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I am submitting herewith a dissertation written by Michelle B. Kunz entitled "On-Line Customers: Identifying store, product and consumer attributes which influence shopping on the Internet." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

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ON-LINE CUSTOMERS: IDENTIFYING STORE, PRODUCT AND CONSUMER ATTRIBUTES WHICH INFLUENCE SHOPPING ON THE INTERNET

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Michelle B. Kunz
December 1997

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DEDICATION

This dissertation is dedicated to my husband

Dale L. Kunz

who has lived with this perpetual student for twenty-three years.

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There are many people to whom I am grateful for assisting me with this research. Particularly, I am grateful to my advisor, Dr. Carl L. Dyer for his encouragement and guidance throughout the research process, and my doctoral studies at The University of Tennessee. I would also like to express my gratitude to my Dissertation Committee, Dr. Kermit Duckett, Dr. Jinkook Lee, and Dr. Ronald Taylor for their assistance and guidance.

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Sage Publications, Incorporated granted permission to use the Domain Specific Innovativeness, Market Maven Propensity, and Purchase Decision Involvement Scales from the Handbook of marketing scales, Multi-item measures for marketing and consumer behavior research by Bearden, Netemeyer, and Mobley, M. E. (1993).

ABSTRACT

The purpose of this study was to systematically analyze the influence of store, consumer, and product attributes on adoption of shopping via the Internet. The objectives of this study were to determine why consumers use the Internet as a shopping medium, which consumers were making purchases via the Internet, and what kinds of products they were more likely to purchase via this medium.

Ten retail store characteristics were analyzed, and intent to purchase fifteen product categories via the Internet was investigated. Additionally, consumer demographics and attitudes were included in the analysis models. Factor analysis was used to group products together, based upon the intent to purchase each product category via the Internet.

Factor analysis performed on the ten store characteristics of the Internet determined these variables grouped into five factors.

Three of the eight hypotheses regarding store characteristics of the Internet were supported: merchandise quality, merchandise variety, and customer service. These results indicate consumers value the merchandise assortment and customer services when choosing to patronize the Internet as a shopping medium. Insecure credit cards transactions are a deterrent for patronizing the Internet. It would seem to be very important for merchants to disclose the security of their site in a prominent method to the on-line user if they are to gain acceptance in this retailing medium.

Higher levels of opinion leadership and domain specific innovativeness were found to indicate greater likelihood to shop via the Internet. However, market maven propensity and purchase decision involvement were not found to be indicative shopping via the Internet. Consumer demographic characteristics found to be significant included age, gender, one occupational category, nationality and metropolitan size of residence.

Finally, the predicted product categories of high purchase intent/volume, books and magazines, music, computers and travel products were four of the five highest purchased product categories. The other product category with high frequency of purchase was business services.

It would appear that on-line shoppers are Opinion Leaders, Innovators, specifically Domain Specific to the Internet. Additionally, men are more likely to purchase via this medium, and those who intend to shop on-line are more likely to be younger. Finally, where consumers live may play a role in their patronage of the Internet. The results tend to indicate that people living in suburban areas of small metropolitan populations are more likely to purchase, while those living in larger metro areas are less likely. These results may be indicative of the merchandise available and the store selections in the respective regions.

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CHAPTER ONE

INTRODUCTION

A decade or so ago predictions were made that consumers would soon turn to the computer and interactive, on-line shopping for the majority of their shopping requirements. However, these early predictions have proven to over estimate consumers' acceptance of this shopping medium (George, 1987; Korgaonkar & Moschis; 1987, Robins, 1990; Talarzyk, Widing, and Urbany, 1983; and Westlake, 1990). Perhaps it is due to a lack of easy access to computer technology and equipment which allow consumers access to the Internet and on-line shopping opportunities, or perhaps acceptance and adoption of this shopping medium involves more time. Or perhaps this medium may be accepted by only a limited number of consumers.

Rationale

It has been proposed that the characteristics of store, product and consumer influence where consumers decide to shop (Ainscough & Luckett, 1996; Hawkins, 1991; Korgaonkar, 1986; and Urbany & Talarzyk, 1983). Consumers can choose to patronize a variety of different retail mediums which include traditional retail store, catalog/mail order, home/TV shopping and the Internet. Each shopping medium has specific attributes or characteristics, and different combinations of these attributes which influence consumers' choice of retail medium (Claxton & Ritchie, 1979; Davis, Guiltinan & Jones, 1979; Hansen & Deutscher, 1977-78; Huddleston, Ford & Mahoney, 1990; Ohanian & Tashchain, 1992; Shim & Kotsiopulos, 1992, 1993; and Tripp, 1993).

Store attributes can include attributes related to merchandise quality, merchandise selection, brands carried, and price (Hansen & Deutscher, 1977-1978; Hoyt, Attaway & Geibel, 1993; Huddleston, et al. 1990; Lee, 1995; and Ohanian & Tashchain, 1992). Service attributes which influence consumers shopping experience include: return policies, acceptance of credit cards, delivery, hours of operation, convenient location, layaway and helpful personnel (Hansen & Deutscher, 1977-1978; Hoyt et al. 1993; Huddleston et al. 1990; Lee, 1995; Ohanian & Tashchain, 1992; and Paulins & Geistfeld, 1993). Convenience oriented characteristics include time savings, acceptance of credit cards, and merchandise return policies. Among the characteristics which influence consumer acceptance and intent to use the Internet for shopping which have been investigated include convenience, time savings, product price, and merchandise assortment (Dillard, 1992; Korgaonkar & Moschis, 1987; Korgaonkar & Smith, 1986; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; Sharma, Bearden & Teel, 1983; Shim & Drake, 1990; and Shim & Mahoney, 1991). However, these store characteristics which lead someone to purchase products via the Internet have not yet been systematically analyzed. As Table 3 indicates, each of these previous research studies has focused on some of these store characteristics, but of the eight studies reviewed, only the four most recent studies (Dillard, 1992; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; and Shim & Mahoney, 1991) examined three or more of these store characteristics. In addition, only the study by Shim and Mahoney (1991) surveyed current on-line customers. Half of these studies (Sharma, et al., 1983; Korgaonkar & Moschis, 1987; and Mast et al., 1991, 1991) used students as subjects. Justification given in these studies for using this sample

population was that students can be considered as future consumers who will soon be a part of the general consuming public. However, when using students, the investigators could only measure intent to adopt this shopping medium and make inference to future behavior.

Another aspect which limits previous research studies is the use of simulations for on-line shopping (Mast, Oliver & Shim; and Mast, Shim & Morgan) or the use of limited access early versions of integrated text and video offerings, known as Videotex (Sharma et al. 1983; Korgaonkar & Smith, 1986; and Korgaonkar & Moschis, 1987). The use of simulated shopping demonstrations and much older, more cumbersome variations of what is now available to current consumers limits the application of these previous research findings regarding time savings and convenience to today's on-line shopping environment. Therefore, the purpose of this research is to identify what store characteristics influence current on-line consumers to choose the Internet as a shopping medium either instead of, or in conjunction with, other retail shopping mediums.

Statement of the Problem

The EBM Consumer Decision Process Model (Engel, Blackwell & Miniard, 1990) can be used to explain how consumers progress through the purchase process. Specifically, the model examines three major areas of the decision process: information processing, decision process and variables which influence the decision process. The variables which influence the decision process include environmental influences, including: culture, social class, personal, family and situation. The individual differences which influence the decision process include: consumer resources, motivation and involvement,

knowledge, attitudes, personality, lifestyle and demographics. Theoretically the EBM model proposes that consumers move through a series of stages in the decision making process. The model is comprised of five major stages of decision making: 1) motivation and need recognition, 2) search for information, 3) alternative evaluation 4) purchase, and 5) outcomes. The authors state the decision process is a continuum, and the extent and rigor individuals pursue each of the stages will vary with individual consumers and the specific purchase task. Beliefs, attitudes and intention are specifically addressed as factors which influence the alternative evaluation and purchase stages of the decision process. Thus, the store characteristics which consumers use to evaluate and select on-line shopping sources should be included for analysis in this study.

The literature also suggests that consumer and product characteristics influence consumer's choice of retail medium. Consumer characteristics include variables such as demographics, personality, and attitudes (Shim & Bickle, 1994), knowledge and experience (Engel, Blackwell & Miniard, 1990), involvement (Foxall & Goldsmith, 1994; Haynes, Pipkin, Black & Cloud, 1994), innovativeness and shopping orientation (Dawson, Block, & Ridgway, 1990; Huddleston, Ford & Bickle, 1993; Ozanne, Brucks & Grewal, 1992; Schiffman & Kanuk, 1994; Shim & Kotsiopulos, 1992, 1993; and Woodside & Trappey, 1992). Shopping orientation is defined as the attitudes toward shopping and personality exhibited by consumers. These consumer characteristics, attitudes and shopping orientation influence the shopping medium(s) consumers patronize (Forsythe & Bailey, 1996; Holt, 1995; Korgaonkar, 1984; Sproles & Kendall, 1986; Stern, 1995; and Titus & Everett, 1995).

Some products are more appropriate for purchase through certain mediums based upon the product category. For example, a consumer may find it difficult to purchase shoes which fit well, and want to be able to try the product on and test the fit before making a purchase. Thus, purchasing this product in a retail store which permits one to try the product before purchase, would be preferred over mail order. Also, depending on product categories, the information available to consumers and the costs associated with acquiring that information also varies (Nelson, 1970). The degree of information about products consumers are able to access can also influence consumer's choice of retail medium.

As previously discussed, the EBM model incorporates two stages which address the consumer's search for information: stage 2 , search for information and stage 3, alternative evaluation. Engel, Blackwell and Miniard propose both internal sources of information, which includes memory and past experience, and external sources: media, word of mouth communication and search initiated by the consumer, and the alternative evaluation process influence the outcome of the purchase decision. Alternative evaluation involves comparisons on the part of the consumer between choices available. The criteria used to evaluate the possibilities are individual consumer differences, attitudes, personality characteristics and demographics. As previously stated, the extent and rigor with which consumers engage in these stages will vary with each individual consumer and the decision currently being made. Based upon the EBM model, consumer characteristics should be analyzed in the determination of what influences consumers to shop via the Internet.

Objectives of the Study

In this study, the effects of store, consumer and product characteristics on consumers' choice of the Internet as a shopping medium are investigated. This study will determine why consumers use the Internet as a shopping medium, which consumers are making purchases via the Internet, and what kinds of products they are more likely to purchase via this retail medium. This study systematically incorporates variables analyzed in previous research studies: store characteristics, consumer characteristics and product characteristics and surveys current on-line consumers. By surveying current on-line consumers, the subjects will provide responses relative to the current on-line environment which has changed dramatically from the early study by Sharma, et al. (1983) and the more recent study by Shim and Mahoney (1991). As the cost of technology continues to decline, accessibility to and use of the Internet will become more popular with consumers. This new venue in non-store retailing has undergone a significant revitalization, and as more consumers go on-line, their attitudes toward this retail medium and perceptions regarding shopping via the Internet will be of value to retailers who want to target on-line customers. This study will provide retailers with information about what store characteristics on-line customers value, and what products they are likely to purchase via the Internet. In addition, the study will provide information regarding consumer characteristics which retailers will be able to use more effectively market their products to on-line consumers.

CHAPTER TWO

REVIEW OF LITERATURE

In today's market, consumers have many retail mediums from which to purchase products. In-store purchase options include the traditional retail store: department, discount and specialty. Recent additions to the retail store options include manufacturer's outlet stores and warehouse stores. Alternative mediums include mail-order catalogs, TV home shopping, telephone and the Internet. This study will specifically focus on the Internet as an alternative shopping medium. As discussed, this research will extend the knowledge about who uses the Internet to shop, and why these individuals choose to shop using the Internet. In the first section, different types of alternative mediums will be introduced. The discussion will then address the consumer's choice of shopping medium. The theoretical framework, specifically the EBM Model of consumer decision process, will be discussed in the perspective of testing the concept of store choice. Consumer characteristics will then be addressed in the perspective of using alternative shopping mediums. Product categories and characteristics will be discussed as they related to what products have been purchased via alternative shopping mediums. Finally the aspect of shopping orientation as it influences patronage behavior of alternative shopping medium will be explained.

Store Characteristics and Alternative Shopping Mediums

Catalog Shopping Store Characteristics

Previous researchers in catalog shopping suggested saving time, convenience and price as major reasons for consumers to choose catalogs as an alternative medium for

shopping (Berkowitz, Walton & Walker, 1979; Braun, 1993; Eastlick & Feinberg, 1995; Haynes, Lowe & Black, 1994; Korgaonkar, 1984; Kwon, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Schiffman, Schus & Winer, 1976; Seitz & Massey, 1990; Shim & Drake, 1990; Shim & Kotsiopulos, 1992, 1993; Simpson & Lakner, 1993; and Smallwood & Wiener, 1987). Other factors which influence consumers to patronize catalog shopping include quality of the merchandise (Schiffman et al. 1976; & Shim & Drake, 1990), ability to use credit cards (Lumpkin & Hawes, 1985; Seitz & Massey, 1990; Kwan et al. 1991; and Shim & Bickle, 1993), and customer service (Eastlick & Feinberg, 1995; Seitz & Massey, 1990; and Shim & Drake, 1990).

Saving time was found to be positively related to the consumers' choice of catalog shopping by Lumpkin and Hawes (1985), Lumpkin, Hawes and Darden, (1986), Shim and Drake (1990), Kwan, Paek and Arzeni (1991) and Eastlick and Feinberg (1995). Lumpkin and Hawes found that the ability to review and evaluate the product for an extended period of time, since consumers could refer back to the catalog and research product information, provided the subjects the opportunity to make decisions without the pressure of hurrying while in the store or within the constraints of a single shopping trip. Lumpkin et al. found time, related to efficiency in the shopping activities of rural consumers, positively influenced shopping patronage, concluding these consumers would be amenable to new shopping methods and in-home shopping, such as catalog shopping, if it would increase shopping efficiency. Shim and Drake and Kwan et al. found consumers preferred the time saving characteristics of catalog shopping as important factors which influenced them to purchase via this medium. Shim and Drake operationalized this variable from the

perspective of consumers feeling time-pressures in their lifestyle, and catalogs reduced the time involved in the shopping task. Saving time was found to be positively rated, but not statistically significant in the study by Eastlick and Feinberg.

Convenience, though closely related to saving time, has been operationalized as a separate variable in analyzing the characteristics of catalog shopping. Seitz and Massey, (1990) found the convenience of purchasing merchandise to be a component of economic motives, store layout and size, and hours of operation to be components of functional motives which were positively significant when consumers select catalogs as a shopping medium. Lumpkin, Hawes and Darden (1985) found convenience as it related to retail environment was positively correlated with rural consumers' patronage patterns. Shim and Drake (1990) and Kwan, Paek and Arzeni (1991) found consumers with a high intention to use catalogs placed a high value on shopping convenience, but the researchers did not specifically define convenience in their studies. Shim and Bickle (1993) surveyed women fifty-five years of age and older regarding their satisfaction with apparel fit and catalog purchases. The subjects were categorized into three groups based upon their apparel size. The study found that petite women were least satisfied with the convenience factor as it related to ease of ordering and shopping procedures. Thus this catalog characteristic was negatively related to the selection of catalog shopping for these consumers. Thought not statistically significant the final study by Eastlick and Feinberg (1995) found convenience was positively related to choosing catalog shopping.

As indicated in Table 1, seven of the ten studies have found price to be a significant factor consumers consider when choosing to patronize catalogs. Three studies

Table 1

Effects of Store Characteristics on Usage of Catalog Shopping

Author	Schiffman et al. 1976	Lumpkin & Hawes, 1985	Lumpkin, Hawes & Darden 1986	Smallwood & Wiener, 1987	Seitz & Massey, 1990
Time Saving	NT	+ S	+ S	NT	NT
Convenience	NT	NT	+ S	NT	+ S
Merchandise Price	NT	NT	+ S	NT	+ S
Customer Service	NT	NT	NT	NT	+ S
Merchandise Assortment	NT	NT	NT	NT	NT
Merchandise Quality	+ S	NT	NT	NT	NS
Perceived Risk	- S	+ S	NT	NT	NT
Satisfaction	+ S	NT	NT	NT	NT
Credit Available	NT	+ S	NT	NT	+ S
Sample	589 catalog purchasers	581 southwest households	234 southwest households	93 southwest female catalog shoppers	600 residents, southwest 2 metro cities
Methodology	chi-square	MANOVA	cluster analysis multiple discriminant analysis (MDA)	Factor Analysis Discriminant Analysis	Factor Analysis

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

Table 1, continued

Author	Shim & Drake, 1990	Kwon et al. 1991	Simpson & Lakner, 1993	Shim & Bickle, 1993	Eastlick & Feinberg, 1995
Time Saving	+ S	+ S	NT	NT	+ NS
Convenience	+ S	+ S	NT	- S	+ NS
Merchandise Price	+ S	+ S	+ S	- S	+ S
Customer Service	+ S	NT	NT	+ NS	NS
Merchandise Assortment	+ S	+ S	NT	- S	+ S
Merchandise Quality	+ S	NT	NT	NT	+ NS
Perceived Risk	NT	- S	- S	NT	NS
Satisfaction	+ S	NT	NT	- S	NT
Credit Available	NT	+ S	NT	+ S	+ NS
Sample	1500 FamilyFact from DSI, NY	131 women midwest city	102 women midwest city	3000 catalog customers	1500 catalog shoppers
Methodology	t-test stepwise regression	descriptive Factor and Discriminant Analysis	Factor Analysis	ANOVA MANOVA	chi-square

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

(Eastlick & Feinberg, 1995; Seitz & Massey, 1990; and Shim & Drake, 1990) identified value of the merchandise for the price as a positive influence on consumers' selection of catalogs. Two studies (Kwan, Paek & Arzeni, 1991, and Simpson & Lakner, 1993) included merchandise price in the factors which influence catalog shopping. Kwan et al. identified both product price being competitive with store apparel and the possibility of financial loss being small from catalog purchases as elements of financial risk which were positively related to selecting the catalog shopping medium. Simpson and Lakner found economic risk factors included consumers looking for lower prices and shopping more than one store to check prices before purchase. Shim and Bickle (1993) found petite older female consumers were dissatisfied with the price of merchandise in apparel catalogs. Lumpkin, Hawes and Darden (1986) found one group of consumers, termed "Thrifty Innovators" were economic shoppers, positively influenced by merchandise price, since they tended to search several places to find the lowest prices.

Customer service is frequently mentioned by retailers in their promotional activities. Two studies, Seitz and Massey (1990) and Shim and Drake (1990) found the variety of services offered by catalogs as a positive influence in their patronage of the medium. Two other studies, Shim & Bickle (1993) and Eastlick and Feinberg (1995) examined this variable, but found no significant influence on respondents' patronage of catalogs. Specifically, these studies included the availability of toll-free telephone ordering, and personnel knowledge and desire to please the customer as factors in customer services. Perhaps consumers have come to expect these services from non-store retailers, and do not see these services as significantly different for catalog shopping.

The variety or assortment of merchandise available also influences consumers' choice of catalogs as a shopping medium. Shim and Drake (1990), Kwan, Paek and Arzeni (1991), Shim and Bickle (1993) and Eastlick and Feinberg (1995) found this variable to be significant. Kwan et al. found non-shoppers of catalogs expressed concern about the inability to examine and try the product as well as uncertainty of the quality of catalog apparel. Eastlick and Feinberg found the availability of many brands and styles positively influenced patronage of catalogs. Only Shim and Bickle found this variable to be negatively related to selecting catalogs. Again, this study was examining older female catalog shoppers satisfaction with the fit of apparel, so the physical attributes of the consumers may be the most relevant thing to consider with this finding. Shim and Drake found catalog shoppers tended to be dissatisfied with local shopping facilities, indicating consumers cannot find what they are looking for locally.

Quality of merchandise offered by catalogs was found to be significant in only two of the studies (Schiffman, Schus & Winer, 1976 and Shim & Drake, 1990). Schiffman et al. specifically examined the perception consumers had regarding mail-order purchases. They found in-home shoppers spent more on catalog purchases of women's apparel, and ordered a wider variety of merchandise. Perhaps the familiarity these consumers had with catalog shopping provided them with experience of merchandise quality which they in turn considered to be higher than non-shoppers. This study was conducted more than 20 years ago, and fewer consumers were familiar with alternative shopping mediums at that time. This could also be a factor which influenced the findings. Shim and Drake found consumers who had a high intention to shop via catalogs ranked quality as the fourth most

important factor in their choice of catalogs. While the study by Seitz and Massey (1990) included quality of merchandise as a variable which respondents considered important, it did not clearly load on the factor analysis. Seitz and Massey included the purchase of high quality merchandise under the perceived value of catalog attributes, and again it was not statistically significant when analyzed.

Perceived risk and risk factors have been included several of these studies. There are some similarities, but each study analyzed risk in somewhat different aspects, so the research will be discussed individually by study. Schiffman, Schus and Winer, (1976) specifically analyzed the perception of risk as a determinant of catalog shopping. This study found that non-catalog users perceived catalog shopping as a higher risk. In addition, the researchers note that more than half of the in-home shoppers and almost three-quarters of the non-shoppers perceived there to be high risk with mail-order shopping. Lumpkin and Hawes (1985) addressed risk from the perspective of careful shoppers. Consumers indicated the opportunity to evaluate carefully the items in the catalog as a factor which influenced their likelihood to shop via catalogs. The researchers indicate this provides consumers the opportunity to take as much time as needed to research and compare the various products available. Thus the consumers feel more comfortable with their selection and rate the risk to be lower. Several studies (Eastlick & Feinberg, 1995; Kwan, Paek & Arzeni, 1991; and Simpson & Lakner, 1993) examined risk factors in categories: economic/financial, functional/performance/physical, social, and time. Economic/financial risk included price differences between catalog products versus non-catalog products, price comparisons by consumers, and size of financial risk

associated with catalog shopping. Functional/performance/physical risks included: fit of products, ability to return products, difficulty getting money back when products did not fit correctly, comfort of apparel, and appearance on self versus the model. The social risk factors related to fashion and styles of clothing, individuality of items, not fitting in with social group and friends. Lastly, the time risk related to amount of time consumer exhausted in looking for products and the time delay between order and receipt of shipment from catalogs. Social risk was not found to be significant by Eastlick and Feinberg, but economic risk was significant. Simpson and Lakner again found only economic risk to be significant with regard to patronizing catalog shopping. Kwan et al. found in decreasing importance, financial risk, social risk, time risk and functional risk were significant when comparing catalog shopper versus non-catalog shoppers.

Satisfaction of consumers with catalog shopping may be related to several of the risk factors discussed previously, but three of the studies (Schiffman, Schus & Winer, 1976; Shim & Bickle, 1993; and Shim & Drake, 1990) did specifically address customer satisfaction with catalog shopping. Schiffman et al. concluded the in-home shoppers' patronage behavior related to perceived risk, and these consumers evaluated mail-order shopping as more satisfactory than non-shoppers, thus those consumers categorized as in-home shoppers considered catalog shopping to have less risk. As previously mentioned, Shim and Bickle were specifically analyzing older female consumers' satisfaction with apparel fit and catalog shopping. This study determined petite consumers were less satisfied with the variety of merchandise offered, the size and fit of the apparel. The researchers further indicate this finding is consistent for petite consumers. Thus, this

aspect may not provide significant information for general catalog shoppers. Shim and Drake found that consumers who indicated a low intention to shop via catalog had negative ratings for ease of credit regarding guaranteed or defective merchandise.

Credit and the use of charge accounts has also been analyzed in research of catalog shopping. Five of the studies listed in Table 1 (Eastlick & Feinberg, 1995; Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Seitz & Massey, 1990; and Shim & Bickle, 1993) examined the influence of credit card acceptance and charge accounts. Eastlick and Feinberg found the availability of credit to have a positive association with catalog shopping, but it was not statistically significant. The remaining four studies (Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Seitz & Massey, 1990; and Shim & Bickle, 1993) found the availability of credit purchases was positively related to patronage of catalog shopping.

In-home / TV Shopping Store Characteristics

Several research studies which have examined in-home shopping have found time savings and convenience (Berkowitz, Walton & Walker, 1979; Hardin, 1996; and Haynes, Lowe & Black, 1994), merchandise price (Berkowitz et al. 1979; Hardin, 1996; and Haynes et al. 1994), customer service (Berkowitz et al. 1979; and Haynes et al. 1994), merchandise assortment (Berkowitz et al. 1979; Hardin, 1996; and Haynes et al. 1994), and availability of credit (Blakney & Sekely, 1993; Haynes et al. 1994) influence in-home shopping. Each of these studies has unique aspects to the individual situation and objectives of the research. Berkowitz et al. examined delivered groceries by an in-home food retailer and took into consideration if consumers were "locked in" because of travel

time to nearest food store, lack of automobile or the number of preschool children, which would be factors impinging on in-store shopping. Blakney and Sekely investigated local, out of town, in-home and supplemental shopping patterns. The researchers did not define in-home shopping more specifically. Haynes et al. examined two specific types of in-home shopping, cable and TV mediums. Hardin used focus groups to analyze the perceptions of TV shopping.

Time savings is one store characteristic usually attributed to in-home shopping. Berkowitz, Walton and Walker (1979) found this characteristic had a positive influence for the subjects who used an in-home grocery delivery service. Hardin (1996) found consumers have different perceptions of TV shopping than typically assumed. In this study respondents indicated they found TV shopping involved more time because individuals had to wait through long blocks of time for the item(s) they were interested in purchasing to be featured on the broadcast. The author indicated that this practice is common on the shopping networks, but there are some TV shopping shows which allow consumers to call in any time and purchase any products which are in stock, regardless of which items have been featured during broadcast. Haynes, Lowe and Black (1994) found that time savings had a positive influence on in-home shopping, but it was not statistically significant.

Convenience has been examined by all but one of the studies summarized on Table 2 (Berkowitz, Walton & Walker, 1979; Blakney & Sekely, 1993; and Hardin, 1996). The consumers in the Berkowitz et al. study considered convenience as a positive contributing characteristic to patronizing the grocery delivery services. Hardin found some younger

Table 2
Effects of Store Characteristics on Usage of In-Home Shopping (Catalogs and Cable)

Author	Berkowitz et al. 1979	Blakney & Sekely, 1993	Haynes et al. 1994	Hardin 1996
Time savings	+ S	NT	+ NS	- S
Convenience	+ S	- S	NT	S
Merchandise price	+ S	NT	+ NS	S
Customer Service	+ S	NT	+ S	NT
Merchandise Assortment	NS	NT	+ NS	S
Credit User	NS	+ S	+ NS	NT
Special Information	delivered groceries	out-shopping in-shopping	catalog and cable shopping	focus group interview
Sample	1500 in-home food purchasers	420 residents southeast region	295 rural / urban southeast state	female interviewees
Methodology	chi-square	MDA	factor analysis	descriptive

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

consumers felt TV shopping was convenient with regard to the return of merchandise without question and 30 day return period. Other younger consumers perceived having to pay return shipping charges and repackage goods to return them to be inconvenient. Blakney and Sekely found convenience to be a negative loading factor in the second function of in-home shopping characteristics. Thus from these findings, it is difficult to make generalizations regarding the role convenience plays in selecting the medium. The uniqueness and variety of analysis of each study makes it difficult to draw firm conclusions regarding the store characteristic of convenience and the role this variable played in patronizing in-home shopping mediums.

Merchandise price was examined by three of the studies summarized in Table 2. Berkowitz, Walton and Walker (1979) found in-home grocery shoppers were less price conscious and did not seem to be motivated to find the lowest prices for their purchases. In comparing urban and rural in-home shoppers, Haynes, Lowe and Black (1994) found urban in-home shoppers purchase a larger percentage of their apparel via in-home shopping (cable and catalog) and spend a higher percentage of total dollar purchases via in-home shopping mediums, but this finding was not statistically significant. Hardin (1996) found younger respondents perceived the products available via TV shopping to be less expensive; some of these younger subjects characterized the merchandise negatively as "cheap" or "gaudy." Again, this study was qualitative, and did not test for statistical significance in the subjects' responses.

Customer service was analyzed by Berkowitz, Walton, and Walker (1979) and Haynes, Lowe and Black (1994). Berkowitz et al. examined store hours and friendliness

as aspects of customer service and found these services were statistically significant for in-home grocery shoppers. The authors further recommended delivery of orders should be available during the evenings and time of deliveries should be scheduled at the customers' request so it would be convenient for their schedule. Haynes et al. found rural consumers were more satisfied with store and personnel services of cable shopping than were urban consumers, but did not indicate why this difference was evident.

When the assortment offered by in-home shopping mediums was examined (Berkowitz, Walton & Winer, 1979; Hardin, 1996; and Haynes, Lowe & Black, 1994) there were positive influences, but no statistical significance was found regarding these variables. Again, Hardin's study was qualitative. The older respondents in this study perceived the products offered via TV shopping were unique and could not be found elsewhere. Berkowitz et al. determined the variety of products offered important to in-home shoppers, but it was also as important to store shoppers. Thus this characteristic of retailers was important, regardless of the retail medium chosen. Haynes et al. found rural consumers purchased apparel via cable because they were less satisfied with the local shopping options than urban consumers. One variable included in the shopping factor options of this study was the level of satisfaction the consumers had for the merchandise assortment offered by the retailer.

Examining the contribution use of credit plays in the selection of in-home shopping assisted in identifying in-home and supplemental shoppers (Blakney & Sekely, 1993), but was not significant in differentiating in-home versus in-store grocery shoppers (Haynes, Lowe & Black, 1994) and rural versus urban consumers (Berkowitz, Walton & Winer,

1979). Since these studies are varied in the scope of their specific analysis, and in-home shopping was operationalized differently in each study, these findings may not be directly applicable to individual alternative retail mediums.

Internet Shopping Store Characteristics

Research studies which have examined the influence of store characteristics of the Internet on consumers' choice of the Internet as a shopping medium have conflicting findings regarding time savings (Dillard, 1992, Sharma, Bearden & Teel, 1993; Korgaonkar & Moschis, 1987; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; Shim & Drake, 1990; and Shim & Mahoney, 1991) and convenience (Dillard, 1992; Korgaonkar & Smith, 1986; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; and Shim & Mahoney, 1991). Additionally these studies have examined merchandise price (Dillard, 1992, Korgaonkar & Smith, 1986; Korgaonkar & Moschis, 1987; Mast, Oliver & Shim, 1991; and Mast Shim & Morgan, 1991), merchandise assortment (Dillard, 1992; Mast, Oliver & Shim, 1991; Mast, and Shim & Morgan, 1991), and finally perceived risk of shopping via the Internet (Sharma et al. 1983; Mast, Shim & Morgan, 1991; and Shim & Mahoney, 1991). These finds are summarized in Table 3.

