	4.970	3	1.657	.738	.530
Groups					
Within	439.905	196	2.244		
Groups					
Total	444.875	199			

# SATISFACTION and MARITAL STATUS

	Sum of Squares	df	Mean Square	F	Sig.
Between	1.557	1	1.557	.720	.397
Groups	1				l
Within	404.310	187	2.162		
Groups					
Total	405.868	188			

# SATISFACTION and INCOME

	Sum of Squares	df	Mean Square	F	Sig.
Between	1.235	2	.618	.271	.763
Groups					
Within	441.447	194	2.276		
Groups					
Total	442.683	196			

	Sum of Squares	df	Mean Square	F	Sig.
Between	9.314E-	1	9.314E-	.041	.840
Groups	02		02		
Within	445.270	196	2.272		
Groups					
Total	445.364	197			

SATISFACTION and INTERNET USER TYPE (Had)

# SATISFACTION and INTERNET SHOPPER TYPE (Haf)

	Sum of	df	Mean	F	Sig.
	Squares		Square		
Between	29.141	1	29.141	13.841	.000
Groups					
Within	416.879	198	2.105		
Groups					
Total	446.020	199			

# SATISFACTION and EXPECTATIONS (H8g)

	Sum of	df	Mean	F	Sig.
	Squares		Square		-
Between	59.647	2	29.823	15.283	.000
Groups					
Within	386.378	198	1.951		
Groups					
Total	446.025	200			

# SATISFACTION and PERCEIVED RISKS (Hab)

	Sum of	df	Mean	F	Sig.
	Squares		Square		_
Between	4.880	2	2.440	1.095	.337
Groups					
Within	441.145	198	2.228		
Groups					
Total	446.025	200			

Win Street				
Amazon.Com	CDs	0	college	Administration Coordinator
Art.com	a poster	female	some grad	Administrative / Clerical
www. Beckman group.com	power pills	male	some college	Communication tech.
Pointclick	food	male	college	clerk
Receiver	800.com	female	college	College Instructor
petstore.com	a cat bed	female	profess.	law student
Columbia House	Video Tape	male	profess.	Semi Retired/ Consultant "Clinical Services Consilience
a n.y ticket agency can't remember site	attempted to buy concert tickets	male	high school	developer of real estate
No	na	female	profess.	m
http://www. Sportsmans guide.com	Folding Picnic Table for 4	female	some college	housewife
Sportsman guide.com	coat rack	female	some college	bookkeeper
toytime.com	Software Toys	female	college	Mortgage banking
Amazon.com	AudioBook	male	some college	Printer
Ebay	Violin	male	grad	Manager
pro bass shops.com	wheel locks	male	college	software manager
Ebay	FIFA 2000 (PC Game)	male	grad	Information Technology
www. ubid.com	scanner	female	some grad	Graduate Student
www. furniture.com	ottoman	male	college	MIS
Computergate. com	triple HD fans	male	some college	Corporate Security
Haynes	hose	female	college	retired
Stagenscreen.c	Book about Gene Kelly	female	college	Educator
http://www. Bmgmusic service.com	Men at Work CD	female	high school	freelance writer
Total E	audio CD's	female	college	Sales & Marketing
Eshoesale. Com	dress shoes	female	some college	Cumputer Tech
gear.com	vest	male	college	computer tech
www. buy.com	blank floppy disks	male	grad	Technology Coordinator
personal creations	shirt	female	grad	stay at home mom

**APPENDIX 13: Products Purchased by Respondents** 

petsmart.com	cat food	male	trade school	disabled
columbia house	compact discs	female	college	accpontant
www. marinmineral.c om	mineral specimens for my collection	male	college	Research Technician
jjill.com	clothing	female	some college	retired
Childrens place.com	Baby Clothing	female	college	Journalist
Goodmans Sales and Service	Mixmaster eggbeaters	male	some college	Programmer/ Analyst
http://www. lvd.com	Laserdiscs	male	some college	student
Family wonder	3 Videos	female	college	Housewife
buy.com	children's videos	male	grad	Computer Programmer
estyle.com	baby clothes	female	some grad	technician
ebay.com	Disney collectible pins	female	college	Medical Insurance Clerk
FTD FLORIST	flowers	female	high school	chiropractic assistant
Barnes & Noble	Toy Story II CD Rom	female	some college	Bookkeeper
B&N.com	CD's	female	some college	Homemaker
www. planetrx.com	Cosmetics	female	grad	Office Manager
egghead.com	cooling fan for cpu	male	some college	Plant Manager
Ross-Simons	jewelery and crystal	female	grad	Library Media Speciliast
http://www. memory- man.com	four 32Mb EDO 60ns 72 Pin Memory Chips	maie	grad	Senior Analyst
bigstar.com	videos	male	high school	Asst. Gen. Mgr.
Amazon.com	Book	male	some coilege	Retired
www. estherprice. com	Assorted Chocolates for a gift	female	grad	Manager Network Svcs
www. golfsmith. com	putter	male	doct	physician
ebay	Yanni CD	female	some college	bank manager
amazon.com	books	male	some grad	Retired Training Officer State Govt
Bigstar.com	Movies on DVD	male	some college	Business Analyst

Concerned				
JC Penney.com	Comforter and shams	female	high school	office manager
www. southwest. com	air transportation	male	some grad	retired
kbkids.com	talk'n alphabet electronic laptop computer	female	college	Homemaker
www. toysrus.com	toys	female	some college	Secretary
www. superprod. com	commercial toaster	female	some college	cook/waitress
GAP	Pants	male	some college	Manager
apple	software	male	doct	artist
times square records	used mint condition promo copy 45 rpm records	female	college	collections analyst
http://www. bmgmusic service.com/ classical/ umbrella. jhtml	CDs	male	college	Software Engineer
www. domestic ations.com	batman bedding	female	grad	accountant
www. officesupplies. com	inkjet cartridges	male	some grad	Retired
Golfsmith	Emmett Kelly Jr. golf collectible	female	college	Homemaker
Gall's	Police Supplies	female	college	Insurance Underwriter
Dell.com	Computer	male	some college	Retail Management
www. iqvc.com	stretch pants	female	high school	Deputy Town Clerk
Barnes and Noble	books	0	grad	editor
www. quixtar.com	clothing	female	college	Network Engineer
www. ross-simons	neckiace	female	college	housewife/volunteer
Sony.com	laptop computer	female	some grad	Television producer
www. ebay.com	Parker Duofold pen	female	high school	Production Associate
Amazon.com	a book	male	grad	Sr. Systems Analyst
delphiglass. com	stained glass and accessory tools	female	some college	retired

Berring de MAR		III (1997)	210172	
Amazon.com	book	male	some college	telecommunications engineer
STAPLES. COM	REPLACEMENT DRUM FOR LASER PRINTER	male	profess.	CPA-SEMI RETIRED
www. toysrus.com	Remote control Barbie cars	male	college	Police Officer
www. ibeauty.com	Michael Jordan Cologne	female	high school	Dressmaker
Amazon.com	science fiction book	male	grad	Social Worker
http://www. ontrack.com/ powerdesk offer/special. asp	Upgrade to Power Desk 3 to PowerDesk 4 Pro	male	high school	Retired
egghead.com	computer hard drive	female	some college	МОМ
babycenter. com	misc. baby stuff	female	high school	desktop publisher
www. foreverybody. com	body lotion	female	profess.	RN
WWW. QVC.COM	SEVERAL NASCAR DIECASTS AND CARDS	male	college	MANAGEMENT
eBay	collectibles	male	some college	actor
www. qvc.com	Jeweiry (Bracelet)	female	0	Business Manager
Outpost.com	CD-RW Disks and cases	male	some college	Mr. Mom
dogtoys.com	dog toys	female	college	Analyst for sugar company
Newport News	shoes	female	some college	food service
http://www. hmint.com/ index.htm	Stethascope	male	college	RN
www. 1800contact. com	Disposable Contact lenses	male	college	Engineer
Priceline.com	airline tickets	male	college	0
MathWorks	MatLab	male	some grad	Systems Analyst
eBay	camera	male	some college	0
amazon.com	books	female	some grad	payroll clerk
Amazon.com	a book	female	some college	Domestic Engineer
1 month ago	computer product	female	college	horticulturist
Amazon.com	CD and book	female	some college	Financial Consultant