Since saving time is one store characteristic important to consumers when selecting an alternative shopping medium, the findings by Sharma, Bearden and Teel, (1983) and Shim and Mahoney, (1991) which determined it was negatively associated with Internet shopping are interesting. Sharma et al. simulated a electronic shopping experience on computer, and contrasted this with catalog shopping format. However, at the time of this study, technology prevented showing subjects pictures of product, and

Table 3
Effects of Store Characteristics on Adoption of Internet Shopping

Author	Sharma, et al., 1983	Korgaonkar & Smith, 1986 1987	Korgaonkar & Moschis,	Shim & Drake, 1990
Time savings	- S	NT	+ S	+ S
Convenience	NT	+ S	NT	NT
Merchandise Price	NT	NS	NS	NT
Merchandise Assortment	NT	NT	NT	NT
Perceived risk	+ S	NT	NT	NT
Subjects	60 students	583 consumers	394 UG students DSI	1500 Family Facts name,
Methodology	MANCOVA	discriminant analysis	correlation regression analysis	multiple regression chi-square

+/- Direction of relationship S=Significant at .05NS=Not Significant at .05 NT= Not Tested

Table 3, continued

Author	Mast, Oliver & Shim, 1991	Mast, Shim & Morgan, 1991	Shim & Mahoney, 1991	Dillard 1992
Time savings	NS	NS	- S	NS
Convenience	+ S	NS	- S	NS
Merchandise Price	+ S	+ S	NT	NS
Merchandise Assortment	+ S	NS	NT	NS
Perceived risk	NT	+ S	NT	NT
Subjects	students	205 Western UG students	1000 Videotex Users	429 PC users
Methodology	t-test chi-square	factor analysis stepwise MDA chi-square	factor analysis stepwise MDA chi-square	chi-square discriminant analysis ANOVA

+/- Direction of relationship S=Significant at .05NS=Not Significant at .05 NT= Not Tested

only provided text descriptions for the simulated shopping experience. Results showed subjects found more time pressure, and resultant, less time savings associated with electronic shopping. The researchers commented this result may have been impacted by the subjects' working familiarity and understanding of the computer program used to simulate the electronic shopping medium. This concern could be inferred to the current situation consumers experience while learning how to use the current technology available to access the Internet, and the ability of consumers to navigate the Internet as well. Likewise, Shim and Mahoney found saving time to be negatively significant with Internet shopping. Consumers who were less time conscious were more likely to shop via the Internet in this study. It should be noted that the subjects in this study were current subscribers to an Internet service when surveyed. Conversely, two studies (Korgaonkar & Moschis, 1987 and Shim & Drake, 1990) found time savings to positively impact Internet shopping patronage. Korgaonkar and Moschis examined the awareness, interest and attitude of subjects toward the Viewtron system, an early version of electronic shopping system offered in Florida. The results indicated saving time (operationalized as time consciousness by the researchers) was a positive influence on subjects' attitude toward electronic shopping. Shim and Drake examined time consciousness as it influenced the intention of consumers to shop via the Internet. The results determined this variable was successful in discriminating between the consumers with high and low intentions to shop via this medium. Consumers who indicated pressure to find time to shop expressed higher intentions to patronize the Internet as a shopping medium. Three additional studies (Dillard, 1992; Mast, Oliver & Shim, 1991; and Mast, Shim & Morgan, 1991) examined

the store characteristic of saving time, but did not find this variable to be statistically significant. The Dillard study surveyed personal computer owners and the two Mast et al. studies used student subjects viewing Internet shopping simulations. All studies examined the respondents intent to shop via the Internet. Perhaps these aspects of the research studies influence the non-significance of the findings.

There are varied results of the research studies (Dillard, 1992; Korgaonkar & Smith, 1983; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; and Shim & Mahoney) which have examined the influence convenience plays in consumers' decision to choose the Internet as a shopping medium. Korgaonkar and Smith found consumers who were convenience oriented found in-home shopping and banking services more desirable. The specific variables which examined convenience in this study were convenient store location and late-night hours of operations. Mast, Oliver and Shim found subjects who evaluated a simulated Internet shopping experience as more convenient were more likely to adopt this shopping medium. Converse to these findings, Shim and Mahoney found Internet customers were less concerned with convenience, thus convenience was significant, but negatively associated in identifying Internet shoppers. The researchers make an interesting comment regarding this finding which relates to the subjects of this study. These respondents were current Internet users, and responded to the survey based upon their experience on-line, thus the conclusion was drawn that these consumers were knowledgeable of the Internet, based upon personal experience. Other studies have investigated the intent of consumers to use this shopping medium in the future. The researchers conclude that perhaps when consumers are actually on the Internet, they may

be under time pressure, and therefore, not take the time to search through the Internet shopping system. Finally, two studies (Dillard, 1992 and Mast, Shim & Morgan, 1991) examined convenience, but found no significance regarding this variable in determining consumers' adoption of Internet shopping.

Offering competitive merchandise prices, and consumers who consider merchandise price when choosing a shopping medium, positively influenced the intent to choose the Internet in two studies (Mast, Oliver & Shim, 1991, and Mast, Shim & Morgan, 1991). Korgaonkar and Moschis (1987) and Korgaonkar and Smith (1986) found price was not significant when determining which consumers would shop via the Internet. Korgaonkar and Smith raise an interesting issue when defining price orientation of their subjects: that of the cost of subscribing to electronic (Internet) services and the cost of using this method to compare prices may outweigh the benefits gained from additional information.

Only three studies (Dillard, 1992, Mast, Oliver & Shim, 1991; and Mast, Shim and Morgan, 1991) examined the influence of merchandise assortment on shopping via the Internet. Of these, only one study, Mast, Oliver and Shim (1991), found this variable to be significant. Subjects with high intention to shop via the Internet indicated they believe the Internet would provide unique and varied products.

The perception of risk associated with selecting a retail medium has also been examined as it relates to adopting Internet shopping (Sharma, Bearden & Teel, 1983; and Mast, Shim & Morgan, 1991). Sharma et al. found subjects who classified the shopping simulation as high shopping effort, perceived higher financial risk with the purchase

choice. Mast et al. examined the aspect of risk from the perspective of high risk versus low risk product purchases. High risk products included clothing and gift items, while low risk products included records and books. The results of this study showed consumers classified as high intention adopters were willing to purchase both high and low risk products. Thus these results would support an inference that these subjects positively evaluated the risk of purchasing a variety of products via the Internet.

Summary of Store Characteristics and Choice of Alternative Shopping Mediums

To summarize the research findings of what store characteristics of catalog, in-home and Internet shopping influence consumers' choice of alternative medium the following conclusions could be made. If consumers perceive the medium will 1) save them time, 2) be convenient to use/patronize, 3) provide merchandise with good value for the price and 4) merchandise of good quality, 5) involve low risk, 6) provide customer satisfaction, while 7) offering credit accounts and accepting charge cards, they will be more likely to choose that alternative shopping medium.

Consumer Characteristics and Alternative Mediums

As discussed previously, the EBM model (Engel, Blackwell & Miniard, 1990) indicates individual differences of consumers also influence their decision process. These individual differences include: motivation and involvement, knowledge, attitudes, personality, lifestyle and demographics. Researchers exploring alternative shopping mediums have included several of these variables in their studies. Specifically, consumer attitudes related to innovativeness (Berkowitz, Walton & Walker, 1979; Blakney & Sekely, 1993; Haynes, Lowe & Black, 1994; Lumpkin & Hawes, 1985; Lumpkin, Hawes

& Darden, 1986; Shim & Drake, 1990; and Simpson and Lakner, 1993), opinion leadership (Korgaonkar & Moschis, 1987; Lumpkin & Hawes; Lumpkin et al.; Sharma, Beardon & Teel, 1983; Shim & Drake, 1990a, b; Shim and Mahoney, 1991; Simpson & Lakner, and Smallwood & Wiener, 1987), involvement (Berkowitz et al. 1979 and Haynes et al. 1994) and demographics (Berkowitz et al.; Blakney & Sekely; Korgaonkar & Smith; Korgaonkar & Moschis; Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes; Lumpkin et al.; Seitz & Massey; Shim & Drake, 1990a, b; and Smallwood & Wiener) have been analyzed to determine their influence on the choice of alternative retail medium by consumers. The following discussion will examine what influence these various consumer characteristics have on each of the three alternative retail mediums: catalog, in-home and Internet shopping.

Consumer Characteristics of Catalog Shoppers

Innovativeness is one attitudinal characteristic examined by several of the research studies (Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Shim & Drake, 1990; and Simpson & Lakner, 1993) which have examined catalog shopping. Innovativeness is defined by Engel, Blackwell and Miniard (p. 709, 1990) as the consumer's tendency to adopt an innovation sooner than other individuals. Two studies (Lumpkin, Hawes & Darden, 1986 and Shim & Drake, 1990) found variables related to innovativeness to be significant in identifying catalog shopper. Lumpkin et al. found one group of shoppers, termed Thrifty Innovators, more likely to patronize in-home catalog shopping and rated higher on the shopping innovativeness measure of the study. While not defining the variable as innovativeness, Shim and Drake examined consumers'

venturesomeness, operationalized as enjoyment of doing new things. This study determined the consumers who exhibited a higher intent to shop via mail order, were more venturesome. Thus these two studies would support the position that catalog shoppers are more innovative. Two additional studies (Lumpkin & Hawes, 1985 and Simpson & Lakner, 1993) examined innovativeness, but did not find the characteristics to statistically significant in identifying catalog shoppers. However, though not significant, Simpson & Lakner did find a weak positive relationship.

Self-confidence and opinion leadership have been analyzed in four of the ten studies in Table 4. Opinion leadership refers to the individual's knowledge about a specific topic or item, and someone who may be considered influential on others (Engel, Blackwell & Miniard, 1990, pg. 157). Shim and Drake (1990) operationalized opinion leadership as self-confidence and found this characteristic to be positively associated with consumers' intention to buy apparel via catalog shopping. Likewise, Smallwood and Wiener, (1987) found heavy catalog shoppers were more likely to be opinion leaders. Finally, Lumpkin and Hawes (1985) did not find opinion leadership significant in identifying catalog shoppers, and Lumpkin, Hawes and Darden (1996) found opinion leadership ratings differed between active outshoppers and thrifty innovators, but could not be used to identify consumers more likely to shop via catalog.

Demographic variables include age, education, gender, income, marital status, and an additional variable, presence of children in the home, has also been grouped with demographics. Five of the ten studies of catalog shopping (Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Seitz & Massey, 1990; Shim & Drake, 1990; and Smallwood

Table 4
Effects of Consumer Characteristics on Usage of Catalog Shopping

Author	Schiffman et al. 1976	Lumpkin & Hawes, 1985	Lumpkin, Hawes & Darden, 1986	Smallwood & Wiener, 1987	Seitz & Massey, 1990
Innovativeness	NT	NS	S	NT	NT
Opinion Leadership	NT	NS	S	+ S	NT
Age	NT	- S	NT	NS	S
Education	NT	+ S	S	NS	NS
Gender	NT	+ S	S	NS	S
Income	NT	+ S	- S	+ S	S
Marital Status	NT	+ S	S	NS	NT
Children in Home	NT	+ S	+ S	NS	NT
Sample	589 catalog purchasers	581 south-western households	234 households southwest	93 southwestern female catalog shoppers	600 residents, southwestern 2 metropolitan cities
Methodology	chi-square	MANOVA	cluster analysis MDA	Factor Analysis Discriminant Analysis	Factor Analysis

+/- Direction of relationship S=Significant at .05NS=Not Significant at .05 NT= Not Tested

Table 4, continued

Author	Shim & Drake, 1990	Kwon et al. 1991	Simpson & Lakner, 1993	Shim & Bickle, 1993	Eastlick & Feinberg, 1995
Innovativeness	+ S	NT	+ NS	NT	NT
Opinion Leadership	+ S	NT	NT	NT	NT
Age	- S	NS	NT	NT	NT
Education	NS	NS	NT	NT	NT
Gender	NS	NS	NT	NT	NT
Income	+ S	NS	NT	NT	NT
Marital Status	+ S	+ S	NT	NT	NT
Children in Home	+ S	NT	NT	NT	NT
Sample	1500 names of FamilyFacts from DSI, NY	131 women in midwestern city	102 women midwestern city	3000 catalog customers over age 55	1500 catalog shoppers
Methodology	t-test stepwise regression	descriptive Factor and Discriminant Analysis	Factor Analysis	ANOVA MANOVA	chi-square

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

& Wiener, 1987) found one or more of these demographic variables to be significant when examining consumer characteristics of catalog shoppers. These individual characteristics will now be discussed in further detail.

Findings of the research studies regarding age have differing results. Lumpkin and Hawes (1985) found older male head of household respondents were more likely to shop via catalogs. Shim and Drake (1990) found an inverse relationship with age and catalog shopping, and concluded younger respondents exhibited a higher intent to purchase from catalogs. Seitz and Massey (1990) found that alone, age was not statistically significant, but that there was an interaction with age and gender, with younger males more likely to accept catalog shopping. In examining catalog versus non-catalog shoppers (Kwan, Paek & Arzeni, 1991) and light versus heavy catalog shoppers (Smallwood & Wiener, 1987) age was not significant when analyzing the respondents' use of catalog shopping.

Education of the subject was examined in several of the studies (Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Seitz & Massey, 1990; Shim & Drake, 1990 and Smallwood & Wiener, 1987). Only two of these studies (Lumpkin & Hawes and Lumpkin et al.) found education to be significant when examining catalog shoppers. Lumpkin and Hawes found the households which reported higher frequency of catalog shopping had higher educational levels of the male head of household. Lumpkin et al. found education was a variable which contributed to identification of Active Outshopper and Thrifty Innovators, but that it was not individually a significant variable in determining catalog shopping patronage behavior. The Thrifty Innovators were more likely to be in-home catalog shoppers, but educational level could

not be used alone to identify these consumers. Additional research (Kwan et al, Seitz & Massey, and Smallwood & Wiener) did not find education to be a significant variable in identification of catalog shoppers.

Two studies (Lumpkin & Hawes, 1985 and Seitz & Massey, 1990) have found gender to be a significant variable, while four other studies (Kwan, Paek and Arzeni, 1991; Lumpkin, Hawes & Darden, 1986; Shim & Drake, 1990; and Smallwood & Wiener, 1987) did not find gender to be significant when examining patronage behavior of catalog shoppers. Seitz & Massey found young males reported a higher acceptance of catalogs for purchasing apparel, while Lumpkin and Hawes found females were more likely to be catalog shoppers than males. Given the conflicting results from these two studies, few conclusions can be drawn here regarding the role gender plays in patronage of the catalog shopping medium.

Income as a consumer characteristic of catalog shopper has been found to be significant in several studies (Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Seitz & Massey, 1990; Shim & Drake, 1990; and Smallwood & Wiener, 1987). Three of the studies (Lumpkin & Hawes; Shim & Drake and Smallwood & Wiener) conclude catalog shoppers have higher income levels. One study, Lumpkin et al., found income was negatively related to catalog shopping. The group of respondents identified as Thrifty Innovators was more likely to patronize catalogs, and were also concerned with economic shopping, thus the relationship with lower income level is explained in conjunction with concern for lower price. Finally, Seitz and Massey found income was significant in conjunction with gender, and found females with lower income were more

viable markets for catalog apparel purchases.

Marital status has been included in analysis of catalog shoppers' demographics (Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Shim & Drake, 1990; and Smallwood & Wiener, 1987) and the influence of this characteristic on catalog shopping. Marital status was significant with higher levels of catalog shopping reported (Lumpkin & Hawes, Kwan et al.) and higher intent to patronize catalogs (Shim & Drake) by married respondents. Lumpkin, Hawes and Darden found marital status could be used to discriminate between three groups of shoppers, based upon overall shopping activities, but was not significant when identifying catalog shoppers individually. Likewise, Smallwood and Wiener found no significance for marital status when differentiating between high and low levels of catalog shopping.

The presence and age of children in the home, which could be related to marital status, has also been included in characteristics of catalog shopping. Four of the studies which examined marital status (Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; Shim & Drake, 1990; and Smallwood & Wiener, 1986) also included analysis of children in the home and the relationship of this variable with catalog patronage behavior. Smallwood and Wiener included the number of children, but found no significance in identifying light and heavy catalog shoppers. Lumpkin and Hawes, and Shim and Drake found the number of children was positively related to catalog patronage. Thus more children in the home increased consumers' use of catalog shopping. Contradictory to these results, Lumpkin et al. found Thrifty Innovators, who are more likely to shop via catalogs, had fewer children . However, this study characterized this group of consumers

as individuals who spend more time searching for good values, and thus one might conclude they have more time to pursue this behavior, if they have fewer children at home.

Consumer Characteristics of In-Home Shopping

Research which investigated consumers engaged with in-home shopping (Berkowitz, Walton & Walker, 1979; Blakney & Sekely, 1993; Haynes, Lowe & Black, 1994; and Hardin, 1996) has included innovativeness, shopping involvement, age, education, income, occupation and children in the home as consumer characteristics which influence patronage of in-home shopping, which in these studies included catalog shopping along with TV shopping and home-delivery of groceries.

Blakney and Sekely (1993) found innovativeness was positively related to in-home shopping. The researchers operationalized the characteristic as venturesomeness of the subjects. The study found in-home shoppers and supplemental shoppers, individuals who use in-home shopping and out-of-town shopping sources, were more venturesome, or innovative. Berkowitz, Walton, and Walker (1979) found in-home shoppers were more venturesome than those who patronized traditional retail sources. Haynes, Lowe and Black (1994) analyzed rural versus urban in-home shoppers, and compared catalog and cable TV shopping activities of these consumers and found no statistical significance for innovativeness.

Only one study which investigated in-home shopping (Haynes, Lowe & Black, 1994) analyzed involvement. Results determined urban in-home shoppers were more involved with the shopping process than their rural counterparts. It should be noted again this study included both catalog and cable TV in the category of in-home shopping. This

characteristic was not used to differentiate between patronage of these two alternative shopping mediums.

Age was analyzed in all four in-home shopping studies included in Table 5. Three studies (Berkowitz, Walton & Walker, 1979; Blakney & Sekely, 1993; and Haynes, Lowe & Black, 1994) found age was negatively associated with patronage of these alternative mediums. Berkowitz et al. found the subjects who used in-home grocery delivery service were younger than traditional retail store customers, while Blakney and Sekely found in-home shoppers who purchased 5% or more of their total expenditures via in-home shopping methods were younger than those who purchased less than 5% of their expenditures via in-home shopping options. Haynes et al. found cable shoppers were between 31-40 years of age, while catalog shopper were older, 31-40 years of age for light shoppers and heavy shopper 41-50 years of age. Hardin (1996) found age differences in the perceptions of cable TV shoppers regarding the characteristics they assigned to the medium. This study used focus group interviews, and provided only descriptive statistics. Thus these differences identified based upon age, were not statistically analyzed.

Berkowitz, Walton and Walker (1979) found education was positively related to patronage of in-home grocery delivery. The remaining studies in Table 5 (Blakney & Sekely, 1993; Haynes, Lowe & Black, 1994; and Hardin, 1996) did not examine education in each of their respective studies.

Income was found significant, when analyzing in-home shopping, in the study by Blakney and Sekely (1993). The two groups of consumers who spent more than 5% of their total income through in-home methods, exhibited in-home shopping behaviors.

Table 5
Effects of Consumer Characteristics on In-Home Shopping (Catalog and Cable TV)

Author	Berkowitz et al. 1979	Blakney & Sekely, 1993	Haynes et al. 1994	Hardin 1996
Innovativeness	+ S	+ S	- NS	NT
Involvement	NT	NT	+ S	NT
Age	- S	- S	-S	S
Education	+ S	NT	NT	NT
Gender	NT	NT	NT	NT
Income	NS	+ S	NT	NT
Marital Status	NT	NT	NT	NT
Occupation	+ S	NT	NT	NT
Children in Home	NS	NT	NT	NT
Special Information	delivered groceries	out-shopping in-shopping	catalog and cable shopping	focus group interview
Sample	1500 in-home food purch.	420 residents southeast region	295 rural / urban southeast state	female interviewees
Methodology	chi-square	MDA	factor analysis	descriptive

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

Berkowitz, Walton and Walker (1979) found that income was not statistically significant for in-home grocery delivery versus traditional retail store customers. However, this study was conducted in upper-income suburbs, and the researchers admit this may have influenced this finding.

The study by Berkowitz, Walton and Walker (1979) examined occupation of the subjects and determined the consumers who patronized this shopping medium as "up-scale" with regard to their occupational status. Additionally the study found the number of preschool children at home was not significant. The researchers examined this aspect of the respondents' consumer characteristics in an attempt to identify consumers who were captive to their home location. It should be noted this study is eighteen years old, and the time study was conducted may affect the generalizability of the results to today's consumer market.

Consumer Characteristics of Internet Shopping

Information regarding consumer characteristics of Internet consumers can be divided into two areas: empirical studies analyzing the Internet as a shopping medium, and surveys which have been conducted, and published on the Internet, to determine descriptive information about on-line consumers. This section will address the empirical research studies first, and then summarize the findings of more recent on-line surveys.

Empirical research addressing consumer characteristics and their influence on adoption the Internet as a shopping medium have analyzed opinion leadership, (Korgaonkar & Moschis, 1987; Sharma, Beardon & Teel, 1983; Shim & Drake, 1990; and Shim & Mahoney, 1991) adoption and use of technology, labeled high-tech proneness,

(Korgaonkar & Moschis; Korgaonkar & Smith, 1986; Mast, Oliver & Shim, 1991; Mast, Shim & Morgan, 1991; Shim & Drake; and Shim & Mahoney) and demographics, including age, (Dillard, 1992; Korgaonkar & Moschis; Korgaonkar & Smith; Mast, Shim & Morgan; Shim & Drake; and Shim & Mahoney) education, (Dillard; Korgaonkar & Smith; Korgaonkar & Moschis; Mast, Shim & Morgan; Shim & Drake; and Shim & Mahoney), gender and income, (Dillard; Korgaonkar & Moschis; Korgaonkar & Smith; Shim & Drake; and Shim & Mahoney) marital status, (Dillard; Shim & Drake; and Shim & Mahoney) children in the home (Dillard; and Shim & Drake) and occupation (Dillard; Korgaonkar & Smith; Shim & Drake; and Shim & Mahoney). It should be noted several of these studies (Korgaonkar & Moschis; Mast, Oliver & Shim; Mast, Shim & Morgan; and Sharma et al.) used student subjects, thus education, income, marital status, children in the home, and occupation would not be considered significant variables to examine in many of these studies. The following discussion will address these consumer characteristics individually.

Opinion leadership was significant in two (Korgaonkar & Moschis, 1987 and Shim & Mahoney, 1991) of four studies which examined this variable. Korgaonkar & Moschis found opinion leadership was positively associated with interest in Videotex, while not being related to awareness or the formation of favorable attitudes regarding the technology. Additionally, Shim and Mahoney (1991) found opinion leadership was also positively associated with shopping via the Internet. Two studies, Sharma, Bearden and Teel (1983) and Shim and Drake (1990) did not find this variable to be significant in identifying consumers who indicated intent to patronize Internet shopping.

Korgaonkar & Moschis (1987) and Korgaonkar & Smith (1986) defined high tech proneness as interest in owning and operating recently introduced products such as personal computers, ATM cards and debit cards. Shim and Mahoney defined the high tech in-home shopper as one who would use home TV shopping. Mast, Shim and Oliver, (1991) examined computer usage as a variable relative to high tech proneness. All of these studies found this consumer characteristic, high tech proneness or use of computers and new technology items, to be positively related to shopping on the Internet. Dillard (1992) found the years of personal computer experience and the number of different types of software used at home to be positively related to on-line service experience. Mast, Shim and Morgan (1991) and Shim and Drake (1990) also examined personal computer usage and ownership, but found no significance in identifying consumers who would patronize shopping via the Internet.

Dillard, (1992) Korgaonkar and Moschis, (1987) Korgaonkar and Smith, (1986) Mast, Shim and Morgan, (1991) and Shim and Drake, (1990) all found age to be inversely related to shopping via the Internet. Only one study (Korgaonkar & Smith, 1986) found age to be positively related to shopping the Internet, but only regarding electronic banking. While Shim and Mahoney (1991) examined age, it was not significant in their study. Thus, three of these studies found younger consumers more likely to shop via the Internet, and only one study found older consumers likely to patronize the Internet. It should be noted this specific study found patronage of banking services positively correlated to age, and it could be assumed older consumers would be more likely to have greater banking needs.

Five studies (Dillard, 1992; Korgaonkar & Moschis, 1987; Korgaonkar and Smith, 1986; Shim and Drake, 1990; and Shim and Mahoney, 1991) examined the role education had in identifying consumers who would shop via the Internet. The only study to find education significant (Shim & Mahoney) determined electronic shoppers had slightly less education than non-shoppers. This result was somewhat unexpected, but the researchers noted that the electronic shoppers' education level fell between an associate degree and four years of college, while non-shoppers fell between four year degrees and master's degrees. Thus, while statistically significant, all subjects had at least some college education.

Of the five studies (Dillard, 1992; Korgaonkar & Moschis, 1987; Korgaonkar & Smith, 1986; Shim & Drake, 1990; and Shim & Mahoney, 1991) which examined gender of the respondents, only Dillard found gender to be statistically significant. Males were more likely to report experience with on-line services and bulletin boards on the Internet. The four remaining studies did not find gender to be statistically significant in identifying consumer patronage of shopping via the Internet.

Income was examined in five of the studies listed in Table 6. One of these studies (Korgaonkar & Moschis, 1987) found income was associated with interest of electronic shopping, and favorable attitudes toward electronic shopping. Dillard (1992), Korgaonkar and Smith (1986), Shim and Drake (1990), and Shim and Mahoney (1991) examined income, but none of these studies found it to be significant in determining consumers' patronage of shopping via the Internet.

Table 6
Effects of Consumer Characteristics on Adoption of Internet Shopping

Author	Sharma et al. 1983	Korgaonkar & Smith 1986	Korgaonkar & Moschis 1987	Shim & Drake 1990
Opinion Leadership	NS	NT	+ S	NS
High tech prone	NT	+ S	+ S	NS
Age	NT	+ S (banking)	- S	- S
Education	NT	NS	NS	NS
Gender	NT	NS	NS	NS
Income	NT	NS	+ S	NS
Marital Status	NT	NT	NT	NS
Children in Home	NT	NT	NT	+ S
Occupation	NT	NS	NT	NS
Subjects	60 students	583 consumers	394 UG students	1500 Family Facts name, DSI
Methodology	MANCOVA	discriminant analysis	correlation regression analysis	multiple regression chi-square

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

Table 6, continued

Author	Mast, Oliver, & Shim 1991	Mast, Shim and Morgan 1991	Shim & Mahoney 1991	Dillard 1992
Opinion Leadership	NT	NT	+ S	NT
High tech prone	+ S	NS	+ S	+ S
Age	NT	- S	NS	- S
Education	NT	NT	- S	NS
Gender	NT	NT	NS	+ S
Income	NT	NT	NS	NS
Marital Status	NT	NT	NS	NS
Children in Home	NT	NT	NT	NS
Occupation	NT	NT	NS	NS
Subjects	students	205 Western UG students	1000 Videotex Users	429 PC users
Methodology	t-test chi-square	factor analysis stepwise MDA chi-square	factor analysis stepwise MDA chi-square	chi-square discriminant analysis ANOVA

+/- Direction of relationship S=Significant at .05 NS=Not Significant at .05 NT= Not Tested

Three studies (Dillard, 1992; Shim & Drake, 1990; and Shim & Mahoney, 1991) examined marital status as a consumer characteristic related to shopping on the Internet. However, none of the studies found this variable to be significant.

Two studies examined the presence of children in the home. Shim and Drake (1990) found those respondents who indicated they had a higher level of intent to shop on the Internet tended to have more preschool children. Dillard (1992) found no significance related to children present in the home. Both of these studies were investigating consumers' intent to shop via the Internet, and not surveying current on-line users.

When examining occupation, Dillard (1992) found more full-time employed subjects had experience with on-line services, than those who were employed part time or unemployed, but when specifically examining occupation there was no significance. It is obvious that income will be influenced by employment status. The cost of accessing the Internet and the technology needed would be related to the level of income, and employment status will have an influence on the level of income. Additional studies by Korgaonkar and Smith (1986), Shim and Drake (1990), and Shim and Mahoney (1991), again found occupation was not significant in identify consumers who would shop on the Internet.

Characteristics of Internet Users

Interest in determining who is on the Internet has resulted in several surveys which have attempted to describe the consumers currently using the Internet (Commerce/Net Nielson, 1995, 1996; Fram & Grady, 1995; Global Concepts 1995, 1996; GVU, 1994a, b, 1995a, b, 1996a, b; SRI, 1995; Survey.Net, 1995). The information gained from these

studies provides recent trend changes regarding gender, age, marital status, education, income and occupation characteristics of current Internet users.

As indicated in Table 7, the majority of Internet users are male, but the percentage of males has been declining from 94% (GVU 1st and 2nd Surveys) in 1994, to slightly more than two-thirds (GVU 5th and 6th Surveys) by the end of 1996. Age is another characteristic many surveys are interested in determining. GVU's 1st Survey in 1994 found more than half the on-line users were age 21-30. However, again that trend has steadily changed. Very gradually the number of younger users has been declining (Survey.Net, 1995; MIDS 3, 1995; Global Concepts 1, 1995 and Global Concepts 2, 1996) while the number of older consumers has gradually increased (GVU 3rd Survey, 1995; Global Concepts 1, 1995, Global Concepts 2, 1996). The average age of on-line users responding the GVU Surveys 2-6, 1994-1996 has risen from 31 to almost 35 years of age.