WPBSHD		0.000		
cw-usa.com	coffee	male	some college	Systems Administrator
www. egghead.com	internal Zip 250 ide drive (by Iomega)	male	grad	Information Professional
www. schlastic.com	Books	male	grad	Education
cheap flowers/ yahoo	flowers	female	some college	property marketing specialist
Amazon.com	Cordless Phone	female	some college	PC Help Desk Manager
www. fredericks. com	Bias-cut gown	female	some college	Sales Representative
www. hsn.com	This computer I am using	male	high school	Quality Manager
CDs	www.ccmusic.com	male	college	Broadcasting
Amazon.com	Goose Gossage's Autobiography	male	college	actor
amazon.com	sega dreamcast controller	male	college	financial analyst
www. ebay.com	japenese comic books	male	some grad	software engineer
Excalibur Films	Video Tape	male	high school	Self Employed
E-Bay	Ultrapro Card Pages	male	other	Student
www.bn.com	books	female	grad	teacher
petopia	feeder - never received it	female	some grad	Classified Ad-Visor
onehanes place	clothes	female	some college	Administrative Assistant
www. amazon.com	books	female	some grad	stay at home mom
Amazon.com	books for my classroom	female	grad	teacher
guthy-renker- store.com	proactiv facial cleanser	female	high school	Elementary Teacher's Assistant and Tutor
NESERUM. COM	dog equipment	female	college	health care
Arca Max	Computer Software	female	college	RN
www. petstore.com	Dog Toys	female	some college	Claims Representative
micronpc. com	computer	male	grad	engineering executive
Yahoo Auction	Microsoft Office Professional	female	college	Cost Accountant
QVC	stero/cd player	female	college	cashier/homemaker
www. tigerdirect. com	Computer Hardware Upgrade Products	male	grad	Senior Complex Information Analysts (Internet Developement)
Kregers	Motherboard & Memory	male	college	Manager
priceline.com	airline tickets	female	grad	piano teacher

www. mousedriver. com	2 golf shaped computer "mouse"	female	college	Retired Budget Officer
egghead	Kodak DC280 Digital Camera	male	grad	SE / RPh
KCflorist	flowers	female	high school	printing
christian books.com	Christian books	male	grad	Minister
reel.com	X-Files season 1 DVD set	male	some college	dispatcher
Amazon.com	Books	male	some college	Retired
www. usairways. com	air travel	male	college	Marketing Manager
Gap	Children's clothing	female	grad	Teacher
www. mobshop.com	DVD movie	female	college	none
Lexmark and IBM	Printer's cartriges	male	college	Maintenance Engineer
fragrance.net	perfume	female	some college	internet related
pcconnection.c om	scanner	male	trade school	Computer Technician
videoage.com	adult videos	male	some college	cust serv
Kaplan.com	book	female	college	Research Technician
Vermont Teddy Bear	Teddy Bear	male	some college	Perssman
gateway spotshop	0	male	some college	USAF
J C Penney	dress	female	some college	retired
Pasttimes	a cloak	female	some college	Office manager
netmarket. com	a Singer sewing machine	female	grad	Translator
www. ebay.com	Children's books	female	trade schooi	Production Associate
B&N.com	a book	0	grad	teacher
usairways	plane tickets	male	grad	cto
www. axiontech. com	a large assortment of computer hardware (video cards sound cards modems CD ROM drives floppy drives CPU heatsinks & fans etc.)	male	college	Physicist and student
Musicians Friend	Guitar/Amp stand	female	college	Delivery Personel
half.com	books	female	some	volunteer@food pantry & church
--	--	--------	-----------------	------------------------------------
x10.com	camera	male	some	Sales
more.com	health products	female	grad	software engineer
amazon	books	female	profess.	financial specialist
QVC	CAKE CUTTERS	female	high school	HOMEMAKER
www. half.com	books	female	some grad	Computer instructor
usmint	coins	male	grad	President/CEO VIP Investors Inc
Choice Hotels	Hotel Reservation	male	grad	Teacher
AITRAVELO CITY.COM	AIR LINE TICKET	female	some grad	LOAN CLERK
Eastwood	Automobile repair equipment	male	grad	Military
www. ebay.com	silver wire	female	some grad	0
amtrak.com	train tickets	female	college	Educator
http://www. lgg.com/	a 6-inch metal ruler marked in 100ths of an inch	female	some college	Artist
buy.com	ACT! 2000	maie	college	Marketing
Levenger. com	stationary	female	grad	consultant
ONEHANESP LACE. COM	CLOTHING	female	college	CONTROLLER
www.ChecksU nlimited. com	checks	female	college	Homemaker
sweater	isabella bird	female	some college	homemaker
http://www. Exam Essentials. com/	Novell Preporation exam	male	college	Network Administrator
1800flowers	flowers	female	some college	Administrative Asst.
e-bay	plants	female	some college	contracts admin
Drs. Foster & Smith	Dog care irems	female	college	0
amazon.com	CDs	male	college	Network Engineer
yahoo auctions	computer product	0	other	
www. pricescan. com	CD ROM Drive	female	some coilege	Computer Specialist