Marital status has been included in surveys by GVU (1994b, 1995a, b, 1996a, b) and Global Concepts 1 (1995) and Global Concepts 2 (1996). In early surveys, only slightly more than half the respondents were married (GVU 1994b, 1995a). By late 1995, Global Concepts 1 found about 45% of respondents were married. Survey results in 1996 by GVU found the number of married respondents at about 41-45%, while the number of single respondents has declined to 41% in early 1996 and 37% in late 1996. Thus, marital status seems to be approximately balanced between single and married users. However, it should be noted that each of the surveys have changed the format of the survey, and

Table 7
Characteristics of Internet Users

Source	GVU 1st Survey, Jan., 1994	GVU 2nd Survey, Oct.-Nov., 1994	SRI VALS2, Feb. 1995	GVU 3rd Survey, Apr.-May, 1995	Fram & Grady, May, 1995
Gender	94% male	90% male	64% male 36% female	15.5% female 82% male	79% male 21% female
Age	56% 21-30	average= 31; 44% 26-30	median: 30	Mean: 35.01; 30.44%: 21-30	median: 32
Marital status		53% single 42% married		50.3% married 40% single	
Education			93% some college 34% grad. ed.		67% four year degree
Income		42% $35-$75,000; 13% <$15,000	median: $40,000	median: $50-60,000	
Occupation	45% professional	27% technical; 26% univ. stud.		Computer: 31.4% Education 23.7% Prof: 21.9%	
Race		87% white			
Children					
Respondents	4777 on-line users	17,804 on-line users	2,400 on-line users	13,000 on-line users	461 on-line users

Table 7, continued

Source	O'Reilly and Assoc., May-Jun., 1995	Survey.Net, June 1995	MIDS 3, Oct. 1995	CommerceNet/ Nielson, Oct. 1995	GVU 4th Survey, Oct.-Nov., 1995
Gender		73.5% male 26.3% female	64% male 36% female	66% male 34% female	29.3% female 70.7% male
Age	Avg. 32	23%: 26-30 16.4%: 22-25	42.1%: 18-25 16.7%: 26-35		Average: 32.7
Marital status					41.7% married 40.8% single
Education		31.9% Grad coll 31.9% College 18.1% Masters		64% college degree	
Income	Avg. $60,000			25% > $80,000	median: $50-60,000
Occupation		63%: Professional 30%: Student		50% professional/ managerial	Computer: 29.9% Education: 30.9% Prof: 19.9%
race					
children					
Respondents	29,901 households			4200 phone interviews	>23,000 on-line users

Table 7, continued

Source	Global Concepts 1 Late 1995	Global Concepts 2 1995-96	CommerceNet/ Nielson, Mar.-Apr., 1996	GVU 5th Survey, Apr.-May, 1996	GVU 6th Survey, Oct.-Nov. 1996
Gender		78% male	67% longtime users male; 60% newcomers male	68.5% male 31.5% female	68.6% male 31.4% female
Age	33%: 26-35 30.6%: 36-50 26.6%: 18-25	14%: 25-29 24%: 30-39 26%: 40-49		Average: 33	Average: 34.9
Marital status	44.4% married 55.6% single	60% married		41.1% married 40.8% single	45.7% married 36.7% single
Education	29.2% college 38.9% coll. grad 22.6% post grad	28% college 40% coll. grad 21% post. grad.			
Income	30.3%: $31-$50,000	21%: $35-49,000 26%: $50-74,000		Average: $59K	
Occupation	Technical: 29.8% Student: 19% Executive: 16.4%	Commercial: 38% Entrepr: 21% School: 20%	Profs: 23%, long Profs: 11%, newcomers	Educ: 29.6% Computer: 27.8%	
Race					
Children	65.1% none 12.1% one 13.9% two	48% none 21% two 13% one			
Respondents			2800 recontacts		

revised question responses, so direct correlations between individual surveys cannot be made.

Several surveys (SRI, 1995; Survey.Net, 1995; CommerceNet/Nielson, 1995; and Global Concepts, 1995 & 1996) have examined the educational level of respondents. All of the results confirm a strong majority of respondents have at least some college, with approximately two-thirds holding degrees, and about one-fifth with graduate work. These results could be indicative of the number of colleges and universities with Internet and World Wide Web access and increased use of the medium in college courses. However, there are no statistics provided to support this assumption.

Income levels have been examined by GVU Surveys (1994a, 1995a, b, 1996a), SRI (1995), O'Reilly (1995), CommerceNet/Nielson (1995), and Global Concepts (1995, 1996). The results of individual surveys are quite varied, but average and median incomes reported range from $40,000 (SRI, 1995) to about $60,000 (GVU 1995b, GVU 1996a). Two of the surveys found about one-fourth of respondents reported income levels of $50-74,000 (Global Concepts, 1996) and greater than $80,000 (CommerceNet/Nielson, 1995). Since the individual surveys divided income levels into different categories, it is difficult to make more specific generalizations. However, as the cost of technology continues to fall, and as access to the Internet providers become more widely spread, and at reduced access rates, it could be inferred the income level of on-line users will continue to diversify.

Occupations of respondents have included professionals, technicians, students and education, computer-based, and entrepreneurs (CommerceNet/Nielson, 1995, 1996; Global Concepts, 1995, 1996; GVU, 1994a, b; 1995a, b; 1996a; and Survey.Net, 1995).

Thus, with the wide variety of occupational categories, it is again difficult to made specific assumptions, but one could interpret the occupation and income responses might be correlated.

Finally, several of the on-line surveys have included information regarding what consumers are doing on-line (CommerceNet/Nielson, 1995; GVU, 1994a, 1995a and b, 1996a and b; Survey.Net, 1995), and found consumers were using the Internet for work, entertainment and browsing, and education and research, along with communication. Shopping on the Internet has been included in surveys by GVU (1994b, 1995a, 1996a), Fram & Grady (1995), CommerceNet/Nielson (1995, 1996), and Global Concepts (1995, 1996). Results indicate consumers perceive there to be risk with transmission of credit card information on the Internet (GVU, 1994b and 1996b), while consumers are making purchases via the Internet (CommerceNet/Nielson, 1995, 1996; Fram and Grady, 1995; and Global Concepts, 1995, 1996), with indications they plan to buy via the Internet in the future (Global Concepts, 1995, 1996). Solomon, (1996) cited a January 1996 survey of America OnLine users, of whom one half indicated they had made an on-line purchase in the last year, and 71% indicated the planned to use Internet shopping more often. A more recent poll of 700 PC World Watch Readers (Sept. 9, 1996) indicated more than two-thirds of the respondents had purchased a product or service on the Internet in the last year, and only 6.8% indicated they had no plans to purchase in the next year. Forester Research predicted on-line shopping will grow to $4.8 billion by 1998 (Press, 1994). Discussion regarding what products consumers are purchasing on the Internet will be covered in the following section.

Summary of Consumer Characteristics and Alternative Shopping Mediums

Summarizing the empirical research on consumer characteristics and the selection of alternative medium, attitudes and demographics have been examined. The attitudes of consumers regarding alternative shopping medium patronage would indicate individuals who are innovative, opinion leaders, involved with the purchase process, and high-tech prone are likely to patronize the Internet as a shopping medium. Although two of the studies discussed found age to be positively related to choice of the alternative medium, the majority of the results would indicate there is an inverse relationship between age, and adoption of the Internet as an alternative shopping medium. The results regarding gender and income are somewhat inconclusive. Approximately the same number of studies found these two variables to be insignificant and those which found them to be significant. Education was found to be significant in only one third of the studies, and one of those was inversely related. Marital status and the presence of children in the home appear to be positively related to patronage of alternative shopping medium. The research discussed would not lend support to occupation playing a role in consumers' selection of alternative shopping sources. Descriptions of current Internet users from the on-line surveys would indicate consumers on the Internet are more likely to be male, have at least some college education, higher than average incomes, and be professionals, educators, entrepreneurs or technicians.

Product Categories and Alternative Mediums

As discussed in the introduction, the type of product, and the information consumers have about the product will influence where they make their purchase, and

what products they purchase from specific retail sources. The EBM model incorporates the search for product information into the decision process consumers make in purchasing products, and selecting a retail medium from which to make that purchase.

Based upon the amount of information consumers have, or can find, products can be categorized as search, experiential or credence products (Nelson, 1970). Search products are those which the consumer can determine the qualities or properties before purchase. An example would be a stereo, tape or CD player. Experiential goods cannot be evaluated until they are used. A good example would be food products. Only after the consumer has tasted or eaten the product can it be fully evaluated. The third category is credence goods. These products cannot be fully assessed by the consumer even after they have been consumed. This category may include many services purchased by consumers such as financial services, auto repairs, and perhaps airline travel. It may be more appropriate to purchase a search good from a retail store since this source offers the chance to examine and test the product prior to purchase. At other times, consumers may complete the information search for the product from retail stores, but purchase the product from another source such as mail order catalog. Thus some consumers may obtain product and search information from traditional retail store sources, and then use another medium such as catalogs or TV shopping for the purchase of the product, based upon store attributes such as convenience and time savings or consumer characteristics, such as desire for credit card usage or price of the merchandise. Thus it would be appropriate to investigate what information research has gleaned regarding specific products purchased from alternative retail mediums.

Product Categories and Catalog Shopping

Of the ten research studies of catalog shopping listed in Table 1 and Table 4, seven of the studies (Eastlick & Feinberg, 1995; Kwan, Paek & Arzeni, 1991; Seitz & Massey, 1990; Shim & Bickle, 1993; Shim & Drake, 1990; Simpson & Lakner, 1993; and Smallwood & Wiener, 1987) focused on the purchase of apparel products via catalogs. Shim and Bickle determined dresses were purchased most frequently by older catalog shoppers. Lumpkin and Hawes (1985) found consumers frequently purchased men's and children's apparel, along with household appliances and housewares from catalogs. Because of the limited focus on product categories in these studies, it is difficult to make any inferences regarding what products consumers would be willing to purchase from other alternative mediums, other than to speculate that if these consumers are comfortable making apparel purchases from catalogs, perhaps they will be comfortable making purchases of similar products from other retail sources, such as the Internet.

Product Categories and In-home Shopping

In examination of in-home shopping and out-shopping behaviors, Blakney and Sekely (1993) included product categories of adult clothing, children clothing, toys and games, and bedding and linens. Only one product category, bedding and linens, was found to be negatively associated with in-home shopping. The researchers conclude there may be several factors which influence this result: 1) longer purchase cycle of these products, 2) larger dollar investments, and 3) many times these products are large, making long-distance delivery of these goods difficult. Haynes, Lowe and Black, (1994) found purchasing clothing from cable TV was more popular with rural respondents, and suggest

this may be an outcome of dissatisfaction with the merchandise offerings available to them locally. The two other studies in this group of research were targeted at specific products such as groceries (Berkowitz, Walton and Walker, 1979) or consumers involved with apparel purchase (Hardin, 1996). Again, because of the limited scope of products analyzed in these studies it is rather difficult to make generalizations regarding what products consumers are more likely to purchase via in-home shopping medium.

Products Categories and Internet Shopping

The empirical studies which investigated shopping via the Internet have included product categories in several of the studies (Korgaonkar & Smith, 1986; Mast, Oliver & Shim, 1991; and Mast, Shim & Morgan, 1991). Korgaonkar & Smith included at-home banking services, educational services, new, sports, electronic shopping, entertainment and home management product/shopping categories in their study. The results indicated consumers rated entertainment services followed by electronic shopping services as desirable. However, for the respondents who rated services as undesirable, electronic shopping was the first choice, followed by entertainment services. Thus, this study, while listing several services, considered "shopping" as a separate service activity, rather than examining specific products to purchase. Additionally, the conflicting evaluation of these services by the respondents is explained by the researchers, that the subjects expressed more defined opinions regarding these two categories, as compared to the in-home banking, news and sports services available. The researchers conclude these strong opinions about these two specific services may be an outcome of greater awareness of these specific product categories, over the other products listed in the items of the survey.

The most informative findings regarding products consumers will consider purchasing from the Internet come from the studies by Mast, Oliver and Shim (1991) and Mast, Shim and Morgan (1991). These two studies found consumers indicated willingness to purchase these products from the Internet: airline tickets, entertainment/game services, clothing, gifts, books, records, computer products, newspaper subscriptions and groceries.

Surveys conducted on the Internet, which are summarized in Table 8, have included products which consumers have purchased, or would consider purchasing in the future. Fram & Grady (1995) found products purchased via the Internet included computer hardware and software, books, music, and magazines. GVU's 6th Survey (1996) found products purchased included travel, books and magazines, music items in product categories representing approximately 14%-20% response rates. Additional information found increases in gathering information and purchase for apparel, legal services and personal items. The researchers conclude shopping has nearly doubled to about one-fifth of the Web's users shopping via this medium. Survey.Net (1995) included thirty-one product categories in the list of items purchased. Computer related products and services were purchased by 27% of the respondents, and books, information and magazines were purchased by 24% of the survey participants. Internet products and services, clothing, music and videos, were purchased by approximately 8% of the survey participants. Percentages below 8% were indicated for the remaining product categories.

Fram and Grady (1995) and Pitkow and Kehoe (GVU, 1996) both found on-line consumers expressed concern with security of credit card transactions. Additional concerns addressed vendor identification and reliability, along with satisfaction with

Table 8
Characteristics of Internet Users On-line Activities

Source	GVU 1st Survey, Jan., 1994	GVU 2nd Survey, Oct.-Nov., 1994	SRI VALS2, Feb. 1995	GVU 3rd Survey, Apr.-May, 1995	Fram & Grady, May, 1995
Internet Activities				ref. & prod. info. electronic news	
Internet Use	36% 10 or + hrs/week on-line			browse: 82.6% entertainment: 56.6% shopping: 10.5%	64% purchased: computer software, books, music, mags, computer hardware
Computer Use		29% 50 hr/wk 19% 41-50 hrs			
Credit Cards/Risk		majority agree			88% purchasers satisfied; 4% dissatisfied;
Time on-line					
Shopping on-line					insecurity
Respondents	4777 on-line users	17,804 on-line users	2,400 on-line users	13,000 on-line users	461 on-line users

Table 8, continued

Source	O'Reilly and Assoc., May-Jun., 1995	Survey.Net, June 1995	MIDS 3, Oct. 1995	CommerceNet/ Nielson, Oct. 1995	GVU 4th Survey, Oct.-Nov., 1995
Internet Activities					ref. & prod. info replace tv electronic mags/news research
Internet Use		39.1%: Research 27.6%: Entertain. 17.3%: Comm.		14% have purchased	daily: 78.4%
Computer Use				55% prod. Information 60% company information 73% search info 14% purchase products	
Credit Cards/Risk					
Time on-line				average 35 min. week	
Shopping On-line					
Respondents	29,901 households			4200 phone interviews	>23,000 on-line users

Table 8, continued

Source	Global Concepts, #1 Late 1995	Global Concepts, #2 1995-96	CommerceNet/ Nielson, Mar..-Apr., 1996	GVU 5th Survey, Apr.-May, 1996	GVU 6th Survey, Oct.-Nov., 1996
Internet Activities				78.5% browse 64.5% entertain. 50.9% work	77% browse 64% entertain. 53% education 51% work
Internet Use	96.1% aware 32% purchased 90.7% likely to buy future	27% bought 17% likely to buy		55.4% access from home 14.2% shopping 76.5% acad. res.	63.6% access from home
Computer Use	35% bought off-line				
Credit Cards/Risk			selling / buying increased		concerned; reason not buy
Time on-line	42.3% > 30 hours/month	41% > 30 hours/month	increased 50% from survey 1		20% >20 hr/wk 30% 10-20 hr/wk 17% 7-9 hr/wk 17.76% 4-6 hr/wk
Shopping On-line	aware: 40%				32% anticipate >$100
Respondents			2800 recontacts		

purchases and product returns. Consumer loyalty to products, brands or companies may increase their confidence in certain shopping sources. Many retailers offer return and customer satisfaction policies to reduce the risks consumers perceive about purchasing products. The lack of the ability to examine and try the product leads to risk on the consumer's part. By offering guaranteed satisfaction and liberal return policies, nonstore retailers have responded in ways which reduce these perceived consumer risks. Fram and Grady (1995) found Web shoppers tended to buy products which carried little risk of defects in style, color, size, fragility and fabric. Pallab (1996) indicated concerns regarding system and transaction security as well as overall regulation of the Internet were primary topics in international conferences addressing marketing on the Internet. Finally, customer service and satisfaction have not fully met expectations in several instances, Furger (1996). Merchandise which is delivered in unacceptable packaging or by an unknown company increase consumer doubts and negative perceptions of shopping via the Internet. Furger found repeated phone calls and e-mail inquiries did not fully correct problems with on-line purchases. Thus, consumers will continue to view this medium with skepticism if merchants do not adequately address this issue.

Summary of Product Categories and Alternative Shopping Mediums

In summarizing the findings regarding what products and product characteristics can be associated with the selection of alternative shopping mediums, the research on catalog shopping and in-home shopping mediums has focused primarily on apparel products. The research which specifically has addressed shopping via the Internet provides the most valuable insight into what products consumers would be likely to

purchase via Internet shopping. Based upon these findings it could be predicted that consumers are more likely to purchase: 1) airline tickets, 2) entertainment and game services, 3) clothing and gifts 4) books and magazines 5) music, records and CD's, 6) computer products, hardware and software, and 7) food products.

Shopping Orientation

Shopping orientation has been defined and operationalized in various ways by researchers. A basic definition or explanation of shopping orientation refers to consumers' lifestyle, interests, opinions and behaviors which place particular emphasis on certain activities (Shim & Chen, 1996; Shim & Bickle, 1994; Shim & Kotsiopulos, 1993; and Shim & Mahoney, 1991). As summarized in Table 9, researchers have classified shopping orientation in many different ways. However, there are several recurring themes which can be identified from this summary of shopping orientation research. Shopping orientation classifications or categories can be grouped by store characteristics, retail medium and consumer attitudes. Store characteristic categories include: 1) merchandise price and value; 2) brands and country of origin; 3) time conscious and convenience oriented 4) credit user. Retail medium classifications include: 1) in-home shoppers, 2) electronic, high-tech shoppers, 3) mall shoppers, 4) local store oriented, and 5) catalog shoppers. Categories of shopping orientation which encompass consumer attitudes include: 1) innovators, 2) appearance/fashion conscious shoppers, 3) recreational shoppers, 4) opinion leaders and self-confident shoppers, 5) appearance managers, 6) planned shoppers, 7) apathetic shoppers, 8) social and personalizing shoppers, and 9) active and inactive shoppers.

Table 9 Shopping Orientation

Author(s)	Date	Shopping Orientation Classes	Factors/Variables
Korgaonkar	1984	Price Orientation Time & Convenience Orientation Brand Conscious Orientation	value for dollar save time; convenient location national vs "no-name" brands
Lumpkin & Hawes	1985	Economic Shopper Personalizing Shopper Ethical Shopper Apathetic Shopper	shopping is economic activity friendly relationship w/ store patronize specific stores little interest in shopping
Korgaonkar & Smith	1986	Convenience Orientation Planning Orientation Price Orientation High-tech Proneness Mail-order Orientation	any time of day non-impulse buying subscription costs to on-line service personal computer ownership mail/phone ordering
Lumpkin, Hawes & Darden	1986	Inactive Inshoppers Active Outshoppers Thrifty Innovators	loyal to local merchants, low innovativeness generalize shopping opinion leadership time manager, in-home & economic shopper
Kwon et al.	1991	Enjoy store shopping Prefer to shop at home	browse store; shop for enjoyment saves time; convenient; clothes shopping chore
Mast, Shim & Morgan	1991	Fashion/shopping Innovator Low Time-pressure Shopper Credit Card Shopper Social Shopper Price Conscious Shopper Catalogue Enjoyment Shopper	new fashions & stores little time to shop purchase many things with credit card shops with friend watch ads for sales shop via catalog at home

Table 9, continued

Author(s)	Date	Shopping Orientation Classes	Factors/Variables
Shim & Mahoney	1991	Easy to use	Learning to use easy
		Innovator	like to try new things
		Appearance/fashion Conscious	consider self as well dressed
		Price Conscious/cautious	check prices
		In-home shopping prone	success shopping by mail or phone
		Comparative electronic shopper	use catalog or store for information first
		Perceive electronic shopping high cost	subscription cost is high
		Recreational Shopper	shop for recreation
		Credit user	credit cards are convenient
		Shopping Opinion Leader	tell friends about good stores
		Convenient/Time Conscious Shopper	buy at most convenient store
		High-tech, In-home Shopper	would use home TV shopping
Shim & Kotsiopulos	1992	Confident Shopper	confident in ability to shop for clothing
		Brand Conscious Shopper	buys well-known brands
		Convenience/Time Conscious Shopper	buys at convenient stores
		Mall Shopper	malls best place to shop
		Local Store Shopper	prefers local clothing stores
		Apathetic toward "Made in USA"	doesn't care where garments are made
		Catalog Shopper	shops for clothing via catalog
		Appearance Manager	personal reputation affected by appearance
		Credit User	buys with credit cards
		Economic Shopper	shops around for bargains
		Fashion Conscious Shopper	buys new clothes earlier in the season

Table 9, continued

Author(s)	Date	Shopping Orientation Classes	Factors/Variables
Shim & Kotsiopulos	1993	Confident/Appearance; Fashion-Conscious Brand-Conscious, Loyal Convenience/Time-Conscious Shopping Mall-Oriented Local Store-Oriented Apathetic Toward "Made-in-USA" Catalog-oriented Economic/Price Conscious Credit-Oriented	good clothing shopper; up-to-date fashion trends well-known clothing brands; brands=quality convenient store, save time prefers malls, shop and walk malls good quality for price doesn't care where clothes are made mail/phone ordering is convenient shops around for bargains; reads ads buys with credit card; good to have charge accounts
Shim & Kotsiopulos	1993	Confident Shopper Brand Conscious Shopper Convenience/Time Conscious Shopper Mall Shopper Local Store Shopper Apathetic toward "Made in USA" Catalog Shopper Appearance Manager Credit User Economic Shopper Fashion Conscious Shopper	confident in ability to shop for clothing buys well-known brands buys at convenient stores malls best place to shop prefers local clothing stores doesn't care where garments are made shops for clothing via catalog personal reputation affected by appearance buys with credit cards shops around for bargains buys new clothes earlier in the season

Table 9, continued

Author(s)	Date	Shopping Orientation Classes	Factors/Variables
Shim & Bickle	1994	Shopping Enjoyment	shopping puts in good mood
		Confident/Efficient Shopper	confident about shopping ability
		Fashion-Oriented Shopper	interested in fashion
		Credit User	buys with credit and charge cards
		Dissatisfaction with Local Shopping	local stores don't meet shopping needs
Shim & Chen	1996	Shopping Interest	enjoys shopping; reading fashion magazines
		Shopping Confusion	USA clothing size is confusing
		Chinese Consumer Ethnocentrism	Chinese people should buy products in China
		Convenience Orientation	buy at most convenient stores; save time
		Brand Consciousness	buy specific brands
		Cash Orientation	prefer to pay in cash
		Fashion Consciousness	fashion important; considered stylish
		Shopping Sex Role	shopping is a woman's job
		Shopping Planning	buys planned things; buys from list
		Interaction with Salespeople	like talking with salespeople
		Shopping Alone	prefers shopping alone

Price has been included (Korgaonkar, 1984; Korgaonkar & Smith, 1986; Mast, Shim & Morgan, 1991; and Shim and Mahoney, 1991) along with economic shopping (Lumpkin & Hawes, 1985; and Shim & Kotsiopulos, 1992, 1993a, b) These studies have focused on the shopper's concern with product price, and the value for the dollar of the merchandise. Thus price conscious and economic shoppers look for bargains, search for low prices, or make purchases they feel are a good value for the money spent.

Korgaonkar (1984), Shim and Chen (1996), and Shim and Kotsiopulos (1992) examined if consumers were concerned with purchasing national or well-known brands. Additionally several studies have included concern with the influence country of origin (Shim & Chen, 1996; Shim & Kotsiopulos, 1992, 1993a, b) plays in consumer shopping behavior. Brand conscious consumers prefer nationally known or well-known brands over "no-name" products.

Consumer orientation toward time and convenience (Korgaonkar, 19984; Korgaonkar & Smith, 1986; Mast, Shim & Morgan, 1991; Shim & Kotsiopulos, 1992, 1993a, b; and Shim & Mahoney, 1991) has been included in shopping orientation literature. Time conscious and convenience oriented shoppers prefer shopping where they save time or at stores that are located conveniently to them.

Several studies have examined the use of credit cards and charge accounts (Shim & Bickle, 1994; Shim & Chen, 1996; Mast, Shim & Morgan, 1991; Shim & Kotsiopulos, 1992, 1993a, b; and Shim & Mahoney, 1991) and termed this orientation credit user or credit orientation. As could be easily inferred, these consumers tend to prefer purchasing products via credit card, or local store charge account.

Consumer attitudes used to label several categories of shopping orientation include: 1) innovators (Mast, Shim & Oliver, 1991, and Shim & Mahoney, 1991), opinion leaders (Shim & Mahoney, 1991) and confident shoppers (Shim & Bickle, 1994; and Shim & Kotsiopulos, 1992, 1993a, b). All of these shopping orientations relate to consumers willingness to try new things and shop at new stores, and confidence in selecting merchandise. Additional consumer attitudes include appearance and fashion-conscious or fashion oriented consumers (Shim & Bickle, 1994; Shim & Chen, 1996; Shim & Kotsiopulos, 1992, 1993a, b; Shim & Mahoney, 1991). This shopping orientation relates to the importance appearance, and being fashionable plays in the shopping activities and purchase choices of consumers. Recreational shoppers (Kwan, Paek & Arzeni, 1991 and Shim & Mahoney, 1991) and social shoppers (Mast, Shim & Morgan, 1991) relate to shopping activities conducted for enjoyment, and with friends. Lumpkin & Hawes (1985) labeled consumers who enjoyed a friendly relationship with the store personnel as personalizing shoppers. The overall attitude shoppers have about the shopping activity itself have been categorized as apathetic (Lumpkin & Hawes, 1985) and inactive shoppers (Lumpkin, Hawes & Darden, 1986). Finally, planned shoppers (Korgaonkar & Smith, 1986) plan their shopping trips and are not impulse buyers.

The final group of shopping orientation categories is based on the retail medium consumers choose to patronize. These alternative retail medium locations include mail-order (Korgaonkar & Smith, 1986), catalog and in-home (Mast, Shim & Morgan, 1991; and Shim & Kotsiopulos, 1992, 1993a, b; Shim & Mahoney, 1991), local shopper (Shim & Kotsiopulos, 1992, 1993 a, b) and mall oriented shoppers (Shim & Kotsiopulos, 1992,

1993a, b). The consumers who have an orientation toward one or more of the retail mediums, patronize these specific retail mediums.

In summary of shopping orientation, it can be observed the categories or labels assigned to shopping orientations are very much related to store and consumer characteristics. Thus post hoc analysis of the data may provide shopping orientation patterns of Internet consumers which will provide additional insight and information regarding consumers' attitudes and shopping habits regarding shopping via the Internet.

CHAPTER THREE

RESEARCH QUESTIONS AND HYPOTHESES

The theoretical framework for this study is based upon a modified version of the Engel, Blackwell and Miniard (EBM) Consumer Decision Process Model (1990) as presented in Figure 1. As discussed previously the EBM model indicates consumers move through a series of stages in the purchase decision process. These stages consumers will go through are: 1) an awareness of alternative store types, specifically the Internet, 2) development of attitudes regarding the Internet as a shopping medium, 3) intent to adopt the alternative shopping medium, 4) to accept or reject the Internet as an alternative shopping medium, 5) post purchase decision and evaluation processes regarding purchases made via the Internet.

The perceptions consumers have regarding different shopping mediums, their attitudes toward shopping activities and psychological perspectives, as well as situational conditions will influence their choice of shopping medium and patronage of certain retailers. Therefore, this research will address store characteristics, consumer characteristics and types of products consumers purchase as they influence shopping via the Internet.

Research Questions

As a brief review, the research questions for this study are: 1). What are the store characteristics which make Internet shopping more attractive than other retail mediums? 2). What are the consumer characteristics which influence shopping via the Internet? 3). What are the product types which consumers would consider purchasing via the Internet?

Model

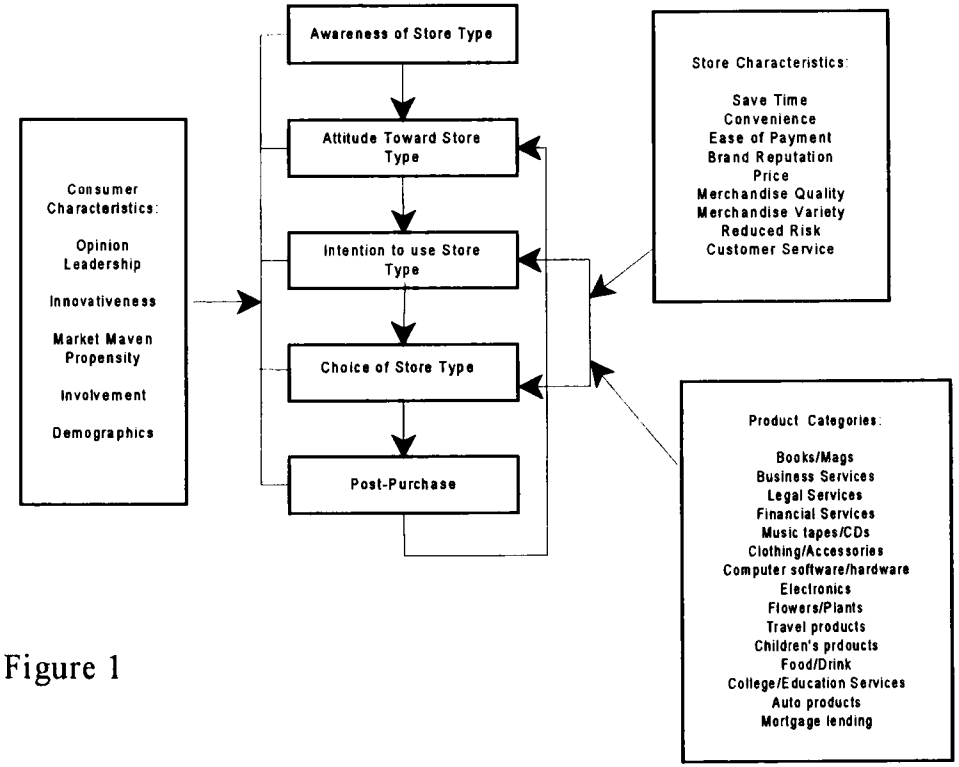

Figure 1

Hypotheses

Previous research indicates store characteristics which influence consumer patronage of alternative mediums include: 1) saving time, 2) convenience, 3) acceptance of credit cards, 4) appropriately priced merchandise, 5) good quality merchandise, 6) reduced risk with purchase, 7) appropriate customer service.

Since research investigating the adoption of alternative shopping mediums, including catalogs (Kwan, Paek & Arzeni, 1991; Lumpkin & Hawes, 1985; Lumpkin, Hawes & Darden, 1986; and Shim & Drake, 1990), in-home grocery delivery (Berkowitz, Walton & Walker, 1976), and the Internet (Korgaonkar & Moschis, 1987 and Shim & Drake, 1990) found consumers patronized these alternative shopping mediums when they perceived them as saving time, and several studies (Hardin, 1996; Sharma, Bearden & Teel, 1983; and Shim & Mahoney, 1991) found this variable to be negatively associated with adoption of alternative shopping mediums, the following hypothesis has been developed regarding the store characteristic of saving time:

HSC1: Consumers who perceive the Internet saves them time will be more likely to shop via the Internet.

Empirical research addressing the role of convenience in the adoption of catalog shopping (Lumpkin et al.; Kwan et al.; Seitz & Massey, 1990; Shim & Bickle, 1993; and Shim & Drake) found consumers adopted catalog shopping when they found this medium to be convenient for them. Researchers analyzing in-home shopping (Berkowitz et al.; Blakney & Sekely, 1993; Hardin) and Internet shopping (Korgaonkar & Smith; Mast, Oliver & Shim, 1991; and Shim & Mahoney) found convenience was a significant variable

in identifying consumers who would patronize alternative shopping mediums. Therefore it is predicted this store characteristic variable will also influence the adoption of Internet shopping in this research. The following hypothesis will test this prediction.