CATER COLORS		<u>Carlo and</u>		
www. Mercata.com	DVD player	male	college	Software Developer
http://www. reel.com/	Sirens" (VHS Video Cassette)	male	grad	computer programmer
www.bn.com	book "The Second Messiah"	male	some grad	Computer Specialist
Amazon.com	Books	male	some college	Military instructor
www. powells.com	out of print books	male	grad	0
amazon.com	book	female	college	database administrator
starwars.com	starwar figures various	male	college	Programmer Analyst
www.eggheads oftware. com	H.P. cdwriter	male	college	Accountant/C.P.A.
http://www. gospelcom. net/rzim/	Tapes	female	some college	Computer Specialist
www. amazon.com	a book.	female	grad	Systems Analyst
Victorias Secret.com	Lingerie	female	some college	Computer Systems Analyst
Priceline.com	food and personal hygene	female	some grad	Sr. Open Systems Engineer
JCPenney	clothes for daughter	female	some college	Computer Specilist
www. amazon.com	books	male	college	Project Manager
WWW COLUMBIAH OUSE. COM	VIDEOS	male	other	Student
www. tilia.com	food saver canisters	male	college	systems programmer
outpost.com	modem	female	grad	small business owner
Barnes& Noble.com	Frank Sinatra CD	female	some college	Homemaker
Pricewatch	Gateway Monitor	female	college	Secretary
Bike Leather	Ladies Wear, Leather Vest	female	doct	consultant
victorias secrets	panties	female	grad	office manager
www. dhccare.com	skin care products	female	high school	Library Technician
www. outpost.com	computer monitor	female	college	Project Manager - Internet tools
cdnow.com	Before and After Stonewall videotape	male	some college	Director of Non Profit

(Note: Spelling and grammar have not been corrected.)

www. Beck man group. com	power pills	Communication tech.	Internet shopping is just easier.
pet store. com	a cat bed	law student	I think it's much much better than going to the mall
Co- lum- bia House	Video Tape	Semi Retired/ Consultant "Clinical Services Consilience	I have been shopping on the InterNet for a number of years. As the number of providers increases and their skill with their web-sites improves I plan on doing as much of my regular shopping via the 'Net as I can.
a n.y ticket agency can't remem ber site	attempted to buy concert tickets	developer of real estate	i feel the internet will be a good vehicle for shopping as time goes by
http:// www. sports mans guide. com	Folding Picnic Table for 4	housewife	Am comfortable with shopping on the Internet. Fast easy and generally quick delivery of products.
toy time. com	Software Toys	Mortgage banking	Some of the purchases that I wanted to make seemed to be available according to the website but after I put them in the shopping cart It took two weeks of checking on status to finally find out that the items were sold out. By that time it was 2 days before christmas and too late to get the items anyplace else.
Ama- zon. com	Audio Book	Printer	Very pleasedbut advice to others is "Buyer Beware"
pro bass shops.c om	wheel locks	software manager	your survey was easy to use thanks for keeping it simple
www. ubid. com	scanner	Graduate Student	I thoroughly enjoy shopping over the internet and at times do shopping for others.
http:// www. bmg music service .com	Men at Work CD	freelance writer	I enjoy the convenience of Internet shopping.
gear. com	vest	computer tech	overall i have been very satisfied