HSC2: Consumers who perceive the Internet to be convenient will be more likely to shop via the Internet.

Because merchandise price was found to be positively correlated with shopping via catalogs (Eastlick & Feinberg, 1995; Kwan et al.; Lumpkin et al.; Seitz & Massey; Shim & Drake; and Simpson & Lakner), in-home (Berkowitz et al. and Hardin) and Internet (Mast, Oliver & Shim and Mast, Shim & Morgan) it is predicted merchandise price will be a store characteristic respondents will consider when deciding to shop on the Internet. Therefore the following hypothesis has been developed to examine this store characteristic of merchandise price as it influences adoption of the Internet as an alternative shopping medium.

HSC3: Consumers who perceive the Internet provides appropriately priced merchandise will be more likely to shop via the Internet.

The availability of credit usage was found to positively influence catalog shopping (Kwan et al.; Lumpkin & Hawes; Seitz & Massey; and Shim & Bickle) and in-home shopping (Blakney & Sekely, 1993). The empirical research studies addressing shopping via the Internet have not examined the role of credit in adoption of this shopping medium. In addition, since several on-line studies have reported consumers are concerned with the security of credit card information when making transactions on-line. While some vendors provide alternatives to including credit card numbers in on-line purchase

transactions, it seems this method of payment is frequently assumed to be the primary payment option for shopping via the Internet. It seems appropriate to examine the role of credit card availability as a store characteristic which influences patronage of this alternative shopping medium in order to expand upon previous empirical research. It also seems important to include the perception consumers have regarding the security of credit card transactions via Internet purchase transactions. Therefore the following hypothesis has been developed to examine these aspects of Internet shopping.

HSC4A: Consumers who use credit cards and charge accounts will be more likely to shop via the Internet.

HSC4B: Consumers who perceive their credit card transactions are secure on-line will be more likely to purchase products via the Internet.

Merchandise quality has been found to be positively related to adoption of catalog shopping (Schiffman, Schus & Winer, 1976, and Shim & Drake). Research investigating in-home shopping and Internet shopping have not previously examined this store characteristic. It is appropriate to include this store characteristic in the analysis of other store characteristics previously included in research addressing adoption of alternative shopping mediums. This study will examine the influence of the merchandise quality on the adoption of the Internet as a shopping medium by testing the following hypothesis:

HSC5: Consumers who rate the Internet higher in providing good quality merchandise will be more likely to shop via the Internet.

The research studies which have investigated perceived risk (Kwan et al.; Schiffman et al.; and Simpson & Lakner) found risk to be negatively associated with adoption of

catalog shopping. Additionally research of Internet shopping (Mast, Shim & Oliver and Sharma et al.) found subjects rated the Internet higher in perceived risk. Therefore, it is predicted that in order for consumers to shop via the Internet they must perceive it to be less risky to purchase products via this shopping medium. The hypothesis to test this prediction is:

HSC6: Consumers who perceive the Internet will provide less risk in their shopping choice will be more likely to shop via the Internet.

Satisfaction with the purchasing process includes customer services and policies which have been examined by several studies addressing catalog shopping (Schiffman et al.; Shim & Bickle; and Shim & Drake). Studies addressing Internet shopping have primarily focused on the intent to shop via the Internet, and used student subjects in half the studies. None of these research studies have specifically addressed customer service as a store characteristic which influences consumers' adoption of the Internet as a shopping medium. Additionally a recent publication by Furger (1996) indicated the lack of follow-up customer support and services provided by many on-line retailers made the aspect of shopping on-line rather unattractive. Therefore is it predicted customer service as a store characteristic will influence the likelihood of consumers' adoption of the Internet as a shopping medium. This variable will be examined via the following hypothesis:

HSC7: Consumers who perceive the Internet provides customer services they deem important will be more likely to shop via the Internet.

Consumer attitudinal characteristics influence the retail medium they choose to patronize. Research has shown consumers who choose alternative shopping mediums are

opinion leaders, innovative, familiar with or knowledgeable of the medium through experience, and involved in the shopping process.

Research has found adopters of alternative shopping mediums are innovative (Berkowitz, Walton & Walker, 1979; Blakney & Sekely, 1993; Lumpkin, Hawes & Darden, 1986; and Shim & Drake, 1990) and opinion leaders (Korgaonkar & Moschis, 1987; Lumpkin, Hawes & Darden; Shim & Drake, 1990; Shim & Mahoney, 1991; and Smallwood & Wiener, 1987). Additionally Haynes, Lowe, & Black (1994) found involvement to be positively related to in-home shopping patronage.

Opinion leaders are described as influencing and communicating information to others (Childers, 1986; Flynn, Goldsmith & Eastman, 1996; King & Summers, 1970 and Venkatraman, 1990). Additionally, these studies indicate an inter-relationship or correlation between opinion leadership and innovativeness. Innovativeness refers to adoption of new products or innovations. Specifically, Goldsmith and Hofacker (1991) define domain specific innovativeness as:

> the tendency to learn about and adopt innovations ...within a specific domain of interest. (p. 211).

Further research validating the domain specific innovativeness scale refers to previous research by Midgley and Dowling, 1978, which described the variable as attitudes and behaviors within a certain category or domain of activity (p. 1106).

Generally researchers describe innovators as the first to buy a new product, individuals who have more interest in the product and are more knowledgeable about the products (Goldsmith & Hofacker, p. 211).

Knowledge about products and the marketplace where they are available is relative to both opinion leadership and innovativeness. Feick and Price (1987) define someone with marketplace expertise as a "Market Maven." Specifically they define market mavens as individuals who information about a lot of products, places to shop, and other market information. In addition, market mavens are prone to sharing this information with others, and as acting a marketplace resource individual (p. 85).

Since previous research has found adopters of alternative shopping mediums are innovators and opinion leaders, it is predicted consumers who adopt the Internet as a shopping medium will rate high on opinion leadership and domain specific innovativeness. In addition, since general knowledge of products and the marketplace will make it easier for individuals to "navigate" the intricacies of the Internet, it is also predicted consumers who are knowledgeable of the Internet and the marketplace, i.e. Market Mavens, will be more likely to shop via this medium. Because they are comfortable with the technology and navigating the Internet, Market Mavens will be more at ease shopping via this medium. Therefore the following three hypotheses regarding consumer attitudes are presented for analysis in this study:

HCC1: Consumers who rate high on opinion leadership will be more likely to purchase products via the Internet.

HCC2: Consumers who rate high on domain specific innovativeness will be more likely to purchase products via the Internet.

HCC3: Consumers who rate high on market maven propensity will be more likely to purchase products via the Internet.

Engel, Blackwell and Miniard (1990) address many aspects of involvement in the consumer decision-making process. They define involvement as the "degree of perceived relevance and personal importance accompanying the product and brand choice within a specific situation (p. 30)." They further posit that risk, and product characteristics such as utilitarian versus hedonic (pleasure) benefits play a role in the purchase process and the level of involvement consumers exhibit in the decision process. Therefore involvement lies on a continuum from low to high, based upon the motivational and benefit influences which play into the decision-making process. The EBM model includes situational influences in the environmental factors which play a role in the decision process. Further development and explanation of the situational factors which influence the decision-making process are identified as: message involvement, product/brand involvement, and purchase decision involvement (Engel, Blackwell & Miniard, p. 261). Engel, Blackwell and Miniard have adapted this conceptualization of involvement from Zaichkowsky, (1986). Purchase decision involvement has been defined by Mittal, (1989) as "the extent of interest and concern that a consumer brings to bear upon a purchase-decision task" (p. 150). This concept is addressed as a mind-set the consumer brings to the purchase task. Mittal further explains that prior experience in making a purchase may reduce the amount of information search an individual expends, but this does not by default indicate low involvement with the purchase decision. A routine purchase of a product does not mean the consumer is exhibiting a low level of involvement, but rather may be repeating product purchase based upon brand preference, not indifference to what brands are available in the market. Mittal has developed the Purchase Decision Involvement Scale to measure "the

extent to which a consumer cares about what he or she buys, and the extent to which he or she is motivated to make the right choice" (p. 159). It seems appropriate to include involvement, specifically as it related to the purchase-decision task, when examining why consumers shop via the Internet. Additionally, since research on opinion leadership, innovativeness, and market knowledge indicate a relationship of these variables with involvement, the following hypothesis has been developed to test the role of involvement in shopping on the Internet.

HCC4: Consumers who are more involved with the on-line shopping process will be more likely to purchase products via the Internet.

Demographic characteristics of consumers have also been found to be significant in influencing their patronage of retail mediums. Empirical research analyzing catalog shopping (Lumpkin & Hawes, 1985 and Shim & Drake, 1990), in-home shopping (Berkowitz, Walton & Walton, 1979; Blakney & Sekely, 1993; and Haynes, Lowe & Black, 1994), and Internet shopping (Dillard, 1992; Korgaonkar & Moschis, 1987; Mast, Shim & Morgan, 1991; and Shim & Drake, 1990) found an inverse relationship with age and the adoption of these alternative shopping mediums. Thus, younger consumers are more likely to patronize these alternative shopping mediums. Education has been found to be positively related to the adoption of catalog shopping (Lumpkin & Hawes) and in-home shopping (Berkowitz et al.). Educational level has not been analyzed in the empirical research addressing shopping via the Internet. Perhaps because about half of the studies included in this review have used student subjects, this variable has not be appropriate for inclusion by the researchers. Gender has been a significant consumer characteristic in

several studies regarding catalog shopping (Lumpkin & Hawes, Lumpkin et al., Seitz & Massey) and Internet shopping (Dillard). The results of these findings are varied, and a specific direction regarding gender and adoption of Internet shopping cannot be made at this time, based upon these studies. Higher income level has also been found to be correlated with the adoption of alternative shopping mediums (Blakney & Sekely, 1993; Korgaonkar & Moschis, 1987; Lumpkin & Hawes; Seitz & Massey; Shim & Drake; and Smallwood & Wiener, 1987). Research studies analyzing catalog shopping (Kwan et al.; Lumpkin & Hawes; Lumpkin et al.; and Shim & Drake) have found marital status is a significant consumer characteristic regarding adoption of this shopping medium. A variable related somewhat to marital status is the presence of children in the home. Only four of the studies reviewed (Lumpkin & Hawes; Lumpkin et al.; and Shim & Drake, 1990 a, b) found this variable to be positively associate with the adoption of alternative shopping mediums. Researchers indication a correlation regarding the significance of this consumer characteristic with saving time and convenience store characteristics. Thus, consumers with children tend to patronize retail mediums they find to save them time and be convenient. Additional on-line and commercial studies have included descriptive statistics regarding on-line users. These studies have found the current demographics of on-line consumers using the Internet, indicate these consumers are younger, male, have at least some college education, are employed in professional or technical occupations, and have a higher than average income. Therefore, the consumer characteristics which have been significant in identifying patronage of alternative shopping mediums are predicted to also be significant in this study of shopping via the Internet. Additionally, the

demographic characteristics of current Internet users are assumed to be indicative of respondents who will shop via the Internet. As a result, the following hypotheses have been developed regarding consumer demographics:

HCC5: Younger consumers will be more likely to shop via the Internet.

HCC6: Male consumers will be more likely to shop via the Internet.

HCC7: Consumer who have college education will be more likely to shop via the Internet.

HCC8: Consumers who are in technical or professional occupations will be more likely to shop via the Internet.

HCC9: Consumers who have a higher than average income will be more likely to shop via the Internet.

The types of products consumers will consider to purchase via the Internet has also been predicted in previous research, and on-line surveys have included products which consumers have purchased via the Internet. Empirical research addressing catalog and in-home shopping has been directed toward apparel purchases via these mediums. Research by Mast, Oliver and Shim (1991) and Mast, Shim and Morgan, (1991) has addressed which products consumers would be more likely to purchase via the Internet. These studies have found airline tickets, clothing, books, music, entertainment services, computer products, and newspaper subscriptions are the products consumers express the greatest likelihood of purchasing via the Internet. Surveys conducted on the Internet and by commercial research companies regarding current on-line consumers have also indicated which products consumers have purchased via this medium. These products

include books and magazines, music products, clothing, computer software and hardware, and travel products. Many of these products, with the exception of travel products, are available via catalog shopping today. Many consumers purchase travel related products (airline tickets particularly) via telephone. Additionally these products can be classified as search goods or experience goods. Thus it would seem than consumers can readily or easily ascertain the information they need regarding these products prior to purchase. Additionally, with experience goods, once they have gained the experience of consuming the product, they can more effectively evaluate the product and their satisfaction with it. Therefore, it is predicted that products which consumers are familiar with, such as search and experience goods, and have experience purchasing via alternative mediums such as catalog and TV will be the products they are more likely to purchase via this alternative shopping medium, the Internet. The following hypothesis has been developed to examine which products consumers will be likely to purchase via the Internet:

HPC: The product categories consumers will be more likely to purchase via the Internet will be 1) books and magazines, 2) music products, 3) computer-related products, and 4) travel-related products.

CHAPTER FOUR

METHODOLOGY

Specifically, the following store characteristics were proposed to influence the choice of the Internet as a shopping medium: 1) saving time, 2) convenience, 3) ease of payment, 4) company reputation, 5) brand reputation, 6) price, 7) quality of merchandise, 8) variety of merchandise, 9) reduced risk, and 10) customer service. Consumer characteristics which were expected to influence the choice of the Internet as a shopping medium were: 1) opinion leadership, 2) domain specific innovativeness, 3) market maven propensity, 4) domain specific innovativeness, 5) age, 6) gender, 7) education, 8) occupation, and 9) income. The product categories examined which consumers might purchase from the Internet were categorized into these areas: 1) books and magazines, 2) business services, 3) legal services, 4) financial services, 5) music products, 6) clothing, 7) computer products, 8) electronics, 9) information resources, 10) travel products, 11) children's' products, 12) food and drink, 13) college and education services, 14) auto products, and 15) mortgage lending.

Measures

Patronage behavior was measured in two levels, intention to use the Internet and past behavior. Intent to use the Internet was measured by asking subjects how likely they are to purchase each of fifteen product categories. The response was measured on a five-point Likert scale from 1, very unlikely to 5, very likely. Past patronage behavior was measured for each of the fifteen product categories, and each of the four retail mediums, Internet, catalog, retail, and TV. Respondents were asked to indicate where they have

purchased each of the products, and could respond to any or all of the four retail mediums. Omission of a response indicated non-purchase of the specific product category from that retail medium.

Subjects were asked to rate how important each of the perceived store characteristics is in their choice of store medium when making a purchase. The response was measured on a five point Likert scale of 1, least important to 5, most important. Respondents were asked to rate each of the ten store characteristics for each of the four store mediums: retail, catalog, Internet and TV.

Consumer characteristics regarding attitudes, opinion leadership, innovativeness, market knowledge of the Internet, and involvement were measured using standardized scales developed for each of these measures. Opinion leadership was measured using the Opinion Leadership Scale developed by Flynn, Goldsmith and Eastman, (1996). This scale consists of six items, measured on a five-point agree-disagree level of response. The level of respondents' opinion leadership was measured by summing the responses of the six items. The range of OPL scores was 6-25. The scale is designed to measure a specific domain, in this case shopping on the Internet. The researchers conclude in their analyses which developed this scale, it is adaptable to a variety of topics, and possesses a high level of internal consistency and reliability. Consumer innovativeness was measured by using the Domain Specific Innovativeness scale developed by Goldsmith and Hofacker, (1991). This scale was developed to measure the tendency of individuals to learn about and adopt innovations within a specific domain of interest, in this case, shopping via the Internet. The DSI consists of six items scored on a five-point disagree-agree format, and summed

to form an overall Domain Specific Innovativeness score, with a range of 6-30. Goldsmith and Hofacker examined the interaction of the DSI scale with opinion leadership, product involvement, and product category knowledge, and suggest using the DSI scale in conjunction with other constructs measuring involvement and opinion leadership. Consumer characteristics regarding product and purchase knowledge were measured using the Market Maven Propensity Scale, developed by Feick and Price (1987). Feick and Price determined Market Mavens are more likely to be product innovators, heavy information seekers and opinion leaders, with high purchase involvement. Market Mavens have information about many kinds of products, places to shop and market information. The MMP scales consists of six items, measured on a five-point agree-disagree scale regarding new products and where to shop for these products. These six items are summed to give an overall MMP score, and gain the range of scores was 6-30. Involvement was measured using the Purchase Decision Involvement Scale developed by Mittal, (1989). This scale measures the dimension of the purchase decision involvement consumers bring to the purchase-decision task. Scale items are worded in a manner to specifically direct the respondents toward consideration of purchase, and the importance of this decision, while also addressing the issue of the outcome of this decision process. The scale consists of four items, measured on a five-point bipolar response, which are summed and divided by four, for an average PDI score. The range for overall Purchase Decision Involvement was 1-5. In summary, consumer characteristics regarding attitudes were measured for overall scores of Opinion Leadership, Domain Specific Innovativeness, Market Maven Propensity, and Purchase Decision Involvement.

Consumer demographic characteristics were measured for age, gender, education, occupation, and income. Additional demographic information was included regarding marital status, ethnicity, size of household, number and ages of children in the home, and size of residence. Age was measured in seven levels as follows: 1) 18-24, 2) 25-29), 3) 30-34, 4) 35-44, 5) 45-54, 6) 55-64, and 7) 65 and over. Education was measured in six categories including: 1) less than high school, 2) graduated high school, 3) trade or technical school, 4) 1-3 years of college, 5) graduated college, 4 years, and 5) attended or completed graduate school, professional degree. Occupation was measured in ten categories, taken from the SRI VALS2 on-line survey (1995). The categories of occupation included in this item were 1) professional or technical, 2) manager or administrator, 3) sales worker, 4) clerical worker, 5) machine operator/laborer, 6) farmer/agriculture, 7) service worker, 8) education, 9) government or military worker, and 10) student. Income was measured as total household income in the past year, before taxes. The scale included ten levels: 1) less than $5,000 2) $5,000-$9,999 3) $10,000-$19,999 4)$20,000-$29,999 5) $30,000-$39,999 6) $40,000-$49,999 7) $50,000-$74,999 8) $75,000-$99,999, and 10) $100,000 and over. Additional demographic information was included in the survey regarding ethnicity, measured in five categories, Caucasian, Black, Hispanic/Spanish, Asian, and Other. Marital status was measured in five categories, married, single, divorced, widowed, and separated. Since research studies regarding selection of alternative retail mediums have included presence of children in the home, and specifically preschool and young children, three items have been included in the survey instrument to measure these variables. Respondents were asked how many people reside

in the household, how many children are in the household, and what ages the children are. Size of the household was measured in six levels: one, two, three, four, five, and six or more, individuals residing in the household. The number of children in the household was measured in six levels: one, two, three, four, five or more, and none. The ages of these children were grouped into four age categories: 1) 0-6, 2) 7-12, 3) 13-17, and 4) 18 and over, and a fifth category, none, for those who have no children at home. Subjects could choose all categories which applied to this item. A final question regarding size of residence was included to determine urban versus rural location of subjects. The categories of measurement for this item included: 1) large central city of 250,000 or more, 2) medium central city of 50,000-250,000, 3) suburb of a large central city, 4) suburb of a medium size central city, and 5) small city, town or village. Three additional items addressing computer use were also included in the survey. One question addressed how individuals gain access to the Internet, and was measured in five categories: 1) America OnLine, CompuServe or Prodigy, 2) other commercial access provider, 3) educational institution 4) business/employer access, and 5) International user, with request for two letter country code. Two questions asked respondents to indicate an average number of hours spent weekly for 1) on-line (on the Internet) and 2) working on the computer. Both of these items were measured using the following levels: 1) less than 5, 2) 5-10, 3) 11-15, 4) 16-25, and 5) more than 25 hours per week. Although these three questions regarding technology access and use have not been specifically measured in previous empirical research, similar items have been included in several of the commercial on-line surveys. Inclusion of the items could provide additional descriptive information regarding

use of technology by the respondents.

Two additional questions were included which address attitudes toward on-line shopping and perceptions of risk. The respondents were asked to indicate their overall attitude toward on-line shopping using a 5-point Likert scale, 1 being very unfavorable, and 5 being very favorable. Subjects were also asked to indicate reasons why they might not shop on the Internet. Multi-item response categories were: 1) unreliability of the seller, 2) possibility of credit card insecurity, and 3) lack of product information.

Data Analysis

In addressing the first research question, this study compared consumers' perception of store characteristics across four different shopping mediums: retail, catalog, Internet, and TV. The store characteristics analyzed include: 1) saving time, 2) convenience, 3) ease of payment, 4) company reputation, 5) brand reputation, 6) price, 7) quality of merchandise, 8) variety of merchandise, 9) reduced risk, and 10) customer service. Analysis of variance was used to compare each of the ten store characteristics for each of the four retail mediums, retail, catalog, Internet and TV, and to compare the respondents' perception of the store characteristics of the Internet versus retail, catalog and TV.

Research questions two and three suggest that store and consumer characteristics and product categories influence consumers' usage of the Internet as an alternative shopping medium. Empirical research addressing consumers' patronage of alternative mediums has found consumers choose retail mediums which save them time, are convenient, provide easy payment options, appropriately priced merchandise of good

quality, reduced risk regarding mis-purchase of products and appropriate customer services. The research also indicates consumers who choose alternative shopping mediums are opinion leaders, innovative, involved with the purchase, and in the case of Internet shopping, knowledgeable and familiar with computers and the Internet technology. Consumer demographics which influence the choice of alternative retail medium include age, gender, education, occupation and income. Consumers have indicated a greater likelihood to purchase certain products via the Internet. These products include 1) books and magazines, 2) music products, 3) computer products, 4) and travel products.

Variables

The dependent variable in this study was the intent to purchase from the Internet. The independent variables were store and consumer characteristics, and product categories. The empirical model was stated as Internet Usage = f (SC, CC, PC).

$$\text{Prob(Internet)} = \beta_0 + \beta_1(\text{store char.}) + \beta_2(\text{consumer char.}) + \beta_3(\text{product cat.})$$

In order to answer research question #1, descriptive statistics (mean and standard deviations) of each store characteristic across four mediums will be presented. Using ANOVA, comparison of consumers' perceived store characteristics of the Internet with other shopping mediums will be analyzed.

Research questions #2 and #3 were addressed by estimating the empirical model shown above. The dependent variable was the intention to purchase a particular product through the Internet and past patronage behavior of the Internet for each of the product categories. The past patronage behavior variable was measured in nominal level of yes or

no regarding the purchase of the product via the respective retail medium. The independent variables were consumer characteristics, and store characteristics. Regression analysis, specifically the General Linear Model procedure was used to analyze the data and estimate the model.

Descriptive statistics regarding consumer demographics, attitudes, and shopping intention for the Internet will provide summary shopping orientation tendencies of on-line consumers. Store characteristics will be grouped together based upon factor analysis and ANOVA results, indicating how consumers perceived each of the four retail mediums. Additionally, past patronage behavior of each of the four retail mediums for each of the fifteen product categories will provide as least descriptive information for patronage behavior of the four retail mediums and the products purchased from each. Consumer shopping orientations can be expected to include their 1) patronage behavior, i.e. catalog, TV, or Internet shopper, 2) store preferences, i.e. saving time, convenience, ease of payment, merchandise and brand quality, price, merchandise quality, reduction of risk and customer service orientations, 3) attitudinal characteristics regarding opinion leadership, innovativeness, market (knowledge) mavenism, and involvement, 4) demographic groupings regarding age, income, occupation, educational level, and size of household, as well as residence location. Additionally, information from respondents indicating why they might not choose to purchase via the Internet may provide insight into the perceptions held by those individuals who indicate low intention to purchase via the Internet and less favorable opinions of online shopping.

CHAPTER FIVE

RESULTS

Pilot Study Data Analysis

Preliminary testing of the survey instrument was conducted using a purposive sample of 102 faculty and students at Morehead State University. Approximately one-half of the surveys were administered via pencil and paper questionnaire, and the other half via on-line web page collection procedures. Logistic problems regarding the loading of the on-line document and appropriate submission procedures were encountered during the early phases of the pretesting period. Corrections were made to the method of posting the survey responses to the database on the system server, and recoding of variables internally in the document provided more efficient use of document size and loading capabilities. Upon completion of the pilot study, the survey instrument was loading reliably on multiple platforms, and required no special software configuration to submit the data responses to the server.

Statistical analyses were performed on the data to determine if any items could be eliminated from the survey instrument. Specifically, factor analysis using principal and maximum likelihood methods, with multiple rotation options were performed on the consumer attitudinal scales: Opinion Leadership (OPL), Domain Specific Innovativeness (DSI), Market Maven Propensity (MMP), and Purchase Decision Involvement (PDI). Results indicated seven factors were required to adequately explain consumer attitudes, and all individual scale items loaded at a significant level. It was especially important to also note that rotated factor pattern of individual factors included items from specific

attitude scales on each individual factor. Factor loading patterns are summarized in Figure 2. The following factors were identified: Factor 1, labeled Market Maven Propensity; Factor 2, Opinion Leadership A; Factor 3, Purchase Decision Involvement; Factor 4, Domain Specific Innovativeness, A; Factor 5, Opinion Leadership, B; Factor 6, Domain Specific Innovativeness, B; Factor 7, Domain Specific Innovativeness, C, with OPL item 5 also loading on this factor, in addition to Factor 2. Results of the factor analysis confirmed it was more appropriate to use the summed overall scores for OPL, DSI, and MMP, and the averaged score for PDI, as the scale designs indicated by the authors of the respective scales. This resulted in only four individual variables for inclusion of statistical modeling of consumers characteristics. In particular, each of the factors appeared to be measuring an individual scale construct.

Factor analysis was also performed using the same procedures described previously on the intent to purchase each of the fifteen product categories. Factor patterns using the alpha method, with varimax rotation are shown in Figure 3. These results indicate all fifteen product categories loaded on seven factors. Some factors could be gleaned from this pattern to reduce the number of products, but there were other product categories which load individually on a single factor. Several of those factors do not appear to be logical to the everyday consumer, and since the pilot test subjects were not a random sample, it was most advisable to leave the survey items as they were listed individually, and then from the larger, random sample apply this analysis to determine product groupings for regression modeling.

Factor Analysis of Attitude Scales, Pilot Study

Factor	Factor Loading	Eigen Value	% of Variance
Factor 1 (MMP)			
MMP1	.64	22.68	48.2%
MMP2	.82		
MMP3	.81		
MMP4	.83		
MMP5	.87		
MMP6	.63		
Factor 2 (OPL)			
OPL2	.40	11.03	23.5%
OPL3	.82		
OPL4	.85		
OPL5	.42		
OPL6	.59		
Factor 3 (PDI)			
PDI1	.49	7.23	15.3%
PDI2	.38		
PDI3	.96		
PDI4	.83		
Factor 4 (DSI)			
DSI1	.67	2.95	6.3%
DSI2	.64		
DSI6	.72		
Factor 5 (DSI)			
DSI 4	.47	1.44	3.1%
DSI5	.71		
Factor 6 (OPL)			
OPL1	.53	1.09	2.3%

Figure 2

Factor Analysis of Intent to Purchase Products via Internet, Pilot Study

Factor	Factor Loading	Eigen Value	% of Variance
Factor 1			
Books	.61	19.8	8.6
Business Serv.	.63		
Travel	.74		
Children Prods.	.51		
College	.59		
Factor 2			
Legal Serv.	.92	3.5	6.9
Financial Serv.	.59		
Mortgage Serv.	.60		
Factor 3			
Clothing	.47	1.8	1.5
Flowers	.69		
Food	.74		
Factor 4			
Music	.89	1.6	5.5
Computer Prods.	.54		

Figure 3

Some changes were made to the survey in the measurement levels of variables. Specifically, education was reduced to five levels, with the deletion of the first level, less than high school. The first two levels of income were collapsed to one category, less than $10,000, since very low levels of income were not expected to be evident for on-line consumers. The upper levels of income were retained, with evidence of research indicating on-line users have higher than average income, and GVU's Sixth Survey (1996) included similar higher level income categories. Upon conclusion of pretesting results, a sixth category of marital status, living with another, was added to the final instrument. This was based upon comments received by the respondents, and similar categories of

marital status were also included in GVU's Sixth Survey (1996). Based upon suggestions by the pretest subjects, four categories (item numbers 4-7) of reasons individuals might not purchase via the Internet were added for inclusion in the final survey instrument: 4) lack of familiarity with on-line purchasing procedures, 5) inability to examine the merchandise, 6) limited access to the Internet, and 7) lack of major credit card.

Survey Data Analysis

The survey was placed on the Morehead State University system server on April 17, 1997 and responses were collected for ten weeks, until June 26, 1997. The web page was submitted to search engines, directories, on-line ad listings (free services) and announcements requesting participation were posted to Internet listservs and newsgroups. A web-page counter was placed on the title page of the survey, and served to provide a form of response rate when compared to the number of actual survey responses. After the ten week period, 485 responses were received, 462 which were usable. A total of 1066 hits to the web-page were registered on the page counter, resulting in a 43.34% response rate.

Consumer Demographics

A demographic profile of the respondents, summarized in Figure 4, indicates respondents of the survey follow similarly to current Internet users. The respondents were predominantly young, with 61.9% between 18 and 34 years of age, more were male, 59.7% versus 40.3% female, income was spread across the categories with fairly even distribution. However, almost one-fourth, 23.6% reported income of $75,000 or more. The survey respondents were predominantly white, with 91.3% reporting their race as

Demographic Profile of Respondents and the U.S. Population *		
Variable	Respondents (N=462)	U.S. Population
Age		
18-24	33.3%	9.7%
25-34	28.6	15.9
35-44	19.9	16.0
45-54	14.3	11.5
55-64	3.7	8.1
65 and over	0.2	12.7
Gender		
Male	59.7%	48.8%
Female	40.3	51.2
Race		
Caucasian/white	91.3%	83.9%
Black	1.3	12.3
Hispanic/Spanish	1.3	9.0
Asian	4.5	
Other	1.5	3.8
Occupation		
Professional/Technical	28.6%	21.4
Manager/Administrator	10.2	16.3
Sales	1.5	14.8
Clerical	1.5	18.6
Machine Operator	0.4	7.8
Farmer/Agriculture	2.6	3.6
Service	0.4	13.8
Education	22.7	
Government/Military	2.2	
Student	29.9	

* U.S.Census Bureau, 1997

Figure 4

Demographic Respondent Profile and U.S. Population*		
Variable	Respondents (N=462)	U.S. Population
Income		
< $10,000	15.8%	13.6%
$10,000-$19,999	11.3	
$20,000-$29,999	10.2	
$30,000-$39,999	7.4	
$40,000-$49,999	12.8	
$50,000-$74,999	19.0	
$75,000-$99,999	10.6	13.9% ($75,000 +)
$100,00- and over	13.0	
Marital Status		
Married	41.3%	54.8%
Single	47.8	24.3
Divorced	4.8	
Widowed	0.6	
Separated	0.6	
Living w/ another	4.8	5.2
# Household Residents		
1	26.2%	24.3%
2	32.5	32.1
3	17.3	17.4
4	15.6	15.5
5	6.1	10.6 (5 +)
6 or more	2.4	
# Children in Household		
0	67.5%	
1	12.6	
2	11.9	
3	5.6	
4	0.9	
5	0.2	
6	1.3	

* U.S.Census Bureau, 1997

Figure 4, continued

white. The occupations reported were again heavily weighted in the field of education, 22.7% reported education, and 29.9% reported as students. The largest reported category of occupation was professional/technical, with 28.6% of the respondents in this category, followed by manager/administrator at 10.2%. Married versus single respondents were very similar, 41.3% married and 47.8% single. Individuals who were divorced and those living with another constituted 4.8% of the respondents for each category. More than half the households were small, 26.2% indicated only one person in the household, and 32.5% reported only two people in the household. Two-thirds of the respondents, 67.5% reported no children in the home, slightly more than ten percent each reported one, 12.6%, and two, 11.9%, children in the home.