# **APPENDIX 14: Comments from Respondents**

www. buy. com	blank floppy disks	Technology Coordinator	Only drawback to online shopping is when you need something same day or next day (shipping cost for next day)
per- sonal crea- tions	shirt	stay at home mom	although the last product I bought on the internet was from Personal Creations I do a great deal of shopping on ebay and my experience has bee overwhelmingly positive.
Chil- drens- place. com	Baby Clothing	Journalist	I like Internet shopping because it's convenient (I can shop at 3 a.m. if I want) and the variety of products is endless. I don't like Internet shopping because photos of products can be deceiving.
Family won- der	3 Videos	Housewife	Ist Time Buyer OfferPurchased 1 video "you received 2 free I only received 1 free. After several attempts to contact the company (e-mail was return) it's been a week and still haven't received a reply.
buy. com	children's videos	Computer Programmer	Only certain types of items are appropriate to buy over the internet. Clothes cars furniture or other things that must be tried on or tried out cannot be easily purchased over the internet unless I have already done research at a physical store. For items such as books videos music computer etc I can get the same information (or more) on the internet that I can get in a physical store. These types of items are great for buying on the internet.
ebay. com	Disney collectible pins	Medical Insurance Clerk	The last purchase I made was from a guy in Canada through ebay and I sent a money order in Feb. and to date I have not received the purchase. I have contacted him several times and the last correspondence he told me it was due to mail and customs which is untrue. I am really beside myself as I have been purchasing Disney Pins over the internet for the last couple of months and this is the first experience I have had where the seller on ebay did not comply with his obligations. If I do not receive the merchandise in the next week I am going to contact ebay to see what can be done.
FTD FLO- RIST	flowers	chiropractic assistant	The FTD salesperson notified me at my home via telephone that a higher than expected cost may incur for delivery due to the locatation I wanted the flowers sent so we temporarily cancelled the order then sent the order to another location to avoid the added delivery fee.
Barnes & Noble	Toy Story II CD Rom	Bookkeeper	I have been shopping over the internet for quite a while now and this week eas the first time that I had to cancel a credit card becuase my numbers had been stolen.
B&N. com	CD's	Homemaker	Great survey!!!
bigstar. com	videos	Asst. Gen. Mgr.	I can buy things that I can't buy locally.
times square records	used mint condition promo copy 45 rpm records	collections analyst	well worth time and peace of mind

www. esther- price. com	Assorted Chocolates for a gift	Manager Network Svcs	I think it is a great way to shop.
ama- zon. com	books	Retired Training Officer State Govt	Easy does it!
www. office- supplie s.com	inkjet cartridges	Retired	I logged on to the above site because they were offering an introductory \$50 off of a \$100 purchase as advevtised in the newspaper.
Barnes and Noble	books	editor	One of the books I purchased was exactly what I needed. One was OK and the third was completely useless. If I had seen it in person I would not have bought it.
www. quixtar .com	clothing	Netwo <b>rk</b> Engineer	Well thought out survey!
www. ross- simons	necklace	housewife/ volunteer	this took less time than I expected(15-25min. according to postcard) which was nice. However several of the questions seemed redundant. Also question #41 should give 0 as a choice becasue for this particular purchse I did not check other sites. Rather I had received an e-mail from the company informing me of some specials that they were offering.
Ama- zon. com	a book	Sr. Systems Analyst	I wish the internet was around 25 years ago
delphi glass. com	stained glass and accessory tools	retired	So far my shopping has been with only companies which are known as reputable and ones I have made purchases from in the traditional way before.
www. out- post. com	computer monitor	Project Manager - Internet tools	Bottom line the web has made shopping convenient
www. toys- rus. com	Remote control Barbie cars	Police Officer	I don't have an active credit card - I use checks to purchase products
www. for- every- body. com	body lotion	RN	I have one comment. I hoped for a comapny brochure regarding products but received nothingexcept the lotion that I purchased.
cw- usa. com	coffee	Systems Administrator	To have a positive experience you need to be careful and have some experience
sweat- er	isabella bird	Homemaker	as a person with multiple sclerosis net shoping saves my energy!!!
E-Bay	Ultrapro Card Pages	Student	Very repetitive questions.

	TODO		
www. qvc. com	Jewelry (Bracelet)	Business Manager	I was very weary about shopping on the internet at first because I had heard about bad experiences but as far as myself I have only had pleasant experiences and trust the site that I order from.
Out- post. com	CD-RW Disks and cases	Mr. Mom	Seach tools within the sites still leave a lot to be desired. Also speed between pages needs to be inproved.
Dog- toys. com	dog toys	Analyst for sugar company	Internet shopping is getting easier all the time. If I could be assured of security I'd shop online even more frequently!
cheap flo- wers/ yahoo	flowers	property marketing specialist	i wish i could find a book with all the web sites in it so i could go directly to what i was looking for
Ama- zon. com	Cordless Phone	PC Help Desk Manager	My last purchase was a gift which is why I did not answer the question regarding the product I received.
Exca- libur Films	Video Tape	Self Employed	I had been trying to find this movie for about 5 years. The site I finally found it on only had 2 left.
one- hanes- place	clothes	Administrative Assistant	I have gotten some very good deals thru the internet
guthy- renker- store com	proactiv facial cleanser	Elementary Teacher's Assistant and Tutor	I just ordered the item referred to here. I have not received it yet so it might be a good idea to offer this survey about a month from now. Good luck and I hope this is useful.
QVC	stero/cd player	cashier/ homemaker	I love using QVC but do look at other sites but mostly buy from QVC. And have for appx. 10 yrs.
www tiger- direct.c om	Computer Hardware Upgrade Products	Senior Complex Information Analysts (Internet Developement)	Shopping on the Internet is Great but I work with it everyday. But sometimes the instantaneous person to person information from visiting a store is more valuable then what you get from the internet or email.
petopia	feeder - never received it	Classified Advisor	I love shopping on the internet - you just got me at a bad experience. I'v tried 3 times dealing with the items I last purchased. It was to be half price - I requested the item never heard from the company when I went back on line to check the statice I find my order had been deleated and no longer available at the sale price. I have emailed them twice about this matter and have yet to hear from them. It is Petopia - I thought a good company.
http:// www. reel. com/	Sirens" (VHS Video Cassette)	computer programmer	My responses regarding the REEL.COM's REPUTATION were neutral because I have no information on the company other than my own experience which was quite positive.
http:// www. lgg. com/	a 6-inch metal ruler marked in 100ths of an inch	Artist	I had searched stores for many months looking for this object I need in my work. I found it and completed the purchase by phone in about an hour and a half on the net.

	MIT (DITUCI	(C.S.)	
Yahoo Auc- tion	Microsoft Office Profes- sional	Cost Accountant	I answered these questions based on two criteria. The first being yahoo auctions whom I am very pleased with. This would be the website that I am refering to. The second critieria is the company that I actually bought the product from. My experience with the company was a terrible experience and I will never do business with this company again. However "I will use Yahoo again.
www. usair ways. com	air travel	Marketing Manager	I often have trouble comparing products/prices while assessing hidden charges like shipping/handling"etc. Also once ordered some products will be out of stock with no follow through on from a customer service representative. Internet shopping seems to receive less customer service support than actual face-to-face or telephone shopping.
Kre- gers	Mother- board & Memory	Manager	It cost me more money because of software problems.
Lex- mark and IBM	Printer's cartriges	Maintenance Engineer	I wish to stop myself using credit cards.No more plastic- land.
ama- zon	books	financial specialist	made shopping easier
net- market .com	a Singer sewing machine	Translator	Internet shopping does not provide as accurate product presentation as you shop in a real store. It is also difficult to get all the infomation about the product at one site because their written descriptions on the products are very limited. We also have to deal with the site or computer problems during shopping which can be extremely frustrating and it always leads me to abandon the shopping cart all together. However it is the fastest and the most convenient way to shop if you know what you want to purchase.
half. com	books	volunteer@food pantry & church	I buy computer to books on the web. It saves me time & energy. I shop & buy. Some places send me notices when an item is in(wish list) or on sale. I have also returned items from the web. Thanks for the chance to give imput.
www. ebay. com	silver wire	0	I think this is the way of the future.
1800- flow- ers	flowers	Administrative Asst.	For the most part my experiences have been positive including purchasing from small vendors and craftsmen.
Ama- zon. com	Books	Military instructor	this thing is quite repeadative
ama- zon. com	book	database adminis-trator	My credit card number was stolen by someone to illegally purchase several items on 10 different websites. The transactions took place over a period of a week before fraud was apparent.

	TP ONCE		
www. bn. com	book "The Second Messiah"	Computer Specialist	Know your product before you purchase it over the internet.
http:// www.E xam- Essen- tials com/	Novell Prepora- tion exam	Network Administrator	I use the internet to research shopping information for all my large purchases such as cars. If a company has a web site that has little information I probably will not buy their products.
star- wars. com	starwar figures various	Programm <del>e</del> r Analyst	The delivery of the products is extremely fast. My son actually used the internet for the purchases stated.
Price- line. com	food and personal hygene	Sr. Open Systems Engineer	Fun Fun - Stress Free
Barnes & Noble. com	Frank Sinatra CD	Homemaker	It was great !! I love the internet !!
victo- rias secrets	panties	office manager	the shipping & handling costs were too high compared to the cost of the product
Bike Lea- ther	Ladies Wear, Leather Vest	consultant	I should have returned the product but it seemed like to much of a hassle
outpost .com	modem	small business owner	Saves me time energy and money
jjill. com	clothing	retired	Shipping & handling costs are MUCH TOO HIGH. Other than that I'd rather shop on the internet.