Consumer Attitudes

Factor analysis, using the Alpha method with varimax rotation was performed on the individual items of the four attitude scales, Opinion Leadership, Domain Specific Innovativeness, Market Maven Propensity, and Purchase Decision Involvement. As summarized in Figure 5, the individual scale items loaded on separate factors. Additionally, only three items, Opinion Leadership items 1 and 2, and Domain Specific Innovativeness item 5 did not load on the five factors with Eigen values greater than 1. These results indicated it was appropriate to use the summed and average scores of the scales as designed by the authors. Thus, four variables for consumer attitudes were used for additional analysis: Opinion Leadership, Domain Specific Innovativeness, Market Maven Propensity, and Purchase Decision Involvement.

Factor Analysis Attitude Scales

Factor	Factor Loading	Eigen Value	% of Variance	
Factor 1 (MMP)				
MMP1	.63	11.9	9.6	.94
MMP2	.73			
MMP3	.77			
MMP4	.82			
MMP5	.84			
MMP6	.50			
Factor 2 (OPL)				
OPL3	.82	4.4	3.7	.73
OPL4	.82			
OPL5	.73			
OPL6	.81			
Factor 3 (PDI)				
PDI1	.49	3.4	2.7	.66
PDI2	.29			
PDI3	.87			
PDI4	.79			
Factor 4 (DSI)				
DSI1	.62	2.3	1.7	.44
DSI2	.64			
DSI6	.66			
Factor 5 (DSI)				
DSI3	.52	1.6	1.4	.28
DSI4	.60			

Figure 5

As indicated in the methodology, ANOVA was performed to analyze each of the ten store characteristics, of the four retail mediums, retail, catalog, Internet and tv, indicating significance in the means of these store ratings (Figure 6).

ANOVA Procedure Store Characteristics
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source:Store Characteristics

DF	Anova SS	Mean Square	F Value	Pr > F
3	1566.45616883	522.15205628	527.38	0.0001

Source: Error(Store Characteristics)

DF	Anova SS	Mean Square
1383	1369.29383117	0.99008954

Figure 6

Post hoc analysis, summarized in Figure 7, found only two store characteristics, convenience and saving time were not significant across all four retail mediums. The differences for the means of convenience for retail and catalog were not statistically significant, and the differences of the means for saving time of retail, catalog and Internet were not found to be statistically significant.

Means and Standard Deviations for Store Characteristics Across 4 Mediums

Variable	Retail		Catalog		Internet		TV	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Brand Rep	4.30*	0.85	3.88*	0.86	3.16*	1.23	2.31*	1.22
Company Rep	4.33*	0.86	3.87*	1.00	2.89*	1.21	2.21*	1.19
Convenience	3.52	1.17	3.56	1.14	3.23*	1.34	2.18*	1.25
Cust Serv	4.47*	0.83	3.45*	1.06	2.56*	1.26	2.04*	1.09
Ease of Pay	4.41*	0.91	3.86*	1.08	3.03*	1.33	2.74*	1.34
Merch Qual	4.38*	0.78	3.80*	0.95	3.13*	1.20	2.27*	1.20
Merch Var	4.28*	0.89	3.78*	0.95	3.26*	1.33	2.10*	1.13
Price	3.85*	1.02	3.67**	0.98	2.28*	1.24	2.64*	1.23
Reduced Risk	4.59*	0.79	3.58*	1.10	2.47*	1.23	2.13*	1.17
Save Time	3.13	1.28	3.24	1.23	3.08	1.37	2.18*	1.25

* Significant at .01 level
** Significant at .05 level

Figure 7

An interesting pattern emerged also regarding these store characteristic means, as shown in Figure 8. The store characteristics which are statistically different from each other (not convenience and saving time), are rated from highest to lowest, retail, catalog, Internet and tv. Thus, consumers rated each store characteristic highest for retail, next for catalog, third for the Internet, and lowest for tv.

Means for Store Characteristics

Variable Label	N	Mean	Std Dev
SAVE TIME RET	462	3.1255411	1.2778088
SAVE TIME CAT	462	3.2359307	1.2333785
SAVE TIME INT	462	3.0757576	1.3724501
SAVE TIME TV	462	2.1796537	1.2498058
CONVENIENCE RET	462	3.5216450	1.1720568
CONVENIENCE CAT	462	3.5562771	1.1446725
CONVENIENCE INT	462	3.2337662	1.3424112
CONVENIENCE TV	462	2.1796537	1.2463297
EASY PAY RET	462	4.4090909	0.9099138
EASY PAY CAT	462	3.8571429	1.0768430
EASY PAY INT	462	3.0281385	1.3342105
EASY PAY TV	462	2.7445887	1.3416905
CO REP RET	462	4.3311688	0.8617331
CO REP CAT	462	3.8701299	0.9991404
CO REP INT	462	2.8874459	1.2056872
CO REP TV	462	2.2077922	1.1874725
BR REP RET	462	4.2987013	0.8547167
BR REP CAT	462	3.8787879	0.9558725
BR REP INT	462	3.1601732	1.2341377
BR REP TV	462	2.3051948	1.2198356
PRICE RET	462	3.8484848	1.0197549
PRICE CAT	462	3.6666667	0.9776978
PRICE INT	462	3.2813853	1.2422601
PRICE TV	462	2.6428571	1.2340711
MDSE QUAL RET	462	4.3787879	0.7803333
MDSE QUAL CAT	462	3.7987013	0.9548134
MDSE QUAL INT	462	3.1341991	1.1816379
MDSE QUAL TV	462	2.2748918	1.1856780
MDSE VAR RET	462	4.2770563	0.8916786
MDSE VAR CAT	462	3.7792208	0.9516289
MDSE VAR INT	462	3.2597403	1.3278521
MDSE VAR TV	462	2.0952381	1.1349406
RED RISK RET	462	4.5909091	0.7872104
RED RISK CAT	462	3.5779221	1.0949448
RED RISK TV	462	2.1277056	1.1703730
CUS SERV RET	462	4.4653680	0.8291672
CUS SERV CAT	462	3.4458874	1.0683244
CUS SERV INT	462	2.5584416	1.2600331
CUS SERV TV	462	2.0432900	1.0894228

Figure 8

Factor analysis, using the alpha method, with varimax rotation was used to group the store characteristics of the Internet in a pattern more efficient to apply in the regression modeling (Figure 9). Five factors resulted and were labeled 1) convenience, 2) service, 3) merchandise, 4) reputation and 5) easy payment. Specifically, the first factor, Convenience, was comprised of saving time and convenience for Internet store characteristics. The second factor was comprised of reduced risk, such as return policies and refunds/exchanges, and customer service. Thus this factor was label service. The third factor included merchandise price, merchandise quality and merchandise variety. These store characteristics of the Internet all related to aspects of the merchandise offering, so this factor was labeled merchandise. The fourth factor included both of the Internet store characteristics related to reputation: company reputation and brand reputation. As a result, this factor was labeled Reputation. Lastly the fifth and final factor was comprised solely of ease of payment, thus is was labeled Easy Payment.

Factor Analysis Store Characteristics, Internet

Factor	Factor Loading	Eigen Value	% of Variance
Factor 1 (StoreA) Convenience			
Save Time	.68	8.1	.81
Convenience	.74		
Factor 2 (StoreB) Service			
Reduced Risk	.65	0.73	.24
Customer Service	.73		
Factor 3 (StoreC) Merchandise			
Price	.58	0.48	.11
Merchandise Quality	.56		
Merchandise Variety	.44		
Factor 4 (StoreD) Reputation			
Company Reputation	.57	0.37	.09
Brand Reputation	.65		
Factor 5 (StoreE) Easy Payment			
Easy Payment	.57	.028	.03

Figure 9

Products Purchased

Respondents reported their patronage of each of the four retail mediums for each of the fifteen product categories. As can be seen in Figure 10, survey participants had purchased products in all fifteen of the product categories. It should be noted that small numbers of respondents had purchased from the three alternative retail mediums in business, legal, financial and mortgage lending services. Additionally, low numbers were reported for clothing, electronics, children's products, food and automotive products purchased via the Internet.

Patronage of Retail Mediums by Product Categories

Medium	Retail		Catalog		Internet		TV	
Product	N	%	N	%	N	%	N	%
Books	441	95.5	210	45.5	159	34.4	210	45.5
Business Serv	262	56.7	74	16.0	105	22.7	74	16.0
Legal Serv	172	37.2	19	4.1	16	3.5	19	4.1
Financial Serv	241	52.2	29	6.3	57	12.3	29	6.3
Music	425	92.0	241	52.2	89	19.3	241	52.2
Clothing	445	96.3	278	60.2	37	8.0	278	60.2
Computers	389	84.2	201	43.5	192	41.6	201	43.5
Electronics	436	94.6	126	27.3	27	5.8	126	27.3
Flowers	337	72.9	77	16.7	70	15.2	77	16.7
Travel	324	70.1	97	21.0	132	28.6	97	21.0
Children Prod	341	73.8	150	32.5	25	5.4	150	32.5
College/Educ	215	46.5	112	24.2	85	18.4	112	24.2
Automotive	400	86.6	110	23.8	18	3.9	110	23.8
Mortgage Serv	214	46.3	13	2.8	8	1.7	13	2.8

Figure 10

By summing the product categories purchased via the Internet, it was determined that 159, or 34.4% of the respondents had not purchased any products via the Internet, and one respondent had purchased from eleven product categories (see Figure 11). Approximately 40% of the respondents had made purchases on the Internet from one to three product categories.

Cumulative Product Category Purchases

BUY	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	159	34.4	159	34.4
1	75	16.2	234	50.6
2	62	13.4	296	64.1
3	50	10.8	346	74.9
4	33	7.1	379	82.0
5	23	5.0	402	87.0
6	19	4.1	421	91.1
7	14	3.0	435	94.2
8	13	2.8	448	97.0
9	6	1.3	454	98.3
10	7	1.5	461	99.8
11	1	0.2	462	100.0

Figure 11

Figure 12 indicates which product categories were most and least frequently purchased. Computer products, books and magazines, travel, and business services were the most frequently purchased product categories. Mortgage services, legal services and automotive products were the least frequently purchased categories, each with less than 5% of the respondents reporting purchases in these categories. Electronics, food and children's products were purchased by only 5% of the survey subjects, and clothing by only 8% of the subjects.

Internet Purchase Frequencies

Product	N	%
Books	159	34.4
Business Services	105	22.7
Legal Services	16	3.5
Financial Services	57	12.3
Music	89	19.3
Clothing	37	8.0
Computers	192	41.6
Electronics	27	5.8
Flowers	70	15.2
Travel	132	28.6
Children's Products	25	5.4
Food	27	5.8
College/Education	85	18.4
Automotive Products	18	3.9
Mortgage Services	8	1.7

Figure 12

Intent to Purchase

Respondents indicated their intent to purchase products from each of the fifteen product categories via the Internet, using a 5-point Likert scale. The responses, as listed in Figure 13, indicate books, computer products, music, and travel products received the highest intent to purchase ratings, while food, legal and mortgage lending services received the lowest ratings.

Mean Scores Intent to Purchase Products via Internet

Variable	Mean	Std. Dev.
Books	3.67	1.41
Computer	3.55	1.47
Music	3.49	1.41
Travel	3.05	1.48
College	2.53	1.43
Clothing	2.45	1.36
Flowers	2.45	1.50
Electronics	2.44	1.39
Business Services	2.40	1.33
Children's Products	2.35	1.35
Automotive	2.12	1.26
Financial Services	2.03	1.26
Food	1.79	1.20
Legal Services	1.66	1.04
Mortgage Lending	1.63	1.07

Figure 13

Factor analysis, using Alpha method with varimax rotation was employed to more efficiently analyze the product categories and develop patterns of products which should be compared to one another. The results of the factor analysis, see Figure 14, indicate four factors of products which group together, with the fourth factor receiving a slightly less than 1.0 Eigen Value. Factor 1, termed Recreation, included books, music, computer and travel products. Factor 2, termed Services, included business, legal, financial, and mortgage lending services. Factor 3, labeled Gifts, included clothing, flowers and food. The fourth factor, labeled Electronics, included electronic and automotive products. Children's products and college loaded on individual factors, with Eigen values much less than 1.0. These factor patterns were useful in analyzing differences in the mean intent to purchase scores for the fifteen product categories.

Factor Analysis, Intent to Purchase Products via Internet

Factor	Factor Loading	Eigen Value	% of Variance	Alpha Coefficient
Factor 1				
(Recreation)		12.3	9.7	.96
Books	.73			
Music	.66			
Computer Prods.	.72			
Travel	.45			
Factor 2				
(Services)		1.9	1.8	.46
Business Svs.	.66			
Legal Svs.	.76			
Financial Svs.	.68			
Mortgage Lend.	.46			
Factor 3				
(Gifts)		1.2	1.2	.14
Clothing	.38			
Flowers	.74			
Food	.53			
Factor 4				
(Electronics)		.90	.92	-.09
Electronics	.86			
Automotive	.47			

Figure 14

Using ANOVA with repeated measures, Figure 15, there were significant differences in the mean scores for intent to purchase specific products via the Internet.

ANOVA Intent to Purchase
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: Intent to Purchase

DF	Anova SS	Mean Square	F Value	Pr > F
14	2825.77142857	201.84081633	180.93	0.0001

Source: Error(Intent to Purchase)

DF	Anova SS	Mean Square
6454	7199.96190476	1.11558133

Figure 15

Post hoc analysis found significant differences in mean scores for products, and is summarized in Figure 16, grouped by factor pattern. Thus, the mean scores for intention to purchase travel products was found to be statistically significant from the other three product mean scores of Factor 1, Recreation products. The mean score for mortgage lending services was found to be statistically significant from the other mean scores of products in Factor 2, Services, and the mean score for business services was statistically different from legal services. The only other intent score for a product category found to be statistically significant was the mean score for food, from Factor 3, Gifts, which significantly different from clothing and flowers.

ANOVA Post Hoc Analysis of Mean Intent Scores

Variable	Mean	S. D.	Sig .05
Books	3.67	1.41	
Computer	3.55	1.47	
Music	3.49	1.41	
Travel	3.05	1.48	*
Business Services	2.40	1.33	**
Financial Services	2.03	1.26	
Legal Services	1.66	1.04	
Mortgage Lending	1.63	1.07	*
** from legal and mortgage only			
Clothing	2.45	1.36	
Flowers	2.45	1.50	
Food	1.79	1.20	*
Electronics	2.44	1.39	
Automotive	2.12	1.26	
College	2.53	1.43	
Children's Products	2.35	1.35	

Figure 16

Multiple ANOVA with repeated measures, post hoc analysis using Scheffe and Student-Newman-Keuls summaries are summarized in Figures 17 and 18, respectively. This summary addresses the product categories, in decreasing intent to purchase scores. The mean intent to purchase score for books is statistically significant from all product categories except: music, computers, and electronics. Mean scores for music and computers are significantly different from legal and financial services, clothing, flowers, travel, children's products, food, college, automotive products and mortgage lending. Travel was significantly different from all product categories, except business services, and electronics. The mean score for intent to purchase college/education was statistically

Significance Pattern Post Hoc Analysis, Product Categories, Intent to Purchase
Scheffe, significant at .05

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1		*	*	*		*		*	*	*	*	*	*	*	*
2			*	*								*			*
3	*	*			*	*	*	*	*	*	*		*	*	
4	*				*	*	*	*	*	*			*		*
5		*	*	*		*		*	*	*	*	*	*	*	*
6	*		*	*	*		*			*		*			*
7		*	*	*		*		*	*	*	*	*	*	*	*
8			*	*								*			*
9	*		*	*	*		*			*		*			*
10	*	*	*	*	*	*	*	*	*		*	*	*	*	*
11	*		*		*		*			*		*			*
12	*	*			*	*	*	*	*	*	*		*		
13	*		*	*	*		*			*		*		*	*
14	*		*		*		*			*			*		*
15	*	*		*	*	*	*	*	*	*	*		*	*	

1=books/mags
2=business services
3=legal services
4=financial services
5=music
6=clothing
7=computers
8=electronics
9=flowers
10=travel
11=children's products
12=food
13=college
14=automotive products
15=mortgage lending
Figure 17

Significance Pattern Post Hoc Analysis, Product Categories, Intent to Purchase
Student-Newman-Keuls, significant at .05

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1		*	*		*	*		*	*	*	*		*		*
2	*		*	*	*		*			*		*		*	*
3	*	*		*	*	*	*	*	*	*	*		*	*	
4	*	*			*	*	*	*	*	*	*		*		*
5		*	*	*				*	*	*	*	*	*	*	*
6	*		*	*	*		*			*		*		*	*
7		*	*	*		*		*	*	*	*		*	*	*
8	*		*	*	*		*			*		*		*	*
9	*		*	*	*		*			*		*		*	*
10	*	*	*	*	*	*	*	*	*		*	*	*	*	*
11	*		*	*	*		*			*		*		*	*
12	*	*		*	*	*	*	*	*	*	*		*	*	
13	*		*	*	*		*			*		*		*	*
14	*	*			*	*	*	*	*	*	*		*		*
15	*	*		*	*	*	*	*	*	*	*		*	*	

1=books/mags
2=business services
3=legal services
4=financial services
5=music
6=clothing
7=computers
8=electronics
9=flowers
10=travel
11=children's products
12=food
13=college
14=automotive products
15=mortgage lending
Figure 18

significant from the mean scores for books, legal and financial services, music, computers, travel, food, automotive products, and mortgage lending services. Clothing and flowers mean scores were the same (2.45), with differing standard deviations (1.36 and 1.50 respectively), while the mean score for electronics was close, 2.44. ANOVA post hoc results are similar for the three variables. Mean scores for all three of these products were significantly different from books, legal and financial services, computers, travel, food, and mortgage lending services. Flowers and electronics also differed from music, while clothing did not. The mean score for intent to purchase business services was statistically significant from scores for books, legal services, music, computers, travel, food and mortgage lending. The score for intent to purchase children's products was significantly different from the scores for books, legal services, music, computers, travel, food and mortgage lending services. The mean score for automotive products was statistically significant from legal services, music, computers, travel, college and mortgage lending services. Financial services mean score was significantly different from business services, music, clothing, computers, electronics, flowers, travel, college and mortgage lending services. The mean intent to purchase food score was statistically significant from scores from business services, music, clothing, electronics, flowers, travel and children's products. Significant patterns for the mean scores for intent to purchase legal and mortgage lending services were similar. Both product categories were significantly different from the scores for books, business services, music, clothing, computers, electronics, flowers, travel, and children's products. Additionally, the mean score for mortgage lending services was also statistically significant from the score for automotive

products, while legal services was significantly different from college. To summarize the results of analysis of the mean intent to purchase product categories, the four product categories receiving the highest intent scores were books and magazines, music, computers, and travel (Figure 19). The mean scores for these variables were statistically significant from other product categories, with the exception of business services and electronics. Travel was also statistically significant from the mean scores for books and magazines, music and computers. This would indicate respondents reported a higher intention to purchase these product categories via the Internet. The three product categories receiving the lowest intent to purchase scores, legal and mortgage lending services and food, were not statistically different from each other, while legal services was significantly different from all other product categories except financial services, and food was statistically different from financial services and automotive products. This finding would indicate these three products are the least likely to be purchased via the Internet.

Significance Pattern Post Hoc Analysis, Product Categories, Intent to Purchase
Scheffe and Student-Newman-Keuls combined significant for both at .05

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
1		*	*			*		*	*	*	*		*		*
2	*		*	*								*			*
3	*	*			*	*	*	*	*	*	*		*	*	
4	*				*	*	*	*	*	*			*		*
5		*	*	*				*	*	*	*	*	*	*	*
6	*		*	*	*		*			*		*			*
7		*	*	*		*		*	*	*	*		*	*	*
8			*	*								*			*
9	*		*	*	*		*			*		*			*
10	*	*	*	*	*	*	*	*	*		*	*	*	*	*
11	*		*		*		*			*		*			*
12	*	*			*	*	*	*	*	*	*		*		
13	*		*	*	*		*			*				*	
14	*				*		*			*			*		*
15	*	*		*	*	*	*	*	*	*	*		*	*	

1=books/mags
2=business services
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5=music
6=clothing
7=computers
8=electronics
9=flowers
10=travel
11=children's products
12=food
13=college
14=automotive products
15=mortgage lending
Figure 19

Regression Findings

Regression analysis, using the General Linear Model, was employed to examine the store and consumer characteristics which influenced the intent to purchase via the Internet. Factor scores were used for the intent to purchase product categories. The product categories analyzed in the model were: 1) recreational products, which included books, music, computers and travel, 2) business services, including business, legal, financial and mortgage lending services, 3) gifts, which included clothing, food and drink, and flowers and plants, 4) electronics, including electronic products and automotive products. As a reminder, the store characteristics were: 1) saving time, 2) convenience, 3) ease of payment, 4) company reputation, 5) brand reputation, 6) price, 7) merchandise quality, 8) merchandise variety, 9) reduced risk, and 10) convenience. Categorical demographic variables were recoded as dummy variables, and some categories were collapsed. Specifically, marital status was collapsed into three categories: married, single, or other. The last category included widowed, divorced, separated and living with another. The category for married was the omitted category. The five levels of education were collapsed to three levels including: 1) high school and technical/trade school, 2) some college and college graduate, and 3) graduate school and/or professional degree. Category two, college and college graduate was the omitted category. The five categories of race were collapsed to: 1) Caucasian, 2) Asian, and 3) other. The last category of other was the omitted category. The nine occupation categories were combined to form five categories: 1) professional or technical, managerial or administrative, and government or military, 2) sales, clerical and service, 3) machine operator/laborer and farmer/agriculture,

4) education, and 5) student. The first category, professional/technical and administrative/magerial was the omitted category. Age and income levels were collapsed to approximately equal levels of measurement. Age was recoded to 1) 18-24, 2) 25-34, 3) 35-44, 4) 45-54, and 5) 55 and over. Income levels were recoded to the following levels: 1) less than $10,000, 2) $10,000-$29,999, 3) $30,000-$49,999, 4) $50,000-$74,999, 5) $75,000-$99,999, and 6) $100,000 and over.

Regression Analysis

Regression analysis was performed using two models. The first model included the individual store characteristics, and the consumer demographic and attitudinal variables. The second model included the factor scores for store characteristics, consumer demographic and attitudinal variables. The intent to purchase via the Internet was the dependent variable in both models. The regression analysis model using individual store characteristics had an r-square of 0.767. The full model is available in Appendix F. The regression analysis model using store factor scores had an r-square of 0.766. The full model is available in Appendix G. The discussion which follows will address the store and consumer characteristics individually for each of the models.

Regression Results of Store Characteristics

Three of the store characteristics were statistically significant: merchandise quality, merchandise variety and customer service, see Figure 20.

	Regression Analysis, Store Characteristics			
	Est.	T for H_o	Pr > T	Std. Err.
Save Time	-.00791	-1.42	.1562	.00558
Convenience	-.00799	-1.36	.1723	.00586
Ease of Payment	-.00588	-1.28	.2008	.00459
Company Reputation	-.00351	-.062	.5360	.00583
Brand Reputation	0.00479	0.74	.4604	.00650
Price	0.00662	1.15	.2494	.00575
Merchandise Quality	0.01271	1.95	.0511	.00651
Merchandise Variety	0.01471	3.02	.0026	.00488
Reduced Risk	-.01049	-1.86	.0636	.00566
Customer Service	0.03849	6.45	.0001	.00597
Insecure Credit Card	-.03469	-3.01	.0026	.01151

Figure 20

Reduced risk was marginally significant in the model, but was negatively correlated with the dependent variable, intent to purchase. Additionally, insecurity of credit card transactions was statistically significant and negatively associated with the intent to purchase via the Internet. Thus, the results would indicate that six of the store characteristics examined were not influential in the subjects' intent to purchase products via the Internet. These store characteristics which were not significant in the regression model were: 1) saving time, 2) convenience, 3) ease of payment, 4) company reputation, 5) company reputation, and 6) merchandise price. The conclusions to be drawn from this analysis would indicate that merchandise offered, specifically quality and variety and

customer services positively influence consumers to shop via the Internet. Additionally, lack of secure on-line transactions for credit card purchases discourage them from purchasing via the Internet. Finally, the ability to return merchandise, and other aspects which reduce the risk of mispurchase negatively influenced the intent to purchase via the Internet. This specific results is rather puzzling. Perhaps consumers perceive the prospect of repackaging and making shipping arrangements to return unsatisfactory products too bothersome. Perhaps there is some underlying aspect of this store characteristic which has yet to be identified. Furthermore, there may be some inter-relationship between this store characteristic and other characteristics, such as customer services and ease of payment, which are not addressed in this model analysis.

Regression Results of Consumer Characteristics

The consumer characteristics analyzed in the model were: 1) age, 2) gender, 3) marital status, 4) education, 5) occupation, 6) race, 7) size of metropolitan area, 8) income, 9) number of people in the household (household size), and 10) presence or absence of children in the home. Consumer attitude characteristics analyzed included: 1) opinion leadership, 2) domain specific innovativeness, 3) market maven propensity, and 4) purchase decision involvement. Another variable was included in the model as a control: national origin, specifically, U.S. or international respondent to the survey. This additional variable was included since 87% of the respondents were from the United States. Categorical variables were controlled for with the use of dummy variables. The results of the regression analysis found eight consumer demographic characteristics to be statistically significant. These characteristics were: 1) age, 2) gender, 3) marital status, 4) education,

5) occupation, 6) race, 7) metropolitan size of residence, and 8) national origin. Two other consumer characteristic were marginally significant: 1) income with p=.08, and 2) size of household with p=.06. Two of the four attitude variables were statistically significant, opinion leadership and domain specific innovativeness (Figure 21).

	Regression Analysis, Consumer Characteristics			
	Estimate	T for H_o	Pr >T	Std. Err.
Age	-.02247	-3.31	.0009	.00678
Gender. Male	0.09845	9.91	.0001	.01080
Marital Status. Single	-.03424	-2.20	.0280	.01558
Marital Status. Other	0.02399	1.34	.1799	.01788
Education. No Coll	-.09363	-4.33	.0001	.02163
Education. Grad/Prof Degree	0.00513	1.19	.2347	.00432
Occupation. Sales/Serv/Cler	0.12843	4.35	.0001	.02953
Occupation. Labor/Ag	0.00631	0.19	.8525	.03395
Occupation. Education	0.01867	1.30	.1929	.01434
Occupation. Student	-.00491	-0.29	.7727	.01699
Race. Caucasian	0.06298	2.50	.0124	.02516
Race. Asian	0.22176	6.45	.0001	.03436
Metropolitan 250,000+	-.05896	-3.59	.0003	.01644
Metropolitan 50-250,000	-.02631	-1.95	.0507	.01346
Metropolitan, Sub/250,000	-.00266	-0.15	.8783	.01735
Metropolitan. Sub 50-250,000	0.06726	2.74	.0061	.02454
Income	-.00719	-1.75	.0804	.00412
No. People in household	0.01057	1.88	.0605	.00563
Children in home	0.01546	1.07	.2844	.01444
Opinion Leadership	0.01439	10.42	.0001	.00138
Domain Spec. Innovativeness	0.005724	3.54	.0004	.00132
Market Maven Propensity	-.000059	-0.06	.9536	.00103
Purch. Decision Involvement	0.00211	0.28	.7773	.00745
Nationality	-.11994	-6.83	.0001	.01756

Figure 21

In examining specific results of the regression analysis and consumer characteristics, the following observations can be made. Age was statistically significant, and negatively estimated in the model. These results would indicate younger respondents were more likely to express a higher intent to purchase products via the Internet.

The coding for the gender variable was formatted to compare men to women. The results indicate men were more likely to express intent to purchase via the Internet, as this variable was statistically significant at the .0001 level.

Marital status was examined as married, single, or other. The last category included: divorced, widowed, separated, and living with another. The results found single marital status to be statistically significant, and negatively correlated in the model. This would suggest single respondents were less likely to intend to shop via the Internet.

Education was also examined in this model. The so-called middle category, college and college graduate was omitted in the dummy variable setup. Thus the two categories of education compared to this category of education were 1) high school and technical/trade school, 2) graduate/professional degree. The regression analysis results found the category for high school/ technical and trade school was statistically significant, and negatively correlated with intent to purchase via the Internet.

Occupation was examined, and only one category of occupation, sales/clerical/service was found to be significant. This category was statistically significant at the .0001 level. The positive estimate would indicate this occupational category is positively correlated with the intent to purchase via the Internet. Thus members of this occupational grouping are more likely to express an intent to purchase via the Internet that

the other categories tested: 1) professional/technical/managerial/administrative, 3) farm/agriculture/machine laborer, 4) education and 5) student. There is no evident explanation for this one specific category to be more likely to shop via the Internet at this time.

Race was examined, with specifically Caucasian and Asian categories tested. Both of these variables were statistically significant, with Caucasian significant at p=.01 and Asian significant at p=.0001. These results would indicate that Caucasian and Asian respondents were more likely to express an intent to shop via the Internet. However, since 91% of the respondents were Caucasian and 4% were Asian these results may be suspect, since the distribution is skewed in the direction of Caucasian respondents.

The location of the residence in relationship to the size of metropolitan area was also examined. The categories were 1) large metro area of 250,000 or more, 2) medium metropolitan area of 50,000-250,000, 3) suburb of a large metro area, 4) suburb of a medium metro area. Of the four residential areas tested, all but the third were statistically significant. However, the two larger metro area categories were negatively correlated with the intent to purchase via the Internet. The last category, suburb of a medium metro area was statistically significant at the .0062 level and positively correlated with the intent to shop via the Internet. These results would seem to be logical. Consumers who live in larger metro areas have more shopping venues and a larger variety of choice for their shopping selection. Thus, they may not be as interested in patronizing alternative shopping mediums. The positive correlation of the estimate for the suburb of a medium

metropolitan area could be related to a reduced number of retail venues available to people who live in this type of metroplex.