Note: Spelling and grammar have not been corrected.

# VITA

# Kathleen VanScoyoc

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# ACADEMIC EXPERIENCE

- 1990 to 1998 Assistant Professor of Marketing, Hampton University, School of Business, Hampton, VA
  responsibilities included teaching, advising, recruiting, coordinating assessment activities, curriculum development, research, and service activities.
- 1984 1990 Instructor of Marketing, Old Dominion University, College of Business and Public Administration, Norfolk, VA responsibilities included teaching and service activities.

# PROFESSIONAL EXPERIENCE

- 2000 to Present Vice President, Strategic Business Planning & Research, AXDEV Global, Norfolk, VA - responsible for planning, designing, and implementing needs/situational analyses, performance measurement tools, gap analyses, performance enhancement, education, and evaluation programs for a variety of international clients.
- 1999 to 2000 Consultant, National Aeronautical Space Administration, Langley, Hampton, VA Project Manager for designing and administering the training program for the implementation of a new integrated financial management computer software system for NASA Langley employees; responsibilities included preparing the needs assessment document, designing the training database, developing curriculum, creating Web based computer training courses, and coordinating training activities.
- 1995 to Present Consultant, Nicholas and Company, Norfolk, VA Director of Marketing and Finance; responsibilities include managing the marketing and financial activities of the firm, designing and administering the company's marketing program, directing the implementation of and training for the new business process computer software system.

## **EDUCATION**

Ph.D. in Business Administration, Old Dominion University Major Concentration: Marketing; Minor Area: International Business Dissertation Title: "An Examination of a Multidimensional Model of Customer Satisfaction with Internet Purchasing"

Masters of Business Administration (Major Concentration: Marketing), Old Dominion University

Bachelors of Science (Education), Old Dominion University

## **COURSES TAUGHT**

Principles of Marketing International Marketing Marketing Ethics Public Relations Consumer Behavior Marketing Management Retail Strategic Management Business Communications

#### AWARDS, HONORS, AND GRANTS

- Awarded Faculty Fellowship for NASA American Society for Engineering Education (ASEE), NASA Langley, 1998
- Awarded Faculty Fellow for Nissan-HBCU Institute at J.L. Kellogg Graduate School of Management, Northwestern University, 1990
- Awarded Faculty Research Grant with Geng Cui to research "Advertising Patterns of Alcoholic Beverages in African-American Magazines versus General Audience Magazines", 1992

Elected to Beta Gamma Sigma and Sigma Beta Delta

Selected into Who's Who Among America's Teachers, 5th Edition, Volume II, 1998

Participated as a Faculty Researcher/Instructor for the following grants awarded to Hampton University: U.S. Army Civilian Personnel Administration/Program Managers Course, 1992 Summer Enrichment Educational Program, 1991 and 1992

# PUBLICATIONS

"Why Do Consumer's Continue to Shop on the Internet?" in *Developments in Marketing Science*, Volume 23, 2000, with Earl Honeycutt, Kiran Karande, and Joan Mann.

"A Comparison of African American and Caucasian American Business Students and Their General Perceptions of Sex Role Portrayals in Advertising," in *Multicultural Marketing Conference 1996 Proceeding*, Volume I, 1996, with John Ford.

"A Content Analysis of Alcoholic Advertisements in African American Magazines," in *Multicultural Marketing* Conference 1996 Proceedings, Volume I, 1996, with Geng Cui.

"The Impact of Information Technology on Retail Strategy Development," in Business Research Yearbook: Global Business Perspectives, Volume III, 1996.

"Segmenting the Asian American Consumer Market: An Acculturation Approach," in *Minority Marketing:* Research Perspectives for the 1990's, Volume VI, 1993, with Geng Cui.

## **CONFERENCE PRESENTATIONS**

"Why Do Consumer's Continue to Shop on the Internet?" presented at the Annual Conference of the Academy of Marketing Science, Montreal, Canada, May 2000.