Two of the four attitude variables were significant at the .0001 level. These two variables were opinion leadership and domain specific innovativeness. Both of the estimates were positive, indicating that higher levels exhibited of these two attitudes were influential in shopping via the Internet. Thus those respondents who expressed a higher intent to patronize the Internet were more likely to rate higher on opinion leadership and domain specific innovativeness.

The other two consumer attitude variables, market maven propensity and purchase decision involvement, were not statistically significant in the regression model. Correlation analysis showed market maven propensity and opinion leadership were correlated at .35 level. Thus the correlation between these two variables may be influencing the level of significance exhibited in the model.

Income was marginally significant at the .08 level, and was negatively estimated. This result would indicate that lower levels of income would be more likely to predict intent to purchase via the Internet. This would seem to be the opposite of what prevailing thought supports at this time. Specifically, the costs associated with acquisition of the technology and equipment necessary to access the Internet would infer higher level of income for those consumers who are currently on-line. The regression analysis results however, do not support this demographic characteristic regarding intent to shop via the Internet. However, this variable is only marginally significant.

Another variable which was marginally significant at the .06 level is the number of people in the household. The estimate of this variable was positive, thus it would appear that larger households are more likely to express intent to patronize the Internet. This could be a result of the time-poor consumer with children at home. It could also be an outcome of having children in the home, working and using the Internet as an educational tool, and then expanding how it is used, and what activities are conducted online.

Finally, nationality of the respondents was examined. Specifically, respondents from the United States were compared to the international respondents. The variable was statistically significant at the .0001 level, and negatively estimated. These results indicate that U.S. respondents were more likely to exhibit intent to shop via the Internet.

Summary of Regression Model for Intent to Purchase via the Internet

To summarize the regression analysis of intent to purchase from the Internet the following observations can be made. Merchandise quality and variety and customer services positively influence intent to shop via the Internet. Additionally, concern regarding insecurity of credit card transactions deters consumers from shopping via the Internet. Younger consumers, male subjects and those employed in sales/clerical/and service positions, and people who reside in suburbs of medium-sized metropolitan areas are more likely to express intent to shop via this alternative medium. Additionally, opinion leaders and domain specific (Internet) innovators are more likely to express intent to patronize this medium. Conversely, single consumers, those with no college education, those who live in larger metropolitan areas, and higher income levels seem to be deterrents to consumers patronage of the Internet as a shopping medium. Race and U.S. versus

international users may also play a role, but since the data set is skewed with large percentages of Caucasian and U.S. respondents, the results regarding these variables must be viewed with caution.

Regression Analysis Using Store Characteristic Factor Scores

Because the results of the regression analysis regarding store characteristics is somewhat contradictory regarding the last two store characteristics, reduced risk and customer service, additional analysis may be appropriate. Factor analysis of the store characteristics found five factors. The factors are: 1) Convenience, which includes saving time and convenience; 2) Service, which includes reduced risk and customer service, 3) Merchandise, which includes price, merchandise quality and merchandise variety; 4) Reputation, which includes company and brand reputation, and 5) Payment which includes ease of payment. This pattern of factors would tend to indicate that the individual store characteristics are not perceived by the consumer as separate characteristics and aspects of the shopping medium, but rather that they are related or work in conjunction with other characteristics in the mind of the consumer when choosing where to shop. Therefore, the regression analysis was administered again, this time using the store characteristic factor scores for the five store factors, rather than the ten individual store characteristics.

Regression Results of Store Factor Scores

The regression model found two of the store factors to be statistically significant at the .0001 level. The factors were service and merchandise. The first, service, included reduced risk and customer services. The estimate was positive, which would indicate that as consumers perceived the aspects of the store factor to be high, intent to purchase via

the Internet increased. The second factor which was significant, merchandise, included price, merchandise variety and merchandise quality. Again, the estimate was positive, which would indicate as respondents rated this aspect of the Internet high, their intent to purchase via the medium increased. The results of these two factors would indicate consumers value customer services provided by the retailer, and are concerned with aspects of the merchandise offered, including the price and the assortment available. A third store factor was marginally significant at .079, reputation. This factor included company and brand reputation. This factor may be related to the merchandise factor, as many consumers patronize specific retailers because of the company's policies, and services, or the brands and merchandise carried. Thus the merchandise factor and reputation factor may be somewhat related or correlated, in the minds of consumers as they select a retail medium to patronize. Two of the store factors were not significant in the model: convenience, which included saving time and convenience, and ease of payment. These results would indicate convenience and ease of payment are not important to consumers in their choice and selection of the Internet as a retail medium. Rather the merchandise offered, and customer services seem to influence consumers in their intent to patronize the Internet as a shopping medium. Finally, insecure credit card transactions was statistically significant at the .008 level, and the estimate was negative. This would indicate that as consumers perceived their credit card transactions to be insecure via the on-line transaction, the intent to purchase via the Internet was reduced. The summary of these findings is given in Figure 22.

	Regression Analysis, Store Factor Scores			
	Est.	T for H_o	Pr > T	Std. Err.
Store Factor 1	-.00307	-0.43	.6646	.00709
Store Factor 2	0.04541	6.80	.0001	.00666
Store Factor 3	0.03017	3.84	.0001	.00785
Store Factor 4	1.01264	1.76	.0785	.00718
Store Factor 5	-.00171	-0.20	.8399	.00847
Insecure Credit Card	-.03018	-2.64	.0084	.01145

Figure 22

Regression Results of Consumer Characteristics, with Store Factors

The results of the regression analysis and consumers characteristics are very similar to the previous analysis. There are only two differences in the model using store factor scores: income is no longer significant, even marginally, and one occupational category, education is now marginally significant.

Age was significant at the .0001 level and the estimate was negative, indicating younger respondents expressed higher intent to purchase via the Internet. This is consistent with the findings of the first regression analysis.

Gender was again significant at the .0001 level, and the estimate was positive for the dummy variable for males. These results, again consistent with the first regression analysis indicated men were more likely to indicate higher intent to purchase via the Internet.

Marital status was statistically significant for the single status dummy variable, and the estimate was negative for this variable. These results, again consistent with previous analysis, would indicate being single negatively influenced the intent to patronize the Internet.

Education was again significant at the .0001 level for the first category of education, high school or trade and technical school. Again, consistent with the previous analysis, the estimate was negative. These results suggest that those respondents without any form of college education were less likely to express intent to shop via the Internet, compared to the respondents with some college or graduate degrees.

Occupation was statistically significant at the .0001 level for category two, sales, clerical and service workers. Additionally, the fourth category, education, was marginally significant at the .085 level. The estimates were positive for both of the occupation categories, indicating people employed in these areas expressed a higher intent to purchase via the Internet.

Both Caucasian and Asian race categories were statistically significant at the .0001 level. The estimate was positive, indicating respondents in these two categories expressed a greater intent to purchase via the Internet, than respondents in the third category, all other races. Caution should be taken when examining these results since 91% of the respondents were Caucasian and 4% were Asian. Thus, the remainder of the respondents only accounted for 5% of the sample, and this results may be biased based upon the sheer numbers.

The size of the metropolitan area where respondents reside was again statistically significant for three of the metroplex areas: 1) 250,000 and over, 2) 50,000-250,000, and 3) suburb of 50,000-250,000 city. The estimate was negative for the first two categories, and positive for the third category. These results are consistent with the previous regression analysis. Thus the conclusions to be drawn from these results would indicate respondents who live in larger metropolitan areas expressed lower intent to purchase via the Internet, while those who live in smaller suburban areas are likely to express higher intent to purchase via the Internet.

Again, consistent with the previous analysis, two of the four consumer attitude variables were statistically significant at the .0001 level. These two, opinion leadership and domain specific innovativeness were again positively associated with intent to purchase via the Internet. Also, consistent with the previous analysis, market maven propensity and purchase decision involvement were not statistically significant. The conclusions to be drawn are that those respondents who are opinion leaders and innovators were more likely to express intent to shop via the Internet.

Finally, nationality was statistically significant at the .0001 level. The estimate was negative, and the coding for this variable indicates that respondents from the U.S. were more likely to report intent to purchase via the Internet than the international respondents. Again, these results should take into consideration 87% of the data set were respondents from the United States.

The number of residents in the household, size of household, was marginally significant at the .08 level, consistent with the previous analysis. Again, this could be a

result of families spending more time at home, and also being on-line. It could be a result of the children and parents working on-line together. While it might be assumed these respondents would be more time-poor, or pressured to shop, since saving time was significant in the statistical analysis, this assumption cannot be made to explain these results. There must be some other influence, perhaps not included in the survey which has an impact on the results. Figure 23 summarizes the results of regression analysis and consumer characteristics.

	Regression Analysis, Consumer Characteristics, with Store Factor Scores			
	Estimate	T for H_0	Pr >T	Std. Err.
Age	-.028522	-4.28	.0001	.00666
Gender, Male	0.09983	9.27	.0001	.01077
Marital Status, Single	-.03122	-2.03	.0420	.01535
Marital Status, Other	0.02808	1.59	.1127	.01772
Education, No Coll	-.08994	-4.17	.0001	.02158
Education, Grad/Prof Degree	0.00436	1.01	.3105	.00430
Occupation, Sales/Serv/Cler	0.11598	3.98	.0001	.02913
Occupation, Labor/Ag	-.006582	-0.20	.8441	.03346
Occupation, Education	0.02456	1.72	.0854	.01428
Occupation, Student	-.01098	-0.65	.5132	.01679
Race, Caucasian	0.06391	2.56	.0106	.02501
Race, Asian	0.20927	6.13	.0001	.03413
Metropolitan 250,000+	-.06256	-3.83	.0001	.01635
Metropolitan 50-250,000	-.02695	-2.00	.0453	.01346
Metropolitan, Sub/250,000	-.00004	-0.00	.9980	.01724
Metropolitan, Sub 50-250,000	0.06166	2.54	.0111	.02459
Income	-.00529	-1.29	.1960	.00409
No. People in household	0.00954	1.73	.0835	.00551
Children in home	0.01977	1.39	.1660	.01427
Opinion Leadership	0.01499	10.93	.0001	.00137
Domain Spec. Innovativeness	0.00543	3.36	.0008	.00162
Market Maven Propensity	.00006	0.06	.9544	.00102
Purch. Decision Involvement	0.00169	0.23	.8193	.00739
Nationality	-.10914	-6.33	.0001	.01725

Figure 23

Summary of Regression Analysis and Store Factor Scores

The results of the second regression analysis, using the store factor scores, were consistent with the original regression analysis, using individual store characteristics. There seems to be some relationship and interaction between several store characteristics in the perception of the respondents. Customer service and characteristics of the merchandise would seem to be important to consumers when they consider the possibility of purchasing via the Internet. Respondents also would seem to desire secure credit card transactions via the Internet. Additionally, younger, married, opinion leaders and innovators, consumers who live in smaller suburban areas are more likely to express greater intent to shop via the Internet. The respondents who also expressed higher intent to purchase via the Internet were more likely to be Caucasian or Asian, and employed in sales, clerical and service related occupations.

Hypothesis Testing

Regression models were used test the hypotheses regarding store characteristics (HSC 1-7) and consumer characteristics (HCC1-9) which influenced the intent to products via the Internet.

Results of Regression Analysis testing hypotheses

The first hypothesis addressing store characteristics was HSC1: Consumers who perceive the Internet saves them time will be more likely to shop via the Internet. This variable was not statistically significant in either of the regression models. Thus this hypothesis cannot be supported. Perhaps, respondents found the Internet difficult to

navigate, or specific sites hard to find. Conversely, perhaps they knew specific sites or companies they want to patronize, and time was not an issue in their minds.

The second hypothesis regarding store characteristics was stated as: HSC2: Consumers who perceive the Internet to be convenient will be more likely to shop via the Internet. Again, the variable was not statistically significant in either of the regression analyses, and as a results this hypothesis cannot be supported. Additionally, it should be noted that saving time and convenience loaded together on store factor 1, and thus it could be concluded that consumers perceive these characteristics as related or integral single components in the shopping patronage decision. In any event, it would seem convenience is not an important consideration to consumers regarding their intent to purchase via the Internet.

The third hypothesis regarding store characteristics was stated as: HSC3: Consumers who perceive the Internet provides appropriately priced merchandise will be more likely to shop via the Internet. The results of the first regression analysis did not find price to be statistically significant. Price was a component of the third store factor, merchandise. In the second regression analysis, using store factor scores, this factor was statistically significant. As a result of these two analysis, this hypothesis regarding price can only be partially supported. As an aspect of the shopping patronage decision, price alone, is not a significant variable.

Two hypothesis regarding the use of credit cards and security of these transactions were proposed: HSC4A: Consumers who use credit cards and charge accounts will be more likely to shop via the Internet (ease of payment), and HSC4B: Consumers who

perceive their credit card transactions are secure on-line will be more likely to shop via the Internet (secure credit card). The results of both regression analyses found ease of payment was not statistically significant, either individually or in the store factor model. Thus, this hypothesis is not supported. Both regression models found insecure credit cards to be statistically significant, and negatively correlated to intent to purchase via the Internet. Thus, this hypothesis is supported.

The hypothesis addressing Internet store characteristics was HSC5: Consumers who rate the Internet higher in providing good quality merchandise will be more likely to shop via the Internet. Merchandise quality was statistically significant in the first regression analysis, and the store factor which included merchandise quality was also significant in the second regression analysis. Thus this hypothesis is supported.

Another hypothesis regarding the store characteristics of the Internet addressed reduced risk as it related to customer satisfaction. This hypothesis was stated as: HSC6: Consumers who perceive the Internet will provide less risk in their shopping choice will be more likely to shop via the Internet. This variable, in the model using individual store characteristic regression analysis was marginally significant, but negatively estimated. Reduced risk was one of two variables which loaded on the second store factor, service. In the second regression analysis using this factor, the factor was statistically significant. Thus this hypothesis for reduced risked can only be partially supported, since it was only marginally significant and negatively correlated in the first model.

The hypothesis which addressed the Internet store characteristic and customer service was HSC7: Consumers who perceive the Internet provides customer services they deem important will be more likely to shop via the Internet. This variable was statistically significant in both models. This variable loaded together with reduced risk in the store factor pattern. The results of both regression analysis show it to be positively correlated with intent to purchase via the Internet. Based upon these results, this hypothesis is supported.

There were four hypotheses made concerning consumer characteristics, related to attitudes. These hypotheses were stated as follows:

HCC1: Consumers who rate high on opinion leadership will be more likely to purchase products via the Internet.

HCC2: Consumers who rate high on domain specific innovativeness will be more likely to purchase products via the Internet.

HCC3: Consumers who rate high on market maven propensity will be more likely to purchase products via the Internet.

HCC4: Consumers who rate high on purchase decision involvement will be more likely to purchase products via the Internet.

The results of both regression analyses are consistent for these four attitude variables. Opinion leadership and domain specific innovativeness were statistically significant and positively correlated with intent to purchase in both models. Thus these two hypotheses are supported. Market maven propensity and purchase decision involvement were not statistically significant in either of the two regression models. As a result of these two

outcomes, neither of the hypotheses addressing market maven propensity or purchase decision involvement can be supported.

The hypotheses which addressed consumer demographic characteristics were stated as:

HCC5: Younger consumers will be more likely to shop via the Internet.

HCC6: Male consumers will be more likely to shop via the Internet.

HCC7: Consumers who have college education will be more likely to shop via the Internet.

HCC8: Consumers who are in technical or professional occupations will be more likely to shop via the Internet.

HCC9: Consumers who have a higher than average income will be more likely to shop via the Internet.

The results of both regression model analyses are consistent regarding these hypotheses. Age was significant and negatively correlated with intent to purchase via the Internet. Thus the hypothesis which proposed younger consumers would be more likely to purchase via the Internet is accepted. The analysis of gender and intent to purchase via the Internet found the variable for males was significant and positively correlated to intent to purchase via the Internet. Thus, the hypothesis which predicted males would be more likely to purchase via the Internet is supported. The results of occupation analysis in both models did not find the first category of profession/technical/administrative/managerial to be statistically significant. As a result, the hypothesis which predicted consumers employed in professional and technical occupations would be more likely to shop via the

Internet is not supported. Finally, income was only marginally significant, but negatively correlated in the individual store characteristic analysis, and not significant in the second regression model. The results of these analyses do not support the hypothesis that higher levels of income would influence higher intent to purchase via the Internet.

The hypothesis which addressed what products consumers would purchase via the Internet was:

> HPC: The product categories consumers will be more likely to purchase via the Internet will be 1) books and magazines, 2) music products, 3) computer-related products, and 4) travel-related products.

Analysis of variance, using repeated measures was performed to analyze the intent to purchase each of the fifteen product categories. As indicated in Figure 24, the products predicted in the hypothesis, books and magazines, music, computer products and travel related products received the highest mean scores. Post hoc analysis found that all four product categories mean scores were statistically significant. Additional observation of the frequency counts of consumer purchases via the Internet by product category, Figure 25, shows three of the four predicted product categories, computers, books and travel are the most frequently purchased product categories. The fourth predicted product category, music, was surpassed by the purchase of business services. However, it should be noted that music was the fifth most frequently purchased product category. Thus this hypothesis is supported, and it is concluded consumers expressed greatest levels of intent to purchase these product categories via the Internet. Additionally, it should be noted that all four

predicted product categories loaded on Factor 1, Recreation products in the factor analysis of intent to purchase via the Internet.

ANOVA Post Hoc Analysis of Mean Intent Scores

Variable	Mean	S. D.	Sig .05
Books	3.67	1.41	
Computer	3.55	1.47	
Music	3.49	1.41	
Travel	3.05	1.48	*
Business Services	2.40	1.33	**
Financial Services	2.03	1.26	
Legal Services	1.66	1.04	
Mortgage Lending	1.63	1.07	*
** from legal and mortgage only			
Clothing	2.45	1.36	
Flowers	2.45	1.50	
Food	1.79	1.20	*
Electronics	2.44	1.39	
Automotive	2.12	1.26	
College	2.53	1.43	
Children's Products	2.35	1.35	

Figure 24

Frequency of Product Categories Purchased via the Internet		
Product Category	Number	Percent
Computers	192	41.6
Books	159	34.4
Travel	132	28.6
Business Services	105	22.7
Music	89	19.3

Figure 25

Summary of Hypotheses Tests

Eight hypotheses were presented to predict the influence of store characteristics on intent to purchase via the Internet. Only three of these hypotheses were supported: customer service, merchandise quality and secure on-line credit card transactions. These three store characteristics are positively correlated to higher level of intent to purchase via the Internet. Those store characteristics which were not found to influence intent to purchase via this medium were: saving time, convenience, ease of payment, price (individually as it is addressed), and reduced risk (again as an individual component of the shopping decision).

Four attitudinal variables were proposed to influence shopping via the Internet: opinion leadership, domain specific innovativeness, market maven propensity, and purchase decision involvement. Only two of the variables, opinion leadership and domain specific innovativeness are supported by the analysis. Market maven propensity and purchase decision involvement do not seem to influence the intent to purchase via the Internet.

Five demographic variables were proposed to influence intent to shop via the Internet: age, gender, education, occupation and income. Of these five, only two, age and gender are supported. The results found younger respondents and males were more likely to express higher intent to purchase via the Internet. Higher levels of education and income were not found to be significant in the models. Additionally the occupation category of professional/technical was not significant in the model.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to systematically analyze the influence of store, consumer, and product attributes on adoption of shopping via the Internet. Predictions made approximately a decade ago were overly optimistic regarding the use of the Internet as a shopping medium. However, with recent technological developments, the technology costs have made computers more affordable, and access to the Internet and World Wide Web more readily available. As a result, more consumers are going on-line every day. Therefore, surveying current on-line consumers regarding what attributes they deem important regarding shopping via the Internet will provide marketers with information valuable in accurately targeting their specific market and developing appropriate marketing plans. The objectives of this study were to determine why consumers use the Internet as a shopping medium, which consumers were making purchases via the Internet, and what kinds of products they were more likely to purchase via this medium.

Ten retail store characteristics were analyzed, across four retail mediums. Past purchase and intent to purchase fifteen product categories via the Internet was investigated. Additionally, consumer demographics and attitudes were included in the analysis models. Factor analysis was used to group products together, based upon the intent to purchase each product category via the Internet. Six factors resulted: 1) recreation products including books and magazines, music, computer products, and travel; 2) services including business, legal, financial and mortgage lending services; 3) gifts which included clothing, flowers and food and drink categories, 4) electronics including

electronic products and automotive products, 5) college and education services, and 6) children's products. The products included in Factor 1, Recreation products, included four of the five product categories which had the highest purchase frequencies of the fifteen product categories. The other category which had a purchase frequency of greater than 20% was business services. The mean intent to purchase score for all four of the product categories in the factor labeled Recreation Products was between 3.05 and 3.67. Although this was a median score on a five-point Likert scale used to measure intent to purchase, these results are supported by the past purchase behavior of the respondents.

Factor analysis performed on the ten store characteristics of the Internet determined these variables grouped into five factors: 1) convenience which included saving time and convenience, 2) services which included reduced risk and customer services, 3) merchandise which included price, merchandise quality and merchandise variety, 4) reputation which included company and brand reputation, and 5) easy payment which included the sole variable of ease of payment.

Specifically, three of the eight hypotheses regarding store characteristics of the Internet were supported: merchandise quality, merchandise variety, and customer service. These results indicate consumers value the merchandise assortment and customer services when choosing to patronize the Internet as a shopping medium. Analysis of store characteristics as factors also provides insight into the perceptions of the respondents. Price of the merchandise also loaded in the factor which included merchandise quality and variety. Perhaps consumers view the merchandise offering or assortment as a component which includes all these aspects. Additionally, the reputation of the company and brand

was marginally significant when analyzed as a factor. Again, these variables, as one factor, may be perceived as one and the same by consumers. Conversely, saving time, convenience, ease of payment options were not significant characteristics in the model. Finally, insecure credit cards transactions are a deterrent for patronizing the Internet. Thus, it would seem to be very important for merchants to disclose the security of their site in a prominent method to the on-line user if they are to gain acceptance in this retailing medium.

Two of the four hypotheses regarding consumer attitudes were supported, and two were rejected. Higher levels of opinion leadership and domain specific innovativeness were found to indicate greater likelihood to shop via the Internet. However, market maven propensity and purchase decision involvement were not found to be indicative shopping via the Internet. These last two attitudes seem to be correlated to opinion leadership and innovativeness. There may be a converse action taking place, and opinion leadership and innovativeness may be negating the effects of market maven propensity and purchase decision involvement. Market maven tend to also be opinion leaders, while opinion leaders tend to be innovators. Thus, while opinion leadership and innovativeness seem to be influential on intent to purchase via the Internet, knowledge of the market place and involvement with the decision process do not appear to affect adoption of the Internet as a shopping medium.

Consumer demographic characteristics were also analyzed regarding their influence on purchase of products via the Internet. Age, specifically for younger subjects, was found to be indicative of purchase via the Internet. A large portion of this sample was

considered to be young, approximately 33% were age 18-24, this variable was still significant in the regression model. Male consumers were more likely to express greater intent to patronize this retail medium. Occupation was predicted to be indicative of shopping via this medium as well. While individuals in the professional/technical occupations were predicted to be more likely to shop via this medium, the results found only one occupational category to be statistically significant. This category was for sales/service/clerical workers. At the present time, there seems to be no evident explanation for this results. There may be a relationship with the types of products which have the highest levels of purchase: books and magazines, computer related products, business services and travel products. However, further investigation is needed to more accurately identify this aspect. The smaller numbers in several of the occupational categories may also have influenced these results. Finally, higher levels of income were predicted to influence patronage of the Internet, since there are costs associated with accessing this medium. The results do not support this. Perhaps the costs have fallen sufficiently that more people have access to this medium. Another perspective is that consumers are using the Internet for more activities than just shopping, and as such targeting the influence of income toward shopping patronage is inappropriate.

Finally, the predicted product categories of high purchase intent/volume, books and magazines, music, computers and travel products were four of the five highest purchased product categories. The other product category with high frequency of purchase was business services. It should be noted that while business services was a factored product category, the other products in this factor, legal, financial and mortgage

lending services all had very low frequencies of past purchase, and low intent to purchase ratings.

Conclusions

It would appear that on-line shoppers are Opinion Leaders, Innovators, specifically Domain Specific to the Internet. Additionally, men are more likely to purchase via this medium, and those who intend to shop on-line are more likely to be younger. Finally, where consumers live may play a role in their patronage of the Internet. The results tend to indicate that people living in suburban areas of small metropolitan populations are more likely to purchase, while those living in larger metro areas are less likely. These results may be indicative of the merchandise available and the store selections in the respective regions.

Study Limitations

These findings may not be generalizable to the population as a whole, since slightly more than half the subjects were employed in education or were students. However, additionally, 28% of the respondents were employed in the professional/technical area. These percentages may be somewhat representative of those individuals who are active on the Internet, so results should may be more indicative of on-line users than at first expected. However, the subject database should be expanded to include more subjects from the other occupational categories and additionally more international users to be more representative of the whole Internet population.

Additionally, due to the length of the survey, while attempting to gather sufficient data to fully analyze the model, respondents may have tired before completing the

instrument, or were discouraged from attempting to do so, upon seeing the survey length. Some subjects with older machines, having less memory and slower processors, may not have been able to participate. Future survey instruments should be streamlined, or divided into more than one web page for easier loading, and to reduce participant difficulties in completion. Market Maven Propensity could be deleted from the instrument, as there was little or no influence of this variable in any of the models and consideration should be given to eliminating Domain Specific Innovativeness as well.

Insights into Data Collection Methodology

Collecting survey data via the Internet is relatively new in the academic arena. While many commercial services are using the medium, surveys tend to be more streamlined than the present instrument. The approach taken by this research provides additional insights into the actual implementation of the method of data collection. Privacy and anonymity of respondents was of great concern during the initial conceptualization of the project. As the research proposal was reviewed by the institutional review board for approval, additional explanation of the mechanics of response submission had to be given, and verification that the computer programmer was establishing the database file to exclude personal email addressing information.

The method of "posting" the data submission to the data file also had to be modified, as not all web browsers would support the mailto command. Finally, the CGI/BIN script written by the systems manager had to be modified from a "get" script to a "post" script which would accommodate the size of the data file being sent to the file on the server. Additionally, none of the information technology support personnel at the time

could program the survey to allow for three separate page documents which could be linked to each other. This limitation prevented breaking the survey instrument into three separate web pages which would load more reliably on computers with less memory. This problem in all likelihood prevented several people from completing the survey.

The method of soliciting participation in the survey was of concern at the onset of this project as well. Announcements to listservs and newsgroups were made. The web page was also submitted to search engines, directories, and link pages as well. It was feared prior to the implementation that these types of posts would be considered as spam by many online users. However, in reality, this was not the case. In fact, only a handful of negative responses were received. This method of "interactive" data collection allowed more freedom and probably encouraged more people to actually communicate with the researcher. In fact, outside of the few negative communications, approximately 35 or 40 direct responses were received. Several requests for survey results were received. There were a handful or so of responses which made suggestions for improvement in the survey design or clarification of items on the instrument. Several individuals also sent suggestions of where additional posts for participation could be made, including places to link the document, and other related sites which might provide a guest book sign-in or brief announcement.

While the response rate appears to be relatively good, at 43.4%, with 485 responses out of 1066 hits on the page counter. In actuality, the research tracked the places where posts and requests were made. This number totals approximate 450 posts. Therefore, the reality is about a 1-to-1 return rate. Many hours during the ten weeks of

data collection were spent online, search places to post, subscribing to lists and following up on leads. This was a very time-intensive effort, and for this research project it was appropriate and sufficed. However, for further projects and future endeavors, a more time efficient of publicizing the survey is necessary. The final observation is that some budget has to be affixed to the data collection. While it is at first perceived as an inexpensive way to collect data, in reality there is a cost, be it financial or in time and effort. The breakdown for the posts and announcements is as follows: 1) 13 internal posts each to America Online and Compuserve, 2) 35 online free want-ads, 3) 24 submissions to directories, 4) 59 links to free linking services and pages, 5) 45 announcements on listervs, both moderated (only 2 refused the post) and unmoderated , 6) 25 submissions made directly to search engines, 7) 211 posts to newsgroups, and 8) 26 posts in miscellaneous announcements, guest books, online malls and similar sites.

Recommendations for Future Research

Future surveys should employ a commercial advertising or promotional service to elicit participant response, and gather responses from a broader-based subject pool. As with any survey, respondents will be more likely to participate if there is something as a means of enticement, such as previous results or immediate feed-back. An interactive survey, which would give the respondent some form of immediate reply, survey summary or results would be additionally helpful in gaining participation. Finally, commercial entities interested in survey results need this information as rapidly as possible. Current user surveys have shown the Internet is not quite as volatile as previously described, but as with any market condition analysis, current information is essential for accurately targeting

the market which is desired for the product or service. Finally, if additional international participants can be included, comparisons should be made between U.S. respondents, and consumers in other countries. It is unrealistic to assume consumers from the international sector are like those in the United States. Cultural, technological, and economic differences, in addition to language nuances may be influential in the survey participation and results relative to these markets.

Finally, marketers should conclude from these results that consumers who shop on-line via the Internet are like other target markets for alternative mediums. These consumers have store and consumer characteristics which are product-specific in their influence patronage of this shopping medium.

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Appendix A

WWW & Internet On-line Shopping Survey

Thank you for taking time to visit this Web Page and complete the survey. I'm a doctoral student at the University of Tennessee, Knixville, TN. This is my dissertation survey instrument. I'm interested in determining how individuals use the Internet and WWW as a source of shopping. Please take about 15-20 minutes to complete my on-line survey. I would really like to have your responses included in my database.

Please note that even though the submission message indicates this will include your personal email address information, the data form is being submitted to a data file, and all personal address and name information is being removed from the data. Thus I assure you, your answers will be anonymous.

It may take a few moments for the server to compile your responses. Please be patient while your submission is sent to the data file.

Continue to survey...

This page has been accessed ⌟ times.

WWW & Internet On-line Shopping Survey

Part I. Internet and WWW use.

1. How do you access the Internet and World Wide Web?

◯ America OnLine. CompuServe. or Prodigy
◯ Other commercial access provider
◯ Educational Institution access (.edu)
◯ Business/Employer access (.com)
◯ International User -- List 2 letter country code [ ]

2. On average, how many hours do you spend per week on-line?

◯ less than 5 ◯ 5-10 ◯ 11-15 ◯ 16-25 ◯ more than 25

3. On average, how many hours per week do you spend working on the computer?

◯ less than 5 ◯ 5-10 ◯ 11-15 ◯ 16-25 ◯ more than 25

4.1. Please rate how each of the four types of retail locations compare with regard to *saving time* when you choose where to purchase products.

A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.2. Please rate how each of the four types of retail locations compare with regard to *convenience* when you choose where to purchase products.

A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.3. Please rate how each of the four types of retail locations compare with regard to *ease of payment options* such as credit card acceptance, when you choose where to purchase products.

A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.4. Please rate how each of the four types of retail locations compare with regard to *company reputation* when you choose where to purchase products.

A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.5. Please rate how each of the four types of retail locations compare with regard to *brand reputation* (well-known brands) when you choose where to purchase products.
A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.6. Please rate how each of the four types of retail locations compare with regard to *merchandise price* when you choose where to purchase products.
A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.7. Please rate how each of the four types of retail locations compare with regard to the *quality of the merchandise* when you choose where to purchase products.
A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.8. Please rate how each of the four types of retail locations compare with regard to the *variety of the merchandise* offered when you choose where to purchase products.
A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
C. **Internet**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
D. **Cable/TV**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.9. Please rate how each of the four types of retail locations compare with regard to *reduced risk* (ability to return products, be satisfied with purchase) when you choose where to purchase products.
A. **Retail**
Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most
B. **Catalog**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

C. **Internet**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

D. **Cable/TV**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

4.10. Please rate how each of the four types of retail locations compare with regard to *customer services* offered when you choose where to purchase products.

A. **Retail**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

B. **Catalog**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

C. **Internet**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Most

D. **Cable/TV**

Least ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5. Most

5. What would be the reasons for you not to purchase on the Internet? Check all that apply.

☐ unreliability of seller
☐ possibility of credit card insecurity
☐ lack of product information
☐ lack of familiarity with on-line purchasing procedures
☐ inability to examine merchandise
☐ limited access to the Internet
☐ lack of major credit card

6. In general, what is your attitude toward on-line, computerized shopping?

Very Unfavorable ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Favorable

7. Where have you purchased the following products? (Check all that apply, omit response in categories where you have not made a purchase.) Retail Store category includes any "typical" business location, such as an office or store.

Books, information and magazines
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Business services
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Legal services
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Financial services
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Music tape or CD
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

7. Where have you purchased the following products?

Clothing, jewelry, accessories
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Computer software or hardware
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Electronics -- TV, VCR, CD Player
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Flowers and Plants
☐ Internet ☐ Catalog ☐ Retail Store ☐ Cable/TV

Travel related products/services
__ Internet __ Catalog __ Retail Store __ Cable/TV

7. Where have you purchased the following products?

Products for children
__ Internet __ Catalog __ Retail Store __ Cable/TV
Food and Drink
__ Internet __ Catalog __ Retail Store __ Cable/TV
College Services/Education
__ Internet __ Catalog __ Retail Store __ Cable/TV
Autos/Automotive products
__ Internet __ Catalog __ Retail Store __ Cable/TV
Mortgage lending
__ Internet __ Catalog __ Retail Store __ Cable/TV

8. How likely are you to purchase each of the following via the Internet?

Books, information and magazines
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Business Services
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Legal Services
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Financial Services
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Music tape or CD and videos
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

8. How likely are you to purchase each of the following via the Internet?

Clothing, jewelry, accessories
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Computer software or hardware
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Electronics – TV, VCR, CD Player
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Flowers and plants
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Travel related products/services
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

8. How likely are you to purchase each of the following via the Internet?

Products for children
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Food and drink
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
College services/Education
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Autos/Automotive products
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely
Mortgage lending
Very Unlikely ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very Likely

Part 2. Background information.

The following background information questions are included only to help us interpret your responses on other questions. Any information you deem to be too personal may be omitted, but the more complete the survey, the better the data results will be.

1. What is your marital status?

◯ Married ◯ Single ◯ Divorced ◯ Widowed ◯ Separated ◯ Living with another

2. What is your current age?

◯ 18-24
◯ 25-29
◯ 30-34
◯ 35-44
◯ 45-54
◯ 55-64
◯ 65 and over

3. What is your gender?

◯ Male ◯ Female

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

◯ Graduated high school
◯ Trade or technical school
◯ 1-3 years college
◯ Graduated college (4 yrs)
◯ Attended or completed graduate school, professional degree

5. What ethnic group do you consider yourself to be a member of?

◯ Caucasian or white ◯ Black ◯ Hispanic/Spanish origin ◯ Asian ◯ Other

6. Which one of the following categories best describes your occupation?

◯ Professional or technical
◯ Manager or administrator
◯ Sales worker
◯ Clerical worker
◯ Machine operator / laborer
◯ Farmer / agriculture
◯ Service worker
◯ Education
◯ Government or military worker
◯ Student

7. What is your total household income in the last year from all sources before taxes? (Please include here all income received by anyone in your household.)

◯ Less than $10,000
◯ $10,000-$19,999
◯ $20,000-$29,999
◯ $30,000-$39,999
◯ $40,000-$49,999
◯ $50,000-$74,999
◯ $75,000-$99,999
◯ $100,000 and over

8. How many people reside in your household?

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 or more

9. How many children are in your household?

◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 or more ◯ none

10. What ages are your children living with you? (Check all that apply)

☐ 0-6 ☐ 7-12 ☐ 13-17 ☐ 18 and over ☐ none

11. What is the size of residence area where you live?

◯ Large central city (250,000 or more)
◯ Medium central city (50,000-250,000)
◯ Suburb of large central city
◯ Suburb of medium size central city
◯ Small city, town or village

Part 3. Other people and Online Products/Services.

In the following sections of questions, online products/service refers to the purchase or use of a product or service available on the Internet/WWW.

Section 1

1. My opinion on online products/services seems not to count with other people.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

2. When they choose an online product/service, other people do not turn to me for advice.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

3. Other people come to me for advice about choosing online products/services.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

4. People that I know pick online products/services based on what I have told them.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

5. I often persuade other people to buy the online products/services that I like.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

6. I often influence people's opinions about online products/services.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

Section 2

1. In general, I am among the first in my circle of friends to buy a new online product/service when it appears.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

2. If I heard that a new online product/service was available on the internet, I would be interested enough to buy it.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

3. Compared to my friends I own few online products/services.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

4. In general, I am the last in my circle of friends to know the titles/brands of the latest online products/services.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

5. I will not buy a new online product/service if I haven't heard about/tried it yet.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

6. I like to buy online products/services before other people do.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

Section 3

1. I like introducing new brands and products to my friends.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

2. I like helping people by providing them with information about many kinds of products.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

3. People ask me for information about products, places to shop, or sales.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

4. If someone asked where to get the best buy on several types of products, I could tell him or her where to shop.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

5. My friends think of me as a good source of information when it comes to new products or sales.

very strongly disagree ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 very strongly agree

6. Think about a person who has information about a variety of products and likes to share this information with others. This person knows about new products, sales, stores, and so on, but does not necessarily feel he or she is an expert on one part icular product. How well would you say this description fits you?

Use the following scale:
description does not fit me well ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 description fits me very well

Section 4

1. In selecting from many types and brands of online products/services available in the market, would you say that:

I don't care which one I buy ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 I do care which one I buy

2. Do you think that the various types and brands of online products/services available in the market are all

very alike or are all very different?

They are alike ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 They are all different

3. How important would it be to you to make a right choice of online products/services?

Not at all important ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Extremely important

4. In making your selection of online products/services, how concerned would you be about the outcome of your choice?

Not at all concerned ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 Very much concerned

Congratulations!!!

You've reached the end of this survey.

Thank you for taking the time to visit this page and complete the survey.

Have you answered all the questions on this survey? Completeness of responses will ensure accuracy and validity of the research findings. When you are finished, select the submit button to enter your responses.

Just a reminder that your personal identification information will NOT be submitted with your responses.

E-mail comments regarding this survey, requests for survey results, or inquiries to participate in future surveys to: m.kunz@morehead-st.edu

SUBMIT FORM | RESET FORM

Appendix B

ANOVA SAVE TIME

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC11 (SAVE TIME, RETAIL)
SC12 (SAVE TIME, CATALOG)
SC13 (SAVE TIME, INTERNET)
SC14 (SAVE TIME, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	329.60768398	109.86922799	65.34	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	2325.64231602	1.68159242

Greenhouse-Geisser Epsilon = 0.8645
Huynh-Feldt Epsilon = 0.8698

ANOVA CONVENIENCE

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC21 (CONVENIENCE, RETAIL)
SC22 (CONVENIENCE, CATALOG)
SC23 (CONVENIENCE, INTERNET)
SC24 (CONVENIENCE, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	576.95400433	192.31800144	128.13	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	2075.79599567	1.50093709

Greenhouse-Geisser Epsilon = 0.8770
Huynh-Feldt Epsilon = 0.8825

ANOVA EASE OF PAYMENT

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC31 (EASE OF PAYMENT, RETAIL)
SC32 (EASE OF PAYMENT, CATALOG)
SC33 (EASE OF PAYMENT, INTERNET)
SC34 (EASE OF PAYMENT, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	807.07575758	269.02525253	251.58	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1478.92424242	1.06935954

Greenhouse-Geisser Epsilon = 0.8825
Huynh-Feldt Epsilon = 0.8880

ANOVA COMPANY REPUTATION

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC41 (COMPANY REPUTATION, RETAIL)
SC42 (COMPANY REPUTATION, CATALOG)
SC43 (COMPANY REPUTATION, INTERNET)
SC44 (COMPANY REPUTATION, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1270.10551948	423.36850649	429.54	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1363.14448052	0.98564315

Greenhouse-Geisser Epsilon = 0.8836
Huynh-Feldt Epsilon = 0.8892

ANOVA BRAND REPUTATION

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC51 (BRAND REPUTATION, RETAIL)
SC52 (BRAND REPUTATION, CATALOG)
SC53 (BRAND REPUTATION, INTERNET)
SC54 (BRAND REPUTATION, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1059.16179654	353.05393218	351.89	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1387.58820346	1.00331757

Greenhouse-Geisser Epsilon = 0.9045
Huynh-Feldt Epsilon = 0.9104

ANOVA PRICE

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC61 (PRICE, RETAIL)
SC62 (PRICE, CATALOG)
SC63 (PRICE, INTERNET)
SC64

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	394.14880952	131.38293651	114.02	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1593.60119048	1.15227852

Greenhouse-Geisser Epsilon = 0.8996
Huynh-Feldt Epsilon = 0.9054

ANOVA MERCHANDISE QUALITY

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC71 (MERCHANDISE QUALITY, RETAIL)
SC72 (MERCHANDISE QUALITY, CATALOG)
SC73 (MERCHANDISE QUALTIY, INTERNET)
SC74 (MERCHANDISE QUALITY, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1133.49945887	377.83315296	404.52	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1291.75054113	0.93402064

Greenhouse-Geisser Epsilon = 0.9310
Huynh-Feldt Epsilon = 0.9372

ANOVA MERCHANDISE VARIETY

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC81 (MERCHANDISE VARIETY, RETAIL)
SC82 (MERCHANDISE VARIETY, CATALOG)
SC83 (MERCHANDISE VARIETY, INTERNET)
SC84 (MERCHANDISE VARIETY, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1213.30735931	404.43578644	352.52	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1586.69264069	1.14728318

Greenhouse-Geisser Epsilon = 0.8822
Huynh-Feldt Epsilon = 0.8878

ANOVA REDUCED RISK

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC91 (REDUCED RISK, RETAIL)
SC92 (REDUCED RISK, CATALOG)
SC93 (REDUCED RISK, INTERNET)
SC94 (REDUCED RISK, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1735.82846320	578.60948773	573.87	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1394.42153680	1.00825852

Greenhouse-Geisser Epsilon = 0.8943
Huynh-Feldt Epsilon = 0.9000

ANOVA CUSTOMER SERVICE

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable
SC101 (CUSTOMER SERVICE, RETAIL)
SC102 (CUSTOMER SERVICE, CATALOG)
SC103 (CUSTOMER SERVICE, INTERNET)
SC104 (CUSTOMER SERVICE, TV)

Level of RETAIL CATEGORY	1	2	3	4

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: RETAIL CATEGORY

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
3	1566.45616883	522.15205628	527.38	0.0001	0.0001	0.0001

Source: Error(RETAIL CATEGORY)

DF	Anova SS	Mean Square
1383	1369.29383117	0.99008954

Greenhouse-Geisser Epsilon = 0.9242
Huynh-Feldt Epsilon = 0.9304

Appendix C

ANOVA INTENT TO PURCHASE VIA INTERNET

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Repeated Measures Level Information

Dependent Variable	IS1	IS2	IS3	IS4	IS5	IS6
Level of INTENT	1	2	3	4	5	6
Dependent Variable	IS7	IS8	IS9	IS10	IS11	IS12
Level of INTENT	7	8	9	10	11	12
Dependent Variable	IS13	IS14	IS15			
Level of INTENT	13	14	15			

IS1 (INTENT TO BUY BOOKS)
IS2 (INTENT TO BUY BUSINESS SERVICES)
IS3 (INTENT TO BUY LEGAL SERVICES)
IS4 (INTENT TO BUY FINANCIAL SERVICES)
IS5 (INTENT TO BUY MUSIC)
IS6 (INTENT TO BUY CLOTHING)
IS7 (INTENT TO BUY MUSIC)
IS8 (INTENT TO BUY ELECTRONICS)
IS9 (INTENT TO BUY FLOWERS)
IS10 (INTENT TO BUY TRAVEL)
IS11 (INTENT TO BUY CHILDREN'S PRODUCTS)
IS12 (INTENT TO BUY FOOD)
IS13 (INTENT TO BUY COLLEGE)
IS14 (INTENT TO BUY AUTOMOTIVE)
IS15 (INTENT TO BUY MORTGAGE SERVICES)

Analysis of Variance Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source: INTENT

DF	Anova SS	Mean Square	F Value	Pr > F	Adj Pr > F G - G	Adj Pr > F H - F
14	2825.77142857	201.84081633	180.93	0.0001	0.0001	0.0001

Source: Error(INTENT)

DF	Anova SS	Mean Square
6454	7199.96190476	1.11558133

Greenhouse-Geisser Epsilon = 0.7536
Huynh-Feldt Epsilon = 0.7726

Appendix D

Factor Analysis Intent to Purchase Product Categories

Means and Standard Deviations from 457 observations

	IS1	IS2	IS3	IS4	IS5
Mean	3.66301969	2.39824945	1.67177243	2.02407002	3.49015317
Std Dev	1.41584473	1.33074194	1.04793643	1.26242529	1.41126863

	IS6	IS7	IS8	IS9	IS10
Mean	2.43763676	3.54485777	2.43544858	2.43763676	3.03719912
Std Dev	1.35762357	1.47592553	1.39575306	1.50034546	1.48114436

	IS11	IS12	IS13	IS14	IS15
Mean	2.34135667	1.78555799	2.52078775	2.12910284	1.63676149
Std Dev	1.34812114	1.15753129	1.43885045	1.26472288	1.07778852

Correlations

	IS1	IS2	IS3	IS4	
IS1	1.00000	0.48923	0.24898	0.32355	SHOP BOOKS
IS2	0.48923	1.00000	0.60502	0.56343	SHOP BUS SV
IS3	0.24898	0.60502	1.00000	0.60771	SHOP LEG SV
IS4	0.32355	0.56343	0.60771	1.00000	SHOP FIN SV
IS5	0.61733	0.31971	0.22468	0.25431	SHOP MUSIC
IS6	0.44083	0.33302	0.24916	0.29581	SHOP CLOTH
IS7	0.61592	0.45983	0.22364	0.34133	SHOP COMPUTER
IS8	0.38070	0.40940	0.36931	0.39604	SHOP ELECTRONIC
IS9	0.36793	0.37713	0.32449	0.36030	SHOP FLOWERS
IS10	0.48285	0.49203	0.31448	0.38069	SHOP TRAVEL
IS11	0.44644	0.38001	0.36045	0.28251	SHOP CHILD
IS12	0.33984	0.35738	0.31065	0.30668	SHOP FOOD
IS13	0.25426	0.42516	0.34341	0.31422	SHOP COLLEGE
IS14	0.30235	0.35247	0.35966	0.34006	SHOP AUTO
IS15	0.26308	0.41758	0.50000	0.53187	SHOP MORT SV

	IS5	IS6	IS7	IS8	
IS1	0.61733	0.44083	0.61592	0.38070	SHOP BOOKS
IS2	0.31971	0.33302	0.45983	0.40940	SHOP BUS SV
IS3	0.22468	0.24916	0.22364	0.36931	SHOP LEG SV
IS4	0.25431	0.29581	0.34133	0.39604	SHOP FIN SV
IS5	1.00000	0.50816	0.55374	0.41132	SHOP MUSIC
IS6	0.50816	1.00000	0.38965	0.44314	SHOP CLOTH
IS7	0.55374	0.38965	1.00000	0.60846	SHOP COMPUTER
IS8	0.41132	0.44314	0.60846	1.00000	SHOP ELECTRONIC
IS9	0.36971	0.43439	0.26940	0.29417	SHOP FLOWERS
IS10	0.44448	0.37250	0.48728	0.36661	SHOP TRAVEL
IS11	0.48127	0.54845	0.39788	0.45461	SHOP CHILD
IS12	0.35579	0.43942	0.24568	0.25067	SHOP FOOD
IS13	0.20016	0.24344	0.24920	0.30942	SHOP COLLEGE
IS14	0.30112	0.37956	0.36168	0.56812	SHOP AUTO
IS15	0.30185	0.35917	0.29012	0.42026	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories
Correlations

	IS9	IS10	IS11	IS12	
IS1	0.36793	0.48285	0.44644	0.33984	SHOP BOOKS
IS2	0.37713	0.49203	0.38001	0.35738	SHOP BUS SV
IS3	0.32449	0.31448	0.36045	0.31065	SHOP LEG SV
IS4	0.36030	0.38069	0.28251	0.30668	SHOP FIN SV
IS5	0.36971	0.44448	0.48127	0.35579	SHOP MUSIC
IS6	0.43439	0.37250	0.54845	0.43942	SHOP CLOTH
IS7	0.26940	0.48728	0.39788	0.24568	SHOP COMPUTER
IS8	0.29417	0.36661	0.45461	0.25067	SHOP ELECTRONIC
IS9	1.00000	0.45154	0.39870	0.51127	SHOP FLOWERS
IS10	0.45154	1.00000	0.43074	0.37560	SHOP TRAVEL
IS11	0.39870	0.43074	1.00000	0.44612	SHOP CHILD
IS12	0.51127	0.37560	0.44612	1.00000	SHOP FOOD
IS13	0.19488	0.41073	0.39203	0.24232	SHOP COLLEGE
IS14	0.32843	0.32757	0.36639	0.30806	SHOP AUTO
IS15	0.34534	0.37939	0.41908	0.36106	SHOP MORT SV

	IS13	IS14	IS15	
IS1	0.25426	0.30235	0.26308	SHOP BOOKS
IS2	0.42516	0.35247	0.41758	SHOP BUS SV
IS3	0.34341	0.35966	0.50000	SHOP LEG SV
IS4	0.31422	0.34006	0.53187	SHOP FIN SV
IS5	0.20016	0.30112	0.30185	SHOP MUSIC
IS6	0.24344	0.37956	0.35917	SHOP CLOTH
IS7	0.24920	0.36168	0.29012	SHOP COMPUTER
IS8	0.30942	0.56812	0.42026	SHOP ELECTRONIC
IS9	0.19488	0.32843	0.34534	SHOP FLOWERS
IS10	0.41073	0.32757	0.37939	SHOP TRAVEL
IS11	0.39203	0.36639	0.41908	SHOP CHILD
IS12	0.24232	0.30806	0.36106	SHOP FOOD
IS13	1.00000	0.32691	0.36548	SHOP COLLEGE
IS14	0.32691	1.00000	0.45277	SHOP AUTO
IS15	0.36548	0.45277	1.00000	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Inverse Correlation Matrix

	IS1	IS2	IS3	IS4	
IS1	2.25570	-0.51089	0.15377	-0.08464	SHOP BOOKS
IS2	-0.51089	2.34931	-0.84871	-0.36186	SHOP BUS SV
IS3	0.15377	-0.84871	2.14423	-0.68576	SHOP LEG SV
IS4	-0.08464	-0.36186	-0.68576	2.02351	SHOP FIN SV
IS5	-0.71171	0.27284	-0.10646	0.09543	SHOP MUSIC
IS6	-0.12819	-0.03266	0.17556	-0.07692	SHOP CLOTH
IS7	-0.71866	-0.38462	0.35762	-0.14497	SHOP COMPUTER
IS8	0.26009	0.00695	-0.18296	-0.14788	SHOP ELECTRONIC
IS9	-0.09668	-0.08935	-0.04676	-0.16565	SHOP FLOWERS
IS10	-0.13585	-0.27831	0.11725	-0.08660	SHOP TRAVEL
IS11	-0.19667	0.07856	-0.26691	0.27532	SHOP CHILD
IS12	-0.03475	-0.11840	-0.03863	-0.01869	SHOP FOOD
IS13	0.01647	-0.31690	-0.03457	-0.01881	SHOP COLLEGE
IS14	-0.06911	0.02525	-0.11691	0.06865	SHOP AUTO
IS15	0.15329	0.05887	-0.28816	-0.49974	SHOP MORT SV

	IS5	IS6	IS7	IS8	
IS1	-0.71171	-0.12819	-0.71866	0.26009	SHOP BOOKS
IS2	0.27284	-0.03266	-0.38462	0.00695	SHOP BUS SV
IS3	-0.10646	0.17556	0.35762	-0.18296	SHOP LEG SV
IS4	0.09543	-0.07692	-0.14497	-0.14788	SHOP FIN SV
IS5	2.05640	-0.36423	-0.45363	-0.04581	SHOP MUSIC
IS6	-0.36423	1.82694	0.07419	-0.26605	SHOP CLOTH
IS7	-0.45363	0.07419	2.48853	-1.02076	SHOP COMPUTER
IS8	-0.04581	-0.26605	-1.02076	2.28355	SHOP ELECTRONIC
IS9	-0.09169	-0.22190	0.18861	0.00032	SHOP FLOWERS
IS10	-0.18186	0.03743	-0.37768	0.10963	SHOP TRAVEL
IS11	-0.22394	-0.46981	0.00678	-0.27875	SHOP CHILD
IS12	-0.08911	-0.23831	0.07275	0.17220	SHOP FOOD
IS13	0.09720	0.03682	0.10101	-0.04700	SHOP COLLEGE
IS14	0.04282	-0.12086	0.03856	-0.70114	SHOP AUTO
IS15	-0.09150	-0.06882	0.05993	-0.10777	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Inverse Correlation Matrix

	IS9	IS10	IS11	IS12	
IS1	-0.09668	-0.13585	-0.19667	-0.03475	SHOP BOOKS
IS2	-0.08935	-0.27831	0.07856	-0.11840	SHOP BUS SV
IS3	-0.04676	0.11725	-0.26691	-0.03863	SHOP LEG SV
IS4	-0.16565	-0.08660	0.27532	-0.01869	SHOP FIN SV
IS5	-0.09169	-0.18186	-0.22394	-0.08911	SHOP MUSIC
IS6	-0.22190	0.03743	-0.46981	-0.23831	SHOP CLOTH
IS7	0.18861	-0.37768	0.00678	0.07275	SHOP COMPUTER
IS8	0.00032	0.10963	-0.27875	0.17220	SHOP ELECTRONIC
IS9	1.67415	-0.36971	-0.08605	-0.46266	SHOP FLOWERS
IS10	-0.36971	1.84343	-0.10442	-0.07488	SHOP TRAVEL
IS11	-0.08605	-0.10442	1.95218	-0.26274	SHOP CHILD
IS12	-0.46266	-0.07488	-0.26274	1.60665	SHOP FOOD
IS13	0.17428	-0.35030	-0.32119	-0.00361	SHOP COLLEGE
IS14	-0.12814	-0.00888	0.06294	-0.09658	SHOP AUTO
IS15	-0.01371	-0.12451	-0.20755	-0.12989	SHOP MORT SV

	IS13	IS14	IS15	
IS1	0.01647	-0.06911	0.15329	SHOP BOOKS
IS2	-0.31690	0.02525	0.05887	SHOP BUS SV
IS3	-0.03457	-0.11691	-0.28816	SHOP LEG SV
IS4	-0.01881	0.06865	-0.49974	SHOP FIN SV
IS5	0.09720	0.04282	-0.09150	SHOP MUSIC
IS6	0.03682	-0.12086	-0.06882	SHOP CLOTH
IS7	0.10101	0.03856	0.05993	SHOP COMPUTER
IS8	-0.04700	-0.70114	-0.10777	SHOP ELECTRONIC
IS9	0.17428	-0.12814	-0.01371	SHOP FLOWERS
IS10	-0.35030	-0.00888	-0.12451	SHOP TRAVEL
IS11	-0.32119	0.06294	-0.20755	SHOP CHILD
IS12	-0.00361	-0.09658	-0.12989	SHOP FOOD
IS13	1.45168	-0.15943	-0.14658	SHOP COLLEGE
IS14	-0.15943	1.69125	-0.30783	SHOP AUTO
IS15	-0.14658	-0.30783	1.80401	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling all other Variables

	IS1	IS2	IS3	IS4	
IS1	1.00000	0.22193	-0.06992	0.03962	SHOP BOOKS
IS2	0.22193	1.00000	0.37814	0.16596	SHOP BUS SV
IS3	-0.06992	0.37814	1.00000	0.32922	SHOP LEG SV
IS4	0.03962	0.16596	0.32922	1.00000	SHOP FIN SV
IS5	0.33045	-0.12413	0.05070	-0.04678	SHOP MUSIC
IS6	0.06315	0.01576	-0.08870	0.04001	SHOP CLOTH
IS7	0.30333	0.15907	-0.15482	0.06460	SHOP COMPUTER
IS8	-0.11460	-0.00300	0.08268	0.06879	SHOP ELECTRONIC
IS9	0.04975	0.04505	0.02468	0.09000	SHOP FLOWERS
IS10	0.06662	0.13373	-0.05897	0.04484	SHOP TRAVEL
IS11	0.09372	-0.03668	0.13046	-0.13853	SHOP CHILD
IS12	0.01825	0.06094	0.02081	0.01036	SHOP FOOD
IS13	-0.00910	0.17160	0.01960	0.01098	SHOP COLLEGE
IS14	0.03539	-0.01267	0.06139	-0.03711	SHOP AUTO
IS15	-0.07599	-0.02860	0.14652	0.26156	SHOP MORT SV

	IS5	IS6	IS7	IS8	
IS1	0.33045	0.06315	0.30333	-0.11460	SHOP BOOKS
IS2	-0.12413	0.01576	0.15907	-0.00300	SHOP BUS SV
IS3	0.05070	-0.08870	-0.15482	0.08268	SHOP LEG SV
IS4	-0.04678	0.04001	0.06460	0.06879	SHOP FIN SV
IS5	1.00000	0.18792	0.20053	0.02114	SHOP MUSIC
IS6	0.18792	1.00000	-0.03480	0.13026	SHOP CLOTH
IS7	0.20053	-0.03480	1.00000	0.42820	SHOP COMPUTER
IS8	0.02114	0.13026	0.42820	1.00000	SHOP ELECTRONIC
IS9	0.04942	0.12688	-0.09240	-0.00016	SHOP FLOWERS
IS10	0.09341	-0.02040	0.17634	-0.05343	SHOP TRAVEL
IS11	0.11177	0.24877	-0.00307	0.13202	SHOP CHILD
IS12	0.04903	0.13910	-0.03638	-0.08990	SHOP FOOD
IS13	-0.05626	-0.02261	-0.05314	0.02582	SHOP COLLEGE
IS14	-0.02296	0.06876	-0.01880	0.35678	SHOP AUTO
IS15	0.04751	0.03791	-0.02829	0.05310	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling all other Variables

	IS9	IS10	IS11	IS12	
IS1	0.04975	0.06662	0.09372	0.01825	SHOP BOOKS
IS2	0.04505	0.13373	-0.03668	0.06094	SHOP BUS SV
IS3	0.02468	-0.05897	0.13046	0.02081	SHOP LEG SV
IS4	0.09000	0.04484	-0.13853	0.01036	SHOP FIN SV
IS5	0.04942	0.09341	0.11177	0.04903	SHOP MUSIC
IS6	0.12688	-0.02040	0.24877	0.13910	SHOP CLOTH
IS7	-0.09240	0.17634	-0.00307	-0.03638	SHOP COMPUTER
IS8	-0.00016	-0.05343	0.13202	-0.08990	SHOP ELECTRONIC
IS9	1.00000	0.21045	0.04760	0.28210	SHOP FLOWERS
IS10	0.21045	1.00000	0.05505	0.04351	SHOP TRAVEL
IS11	0.04760	0.05505	1.00000	0.14836	SHOP CHILD
IS12	0.28210	0.04351	0.14836	1.00000	SHOP FOOD
IS13	-0.11180	0.21414	0.19079	0.00236	SHOP COLLEGE
IS14	0.07615	0.00503	-0.03464	0.05859	SHOP AUTO
IS15	0.00789	0.06828	0.11060	0.07630	SHOP MORT SV

	IS13	IS14	IS15	
IS1	-0.00910	0.03539	-0.07599	SHOP BOOKS
IS2	0.17160	-0.01267	-0.02860	SHOP BUS SV
IS3	0.01960	0.06139	0.14652	SHOP LEG SV
IS4	0.01098	-0.03711	0.26156	SHOP FIN SV
IS5	-0.05626	-0.02296	0.04751	SHOP MUSIC
IS6	-0.02261	0.06876	0.03791	SHOP CLOTH
IS7	-0.05314	-0.01880	-0.02829	SHOP COMPUTER
IS8	0.02582	0.35678	0.05310	SHOP ELECTRONIC
IS9	-0.11180	0.07615	0.00789	SHOP FLOWERS
IS10	0.21414	0.00503	0.06828	SHOP TRAVEL
IS11	0.19079	-0.03464	0.11060	SHOP CHILD
IS12	0.00236	0.05859	0.07630	SHOP FOOD
IS13	1.00000	0.10175	0.09058	SHOP COLLEGE
IS14	0.10175	1.00000	0.17623	SHOP AUTO
IS15	0.09058	0.17623	1.00000	SHOP MORT SV

Kaiser's Measure of Sampling Adequacy: Over-all MSA = 0.89910698

IS1	IS2	IS3	IS4	IS5
0.890402	0.893443	0.854504	0.896569	0.904456

IS6	IS7	IS8	IS9	IS10
0.928088	0.852091	0.863208	0.910787	0.933031

IS11	IS12	IS13	IS14	IS15
0.919461	0.922282	0.901577	0.908739	0.928860

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Prior Communality Estimates: SMC

IS1	IS2	IS3	IS4	IS5
0.556678	0.574344	0.533631	0.505809	0.513712

IS6	IS7	IS8	IS9	IS10
0.452636	0.598157	0.562085	0.402683	0.457534

IS11	IS12	IS13	IS14	IS15
0.487752	0.377587	0.311141	0.408721	0.445678

Preliminary Eigenvalues: Total = 15 Average = 1

	1	2	3	4	5
Eigenvalue	12.2822	1.9522	1.2104	0.9027	0.5580
Difference	10.3301	0.7417	0.3077	0.3447	0.3101
Proportion	0.8188	0.1301	0.0807	0.0602	0.0372
Cumulative	0.8188	0.9490	1.0297	1.0898	1.1270

	6	7	8	9	10
Eigenvalue	0.2479	0.0826	-0.0613	-0.1380	-0.1830
Difference	0.1653	0.1439	0.0767	0.0449	0.0703
Proportion	0.0165	0.0055	-0.0041	-0.0092	-0.0122
Cumulative	1.1436	1.1491	1.1450	1.1358	1.1236

	11	12	13	14	15
Eigenvalue	-0.2533	-0.3347	-0.3555	-0.4211	-0.4892
Difference	0.0814	0.0208	0.0655	0.0682	
Proportion	-0.0169	-0.0223	-0.0237	-0.0281	-0.0326
Cumulative	1.1067	1.0844	1.0607	1.0326	1.0000

7 factors will be retained by the MINEIGEN criterion.