"Perceived Risk: A Synthesis of the Literature and Suggestions for Future Study," presented at the 2nd Annual Nissan Fellow Conference in St. Thomas, VI, November 1996.

"A Comparison of African American and Caucasian American Business Students and Their General Perceptions of Sex Role Portrayals in Advertising," presented at the Academy of Marketing Science Multicultural Marketing Conference in Virginia Beach, VA in October 1996, written with John Ford.

"A Content Analysis of Alcoholic Advertisements in African American Magazines," presented at the Academy of Marketing Science Multicultural Marketing Conference in Virginia Beach, VA in October 1996, written with Geng Cui.

"Channels of Distribution - Structure, Process and Performance: Some Research Propositions," presented at the 25th Annual Academy of Marketing Science Conference in Phoenix, AZ in June 1996 and abstract published in *Developments in Marketing Science*, Volume XIX, 1996, written with C.P. Rao.

"Most Favored Nation Status, Human Rights and the U.S.-China Trade Policy," presented at the 1996 Academy of International Business U.S. Northeast Regional Conference in Virginia Beach, VA, June 1996, written by Geng Cui and Claire Williams.

"The Impact of Information Technology on Retail Strategy Development," presented at the Annual International Academy of Business Disciplines Conference in Rockville, MD in April 1996.

"Marketing Alcoholic Beverages to African American Consumers," and "Advertisement of Alcoholic Beverages in African American Magazines versus General Reader Magazines: 1975-1992," presented at the National Association of African American Studies National Conference in Petersburg, VA in March 1994, written with Geng Cui.

"Segmenting the Asian American Consumer Market: An Acculturation Approach," presented at the Academy of Marketing Science 2nd Annual Minority Marketing Conference in Long Beach, MS in October 1993, written with Geng Cui.

"Defining Marketing: An Exercise for Marketing Professor," presented at the American Marketing Association 15th Annual International Collegiate Conference in New Orleans, LA in April 1993.

## **PROFESSIONAL SERVICE**

Member of the Editorial Board of *Multicultural Marketing Conference 1996 Proceedings*, for the Academy of Marketing Science Multicultural Marketing Conference in Virginia Beach, VA in October 1996.

Reviewer for Academy of Marketing Science Multicultural Marketing Conference, Marketing Communications Track, in Virginia Beach, VA in October 1996.

Session Chair: Gender and Family Roles for Academy of Marketing Science Multicultural Marketing Conference in Virginia Beach, VA in October 1996.

Co-editor of Northeast Review of International Business Research, proceedings of the 1996 Academy of International Business U.S. Northeast Regional Conference in Virginia Beach, VA, June 1996.

Reviewer for Journal of Marketing Theory and Practice.

Intern at Telekom, Berlin, Germany, May - July 1993.

# UNIVERSITY SERVICE

#### Hampton University

- > Faculty Advisor to the Collegiate Chapter of the American Marketing Association
- > Academic Faculty Advisor to Marketing Students
- > Faculty Advisor/Mentor to Honors Students in Marketing
- > Chair Publicity Committee Hampton University Annual Black Family Conference
- > Student/Curriculum Assessment Facilitator Marketing Department
- > Judge for the 19th Annual American Marketing Association Collegiate Chapter Awards Program
- Judge for the 1997 American Advertising Federation College World Series of Advertising Pizza Hut Competition

>	Committees: U	niversity:	Committee on Athletics
			UNV 101 Advisory Committee
	Sc	chool of Business:	Student/Curriculum Assessment Committee (Chair)
			Core Curriculum Committee
			Research Committee
			Student Grievance Committee
	М	farketing Dept:	Student/Curriculum Assessment Committee (Chair)

#### **Old Dominion University**

- > Faculty Advisor to the Collegiate Chapter of the American Marketing Association
- Co-chairperson Marketing Department (1987-1988)
- > Faculty Coordinator Marketing Internship Program
- > Marketing Faculty Representative to Faculty Senate
- > Department Coordinator for Virginia State ECC Campaign

#### PROFESSIONAL AFFILIATIONS

Member: Academy of Marketing Science American Marketing Association American Advertising Federation

# **VOLUNTEER WORK**

Ghent Elementary School - Designed and taught technology; Accelerated Reading II Program; PTA Treasurer Sacred Heart Church - Usher; Religious Education Teaching Assistant