Iter	Change	Communalities
1	0.089630	0.62467 0.65277 0.60604 0.57933 0.57960 0.51694 0.68126 0.65171 0.48199 0.52966 0.56583 0.44808 0.36305 0.46000 0.50546
2	0.047962	0.64668 0.69543 0.63917 0.61383 0.60879 0.53622 0.71475 0.69968 0.52475 0.56861 0.60363 0.47545 0.39526 0.48011 0.53737
3	0.028544	0.65195 0.71990 0.65346 0.62961 0.62217 0.53949 0.72705 0.72822 0.55019 0.59018 0.62245 0.48434 0.41647 0.48626 0.55514
4	0.019205	0.65188 0.73478 0.65884 0.63628 0.62866 0.53801 0.73054 0.74743 0.56696 0.60223 0.63192 0.48557 0.43127 0.48629 0.56571
5	0.014520	0.65059 0.74431 0.66014 0.63855 0.63205 0.53577 0.73053 0.76195 0.57908 0.60880 0.63654 0.48388 0.44214 0.48375 0.57254

Factor Analysis Intent to Purhase Product Categories
Initial Factor Method: Alpha Factor Analysis

6	0.012019	0.64941	0.75065	0.65973	0.63871	0.63398
		0.53398	0.72927	0.77397	0.58852	0.61206
		0.63853	0.48129	0.45049	0.48026	0.57735
7	0.010563	0.64864	0.75493	0.65874	0.63791	0.63513
		0.53280	0.72766	0.78453	0.59627	0.61324
		0.63904	0.47862	0.45716	0.47655	0.58105
8	0.009619	0.64826	0.75778	0.65772	0.63671	0.63582
		0.53215	0.72605	0.79415	0.60287	0.61309
		0.63871	0.47616	0.46266	0.47295	0.58412
9	0.008936	0.64818	0.75959	0.65688	0.63537	0.63620
		0.53186	0.72458	0.80308	0.60861	0.61207
		0.63791	0.47399	0.46733	0.46958	0.58684
10	0.008394	0.64829	0.76060	0.65630	0.63402	0.63637
		0.53180	0.72326	0.81148	0.61369	0.61049
		0.63688	0.47211	0.47139	0.46649	0.58934
11	0.007934	0.64854	0.76097	0.65601	0.63269	0.63638
		0.53189	0.72209	0.81941	0.61824	0.60854
		0.63576	0.47047	0.47502	0.46367	0.59172
12	0.007527	0.64887	0.76082	0.65598	0.63140	0.63627
		0.53207	0.72105	0.82694	0.62235	0.60637
		0.63463	0.46905	0.47831	0.46111	0.59404
13	0.007158	0.64924	0.76025	0.65617	0.63015	0.63606
		0.53228	0.72013	0.83410	0.62609	0.60409
		0.63354	0.46780	0.48135	0.45877	0.59632
14	0.006820	0.64963	0.75932	0.65657	0.62893	0.63579
		0.53252	0.71932	0.84092	0.62950	0.60174
		0.63252	0.46669	0.48418	0.45664	0.59860
15	0.006509	0.65004	0.75810	0.65714	0.62773	0.63546
		0.53277	0.71858	0.84743	0.63265	0.59940
		0.63158	0.46571	0.48685	0.45469	0.60089
16	0.006220	0.65044	0.75664	0.65786	0.62655	0.63509
		0.53300	0.71792	0.85365	0.63555	0.59709
		0.63072	0.46482	0.48939	0.45290	0.60320
17	0.005953	0.65085	0.75499	0.65871	0.62538	0.63469
		0.53323	0.71733	0.85960	0.63824	0.59483
		0.62995	0.46402	0.49183	0.45124	0.60555
18	0.005705	0.65125	0.75319	0.65966	0.62422	0.63427
		0.53344	0.71678	0.86530	0.64073	0.59264
		0.62926	0.46329	0.49417	0.44970	0.60792
19	0.005475	0.65163	0.75127	0.66070	0.62306	0.63383
		0.53363	0.71629	0.87078	0.64306	0.59054
		0.62863	0.46262	0.49643	0.44826	0.61034

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

20	0.005260	0.65201	0.74926	0.66183	0.62191	0.63337
		0.53382	0.71583	0.87604	0.64523	0.58851
		0.62806	0.46200	0.49862	0.44692	0.61279
21	0.005060	0.65238	0.74719	0.66302	0.62078	0.63291
		0.53398	0.71541	0.88110	0.64726	0.58658
		0.62755	0.46143	0.50074	0.44566	0.61527
22	0.004873	0.65274	0.74509	0.66426	0.61964	0.63244
		0.53414	0.71502	0.88597	0.64916	0.58473
		0.62708	0.46090	0.50281	0.44447	0.61780
23	0.004697	0.65309	0.74297	0.66555	0.61853	0.63197
		0.53428	0.71466	0.89067	0.65095	0.58297
		0.62665	0.46040	0.50483	0.44334	0.62036
24	0.004531	0.65343	0.74085	0.66687	0.61742	0.63149
		0.53442	0.71433	0.89520	0.65263	0.58130
		0.62625	0.45994	0.50679	0.44227	0.62295
25	0.004375	0.65375	0.73875	0.66823	0.61632	0.63102
		0.53454	0.71401	0.89958	0.65420	0.57971
		0.62588	0.45951	0.50871	0.44126	0.62556
26	0.004226	0.65407	0.73668	0.66960	0.61524	0.63055
		0.53466	0.71372	0.90380	0.65569	0.57819
		0.62553	0.45911	0.51059	0.44028	0.62821
27	0.004085	0.65437	0.73464	0.67099	0.61418	0.63008
		0.53476	0.71344	0.90789	0.65708	0.57675
		0.62520	0.45873	0.51242	0.43935	0.63087
28	0.003950	0.65466	0.73266	0.67239	0.61314	0.62961
		0.53487	0.71318	0.91184	0.65840	0.57539
		0.62488	0.45838	0.51421	0.43846	0.63355
29	0.003821	0.65495	0.73072	0.67379	0.61212	0.62915
		0.53496	0.71294	0.91566	0.65963	0.57409
		0.62457	0.45805	0.51597	0.43761	0.63624
30	0.003696	0.65522	0.72885	0.67519	0.61111	0.62870
		0.53506	0.71271	0.91935	0.66080	0.57285
		0.62427	0.45773	0.51768	0.43678	0.63894

Maximum iterations exceeded.

Eigenvalues of the Weighted Reduced Correlation Matrix:
Total = 15 Average = 1

	1	2	3	4	5
Eigenvalue	9.7220	1.7554	1.1551	0.9240	0.7012
Difference	7.9666	0.6003	0.2311	0.2227	0.2707
Proportion	0.6481	0.1170	0.0770	0.0616	0.0467
Cumulative	0.6481	0.7652	0.8422	0.9038	0.9505

Factor Analysis Intent to Purhase Product Categories
Initial Factor Method: Alpha Factor Analysis

	6	7	8	9	10
Eigenvalue	0.4306	0.3174	0.1185	0.0877	0.0525
Difference	0.1132	0.1988	0.0309	0.0352	0.0525
Proportion	0.0287	0.0212	0.0079	0.0058	0.0035
Cumulative	0.9792	1.0004	1.0083	1.0141	1.0176

	11	12	13	14	15
Eigenvalue	-0.0000	-0.0143	-0.0378	-0.0588	-0.1534
Difference	0.0143	0.0234	0.0211	0.0945	
Proportion	-0.0000	-0.0010	-0.0025	-0.0039	-0.0102
Cumulative	1.0176	1.0167	1.0141	1.0102	1.0000

Eigenvectors

	1	2	3	4	
IS1	0.26103	-0.32986	0.16194	0.33888	SHOP BOOKS
IS2	0.26384	0.23053	0.14392	0.40156	SHOP BUS SV
IS3	0.23375	0.45769	0.00355	0.11960	SHOP LEG SV
IS4	0.25327	0.37665	0.06921	0.18733	SHOP FIN SV
IS5	0.25658	-0.40328	0.04194	0.08278	SHOP MUSIC
IS6	0.28015	-0.24549	-0.21193	-0.23526	SHOP CLOTH
IS7	0.24653	-0.27960	0.45579	0.11483	SHOP COMPUTER
IS8	0.23032	-0.02641	0.40424	-0.48584	SHOP ELECTRONIC
IS9	0.24073	-0.05959	-0.48565	0.08027	SHOP FLOWERS
IS10	0.28216	-0.07293	0.00452	0.27700	SHOP TRAVEL
IS11	0.27836	-0.13812	-0.16546	-0.19711	SHOP CHILD
IS12	0.27037	-0.05525	-0.49056	-0.00778	SHOP FOOD
IS13	0.22679	0.23070	0.10417	-0.00331	SHOP COLLEGE
IS14	0.28162	0.10189	0.10956	-0.43417	SHOP AUTO
IS15	0.25773	0.30055	-0.06059	-0.22908	SHOP MORT SV

	5	6	7	
IS1	0.04606	-0.14501	-0.01063	SHOP BOOKS
IS2	0.00291	0.02424	0.41335	SHOP BUS SV
IS3	0.19076	-0.31623	0.25939	SHOP LEG SV
IS4	0.32163	-0.07730	-0.19961	SHOP FIN SV
IS5	0.09261	-0.32003	-0.21931	SHOP MUSIC
IS6	0.03841	-0.22557	0.13046	SHOP CLOTH
IS7	0.11625	0.13041	-0.09060	SHOP COMPUTER
IS8	0.19348	0.24896	0.29322	SHOP ELECTRONIC
IS9	0.24572	0.50527	0.06800	SHOP FLOWERS
IS10	-0.27294	0.39627	-0.27334	SHOP TRAVEL
IS11	-0.31125	-0.37406	0.23183	SHOP CHILD
IS12	0.02460	0.06041	0.10108	SHOP FOOD
IS13	-0.74936	0.09009	0.01332	SHOP COLLEGE
IS14	0.03661	0.21280	-0.03311	SHOP AUTO
IS15	0.04230	-0.17556	-0.64655	SHOP MORT SV

Coefficient Alpha for each factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
0.961222	0.461056	0.143853	-0.088182	-0.456480	-1.416940	-2.304382

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	
IS1	0.65882	-0.35376	0.14088	0.26368	SHOP BOOKS
IS2	0.70231	0.26075	0.13205	0.32953	SHOP BUS SV
IS3	0.59889	0.49827	0.00314	0.09446	SHOP LEG SV
IS4	0.61733	0.39010	0.05814	0.14077	SHOP FIN SV
IS5	0.63435	-0.42366	0.03574	0.06309	SHOP MUSIC
IS6	0.63895	-0.23791	-0.16661	-0.16542	SHOP CLOTH
IS7	0.64895	-0.31274	0.41355	0.09319	SHOP COMPUTER
IS8	0.68858	-0.03355	0.41657	-0.44778	SHOP ELECTRONIC
IS9	0.61017	-0.06417	-0.42429	0.06272	SHOP FLOWERS
IS10	0.66588	-0.07313	0.00368	0.20153	SHOP TRAVEL
IS11	0.68575	-0.14459	-0.14050	-0.14970	SHOP CHILD
IS12	0.57036	-0.04953	-0.35670	-0.00506	SHOP FOOD
IS13	0.50878	0.21992	0.08056	-0.00229	SHOP COLLEGE
IS14	0.58034	0.08922	0.07782	-0.27582	SHOP AUTO
IS15	0.64234	0.31829	-0.05206	-0.17601	SHOP MORT SV

	FACTOR5	FACTOR6	FACTOR7	
IS1	0.03122	-0.07702	-0.00485	SHOP BOOKS
IS2	0.00208	0.01358	0.19880	SHOP BUS SV
IS3	0.13126	-0.17051	0.12008	SHOP LEG SV
IS4	0.21055	-0.03965	-0.08791	SHOP FIN SV
IS5	0.06149	-0.16651	-0.09797	SHOP MUSIC
IS6	0.02353	-0.10827	0.05376	SHOP CLOTH
IS7	0.08218	0.07224	-0.04309	SHOP COMPUTER
IS8	0.15535	0.15664	0.15839	SHOP ELECTRONIC
IS9	0.16727	0.26951	0.03114	SHOP FLOWERS
IS10	-0.17299	0.19680	-0.11655	SHOP TRAVEL
IS11	-0.20594	-0.19394	0.10319	SHOP CHILD
IS12	0.01394	0.02682	0.03853	SHOP FOOD
IS13	-0.45150	0.04254	0.00540	SHOP COLLEGE
IS14	0.02026	0.09228	-0.01233	SHOP AUTO
IS15	0.02831	-0.09208	-0.29115	SHOP MORT SV

Variance explained by each factor

	FACTOR1	FACTOR2	FACTOR3	FACTOR4
Weighted	9.721993	1.755370	1.155084	0.923956
Unweighted	5.992511	1.119071	0.756536	0.621427

	FACTOR5	FACTOR6	FACTOR7
Weighted	0.701239	0.430575	0.317384
Unweighted	0.403333	0.274468	0.212765

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Final Communality Estimates and Variable Weights

Total Communality: Weighted = 15.005600 Unweighted = 9.380111

	IS1	IS2	IS3	IS4	IS5
Communality	0.655489	0.726975	0.676594	0.610110	0.628251
Weight	1.526212	1.372032	1.481061	1.636361	1.590579

	IS6	IS7	IS8	IS9	IS10
Communality	0.535150	0.712477	0.923066	0.661964	0.571616
Weight	1.868959	1.403100	1.087720	1.513324	1.745659

	IS11	IS12	IS13	IS14	IS15
Communality	0.623976	0.457420	0.519408	0.435962	0.641653
Weight	1.601861	2.184681	1.931681	2.289463	1.565091

Residual Correlations With Uniqueness on the Diagonal

	IS1	IS2	IS3	IS4	
IS1	0.34451	0.01523	-0.01131	-0.00053	SHOP BOOKS
IS2	0.01523	0.27303	0.00112	-0.00835	SHOP BUS SV
IS3	-0.01131	0.00112	0.32341	0.00630	SHOP LEG SV
IS4	-0.00053	-0.00835	0.00630	0.38989	SHOP FIN SV
IS5	0.01265	-0.01924	0.02511	-0.01114	SHOP MUSIC
IS6	-0.00601	0.01355	-0.02681	0.02262	SHOP CLOTH
IS7	-0.00229	0.00772	-0.01257	0.00732	SHOP COMPUTER
IS8	-0.01746	-0.00684	0.00193	0.01027	SHOP ELECTRONIC
IS9	0.00216	-0.00951	0.00671	0.00270	SHOP FLOWERS
IS10	-0.01538	-0.00260	0.00334	0.00354	SHOP TRAVEL
IS11	-0.00524	-0.01347	0.01796	-0.01044	SHOP CHILD
IS12	-0.00003	0.01044	-0.00653	-0.00313	SHOP FOOD
IS13	0.00352	-0.00010	-0.00504	0.00721	SHOP COLLEGE
IS14	0.01976	0.00339	0.00802	-0.02040	SHOP AUTO
IS15	-0.00316	0.00741	-0.01095	0.00376	SHOP MORT SV

	IS5	IS6	IS7	IS8	
IS1	0.01265	-0.00601	-0.00229	-0.01746	SHOP BOOKS
IS2	-0.01924	0.01355	0.00772	-0.00684	SHOP BUS SV
IS3	0.02511	-0.02681	-0.01257	0.00193	SHOP LEG SV
IS4	-0.01114	0.02262	0.00732	0.01027	SHOP FIN SV
IS5	0.37175	0.00423	-0.00832	0.00572	SHOP MUSIC
IS6	0.00423	0.46485	-0.00688	-0.00469	SHOP CLOTH
IS7	-0.00832	-0.00688	0.28752	0.00331	SHOP COMPUTER
IS8	0.00572	-0.00469	0.00331	0.07693	SHOP ELECTRONIC
IS9	0.00431	-0.00749	-0.00889	0.00357	SHOP FLOWERS
IS10	0.01024	-0.00478	0.00696	0.00885	SHOP TRAVEL
IS11	-0.01004	0.00602	0.01508	0.01509	SHOP CHILD
IS12	-0.00655	0.00344	0.00663	-0.00987	SHOP FOOD
IS13	0.00323	-0.00135	-0.01103	-0.00550	SHOP COLLEGE
IS14	-0.00169	0.00749	-0.00237	-0.00007	SHOP AUTO
IS15	-0.00340	-0.00831	0.00253	-0.01236	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Residual Correlations With Uniqueness on the Diagonal

	IS9	IS10	IS11	IS12	
IS1	0.00216	-0.01538	-0.00524	-0.00003	SHOP BOOKS
IS2	-0.00951	-0.00260	-0.01347	0.01044	SHOP BUS SV
IS3	0.00671	0.00334	0.01796	-0.00653	SHOP LEG SV
IS4	0.00270	0.00354	-0.01044	-0.00313	SHOP FIN SV
IS5	0.00431	0.01024	-0.01004	-0.00655	SHOP MUSIC
IS6	-0.00749	-0.00478	0.00602	0.00344	SHOP CLOTH
IS7	-0.00889	0.00696	0.01508	0.00663	SHOP COMPUTER
IS8	0.00357	0.00885	0.01509	-0.00987	SHOP ELECTRONIC
IS9	0.33804	0.00899	0.00427	-0.00171	SHOP FLOWERS
IS10	0.00899	0.42838	0.00879	-0.00385	SHOP TRAVEL
IS11	0.00427	0.00879	0.37602	0.00106	SHOP CHILD
IS12	-0.00171	-0.00385	0.00106	0.54258	SHOP FOOD
IS13	-0.00323	0.00234	0.00062	-0.00331	SHOP COLLEGE
IS14	0.00249	-0.01314	-0.02569	0.00556	SHOP AUTO
IS15	-0.00807	-0.00031	0.00897	0.00429	SHOP MORT SV

	IS13	IS14	IS15	
IS1	0.00352	0.01976	-0.00316	SHOP BOOKS
IS2	-0.00010	0.00339	0.00741	SHOP BUS SV
IS3	-0.00504	0.00802	-0.01095	SHOP LEG SV
IS4	0.00721	-0.02040	0.00376	SHOP FIN SV
IS5	0.00323	-0.00169	-0.00340	SHOP MUSIC
IS6	-0.00135	0.00749	-0.00831	SHOP CLOTH
IS7	-0.01103	-0.00237	0.00253	SHOP COMPUTER
IS8	-0.00550	-0.00007	-0.01236	SHOP ELECTRONIC
IS9	-0.00323	0.00249	-0.00807	SHOP FLOWERS
IS10	0.00234	-0.01314	-0.00031	SHOP TRAVEL
IS11	0.00062	-0.02569	0.00897	SHOP CHILD
IS12	-0.00331	0.00556	0.00429	SHOP FOOD
IS13	0.48059	0.01041	-0.00927	SHOP COLLEGE
IS14	0.01041	0.56404	0.01144	SHOP AUTO
IS15	-0.00927	0.01144	0.35835	SHOP MORT SV

Root Mean Square Off-diagonal Residuals: Over-all = 0.00965569

IS1	IS2	IS3	IS4	IS5
0.010514	0.010061	0.012847	0.010439	0.011007

IS6	IS7	IS8	IS9	IS10
0.011312	0.008179	0.008966	0.005962	0.007895

IS11	IS12	IS13	IS14	IS15
0.012160	0.005586	0.005828	0.012119	0.007650

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling Factors

	IS1	IS2	IS3	IS4	
IS1	1.00000	0.04967	-0.03388	-0.00143	SHOP BOOKS
IS2	0.04967	1.00000	0.00376	-0.02558	SHOP BUS SV
IS3	-0.03388	0.00376	1.00000	0.01775	SHOP LEG SV
IS4	-0.00143	-0.02558	0.01775	1.00000	SHOP FIN SV
IS5	0.03534	-0.06038	0.07240	-0.02927	SHOP MUSIC
IS6	-0.01502	0.03804	-0.06914	0.05314	SHOP CLOTH
IS7	-0.00728	0.02754	-0.04123	0.02187	SHOP COMPUTER
IS8	-0.10723	-0.04722	0.01223	0.05933	SHOP ELECTRONIC
IS9	0.00632	-0.03130	0.02030	0.00743	SHOP FLOWERS
IS10	-0.04004	-0.00759	0.00896	0.00866	SHOP TRAVEL
IS11	-0.01456	-0.04203	0.05151	-0.02726	SHOP CHILD
IS12	-0.00008	0.02714	-0.01559	-0.00680	SHOP FOOD
IS13	0.00865	-0.00028	-0.01278	0.01666	SHOP COLLEGE
IS14	0.04482	0.00864	0.01877	-0.04351	SHOP AUTO
IS15	-0.00899	0.02370	-0.03217	0.01005	SHOP MORT SV

	IS5	IS6	IS7	IS8	
IS1	0.03534	-0.01502	-0.00728	-0.10723	SHOP BOOKS
IS2	-0.06038	0.03804	0.02754	-0.04722	SHOP BUS SV
IS3	0.07240	-0.06914	-0.04123	0.01223	SHOP LEG SV
IS4	-0.02927	0.05314	0.02187	0.05933	SHOP FIN SV
IS5	1.00000	0.01017	-0.02544	0.03380	SHOP MUSIC
IS6	0.01017	1.00000	-0.01882	-0.02479	SHOP CLOTH
IS7	-0.02544	-0.01882	1.00000	0.02226	SHOP COMPUTER
IS8	0.03380	-0.02479	0.02226	1.00000	SHOP ELECTRONIC
IS9	0.01217	-0.01890	-0.02852	0.02212	SHOP FLOWERS
IS10	0.02565	-0.01070	0.01983	0.04874	SHOP TRAVEL
IS11	-0.02687	0.01439	0.04587	0.08870	SHOP CHILD
IS12	-0.01458	0.00686	0.01678	-0.04832	SHOP FOOD
IS13	0.00763	-0.00286	-0.02967	-0.02859	SHOP COLLEGE
IS14	-0.00368	0.01464	-0.00590	-0.00034	SHOP AUTO
IS15	-0.00932	-0.02035	0.00787	-0.07442	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling Factors

	IS9	IS10	IS11	IS12	
IS1	0.00632	-0.04004	-0.01456	-0.00008	SHOP BOOKS
IS2	-0.03130	-0.00759	-0.04203	0.02714	SHOP BUS SV
IS3	0.02030	0.00896	0.05151	-0.01559	SHOP LEG SV
IS4	0.00743	0.00866	-0.02726	-0.00680	SHOP FIN SV
IS5	0.01217	0.02565	-0.02687	-0.01458	SHOP MUSIC
IS6	-0.01890	-0.01070	0.01439	0.00686	SHOP CLOTH
IS7	-0.02852	0.01983	0.04587	0.01678	SHOP COMPUTER
IS8	0.02212	0.04874	0.08870	-0.04832	SHOP ELECTRONIC
IS9	1.00000	0.02363	0.01199	-0.00400	SHOP FLOWERS
IS10	0.02363	1.00000	0.02190	-0.00800	SHOP TRAVEL
IS11	0.01199	0.02190	1.00000	0.00235	SHOP CHILD
IS12	-0.00400	-0.00800	0.00235	1.00000	SHOP FOOD
IS13	-0.00802	0.00516	0.00145	-0.00648	SHOP COLLEGE
IS14	0.00571	-0.02674	-0.05578	0.01006	SHOP AUTO
IS15	-0.02317	-0.00079	0.02443	0.00973	SHOP MORT SV

	IS13	IS14	IS15	
IS1	0.00865	0.04482	-0.00899	SHOP BOOKS
IS2	-0.00028	0.00864	0.02370	SHOP BUS SV
IS3	-0.01278	0.01877	-0.03217	SHOP LEG SV
IS4	0.01666	-0.04351	0.01005	SHOP FIN SV
IS5	0.00763	-0.00368	-0.00932	SHOP MUSIC
IS6	-0.00286	0.01464	-0.02035	SHOP CLOTH
IS7	-0.02967	-0.00590	0.00787	SHOP COMPUTER
IS8	-0.02859	-0.00034	-0.07442	SHOP ELECTRONIC
IS9	-0.00802	0.00571	-0.02317	SHOP FLOWERS
IS10	0.00516	-0.02674	-0.00079	SHOP TRAVEL
IS11	0.00145	-0.05578	0.02443	SHOP CHILD
IS12	-0.00648	0.01006	0.00973	SHOP FOOD
IS13	1.00000	0.02000	-0.02233	SHOP COLLEGE
IS14	0.02000	1.00000	0.02544	SHOP AUTO
IS15	-0.02233	0.02544	1.00000	SHOP MORT SV

Root Mean Square Off-diagonal Partials: Over-all = 0.03091221

IS1	IS2	IS3	IS4	IS5
0.038418	0.033159	0.036143	0.029082	0.032499

IS6	IS7	IS8	IS9	IS10
0.028922	0.025432	0.052830	0.018219	0.022681

IS11	IS12	IS13	IS14	IS15
0.038373	0.017372	0.015385	0.026184	0.027065

Factor Analysis Intent to Purhase Product Categories

Rotation Method: Varimax

Orthogonal Transformation Matrix

	1	2	3	4
1	0.50699	0.47102	0.43441	0.36390
2	-0.62182	0.70591	-0.13187	0.01413
3	0.37549	0.09401	-0.73864	0.43470
4	0.41245	0.32294	0.03635	-0.70795
5	0.08793	0.30439	0.17422	0.19733
6	-0.10430	-0.24185	0.46353	0.31981
7	-0.16304	0.12472	0.04206	0.18974

	5	6	7
1	0.31805	0.28028	0.14233
2	0.21085	-0.18457	0.13752
3	0.09273	-0.31195	-0.09851
4	0.07588	-0.36447	-0.29065
5	-0.88381	-0.21709	0.04562
6	0.23949	-0.72782	-0.16252
7	-0.03950	0.28351	-0.91551

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	
IS1	0.72721	0.18651	0.20791	0.08993	SHOP BOOKS
IS2	0.34578	0.65585	0.20017	0.12584	SHOP BUS SV
IS3	0.04368	0.76079	0.14446	0.15362	SHOP LEG SV
IS4	0.18728	0.67980	0.19351	0.16797	SHOP FIN SV
IS5	0.66323	0.07023	0.23674	0.13602	SHOP MUSIC
IS6	0.34569	0.10398	0.38217	0.25406	SHOP CLOTH
IS7	0.72391	0.15604	0.06707	0.37668	SHOP COMPUTER
IS8	0.31320	0.22436	0.08591	0.85899	SHOP ELECTRONIC
IS9	0.19733	0.21208	0.74458	0.11740	SHOP FLOWERS
IS10	0.45083	0.21266	0.35971	0.10690	SHOP TRAVEL
IS11	0.30837	0.15647	0.29387	0.20933	SHOP CHILD
IS12	0.17608	0.20108	0.53407	0.07402	SHOP FOOD
IS13	0.10548	0.25467	0.07372	0.15042	SHOP COLLEGE
IS14	0.14837	0.23689	0.21862	0.47271	SHOP AUTO
IS15	0.09516	0.46008	0.21912	0.26112	SHOP MORT SV

Factor Analysis Intent to Purhase Product Categories

Rotation Method: Varimax

Rotated Factor Pattern

	FACTOR5	FACTOR6	FACTOR7	
IS1	0.12217	0.15780	-0.02701	SHOP BOOKS
IS2	0.30916	0.03345	-0.15708	SHOP BUS SV
IS3	0.14141	0.17013	0.04976	SHOP LEG SV
IS4	0.10256	-0.01019	0.19140	SHOP FIN SV
IS5	0.03018	0.30191	0.12972	SHOP MUSIC
IS6	0.07621	0.42419	0.09216	SHOP CLOTH
IS7	0.13225	-0.00600	0.01299	SHOP COMPUTER
IS8	0.11054	0.12962	0.01912	SHOP ELECTRONIC
IS9	0.06143	0.06872	0.03690	SHOP FLOWERS
IS10	0.41662	-0.01319	0.09261	SHOP TRAVEL
IS11	0.29471	0.53239	0.06272	SHOP CHILD
IS12	0.13008	0.27050	0.07198	SHOP FOOD
IS13	0.62450	0.14630	0.06294	SHOP COLLEGE
IS14	0.19436	0.14738	0.16458	SHOP AUTO
IS15	0.21765	0.18001	0.47429	SHOP MORT SV

Variance explained by each factor

	FACTOR1	FACTOR2	FACTOR3	FACTOR4
Weighted	3.516212	3.233270	2.610993	2.051907
Unweighted	2.277371	2.084043	1.512216	1.427312

	FACTOR5	FACTOR6	FACTOR7
Weighted	1.649663	1.345305	0.598249
Unweighted	0.933715	0.780027	0.365426

Final Communality Estimates and Variable Weights

Total Communality: Weighted = 15.005600 Unweighted = 9.380111

	IS1	IS2	IS3	IS4	IS5
Communality	0.655489	0.726975	0.676594	0.610110	0.628251
Weight	1.526212	1.372032	1.481061	1.636361	1.590579

	IS6	IS7	IS8	IS9	IS10
Communality	0.535150	0.712477	0.923066	0.661964	0.571616
Weight	1.868959	1.403100	1.087720	1.513324	1.745659

	IS11	IS12	IS13	IS14	IS15
Communality	0.623976	0.457420	0.519408	0.435962	0.641653
Weight	1.601861	2.184681	1.931681	2.289463	1.565091

Scoring Coefficients Estimated by Regression

Squared Multiple Correlations of the Variables with each Factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
0.767641	0.759712	0.651505	0.863534	0.516588	0.504642	0.433571

Factor Analysis Intent to Purhase Product Categories

Rotation Method: Varimax

Standardized Scoring Coefficients

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	
IS1	0.35842	-0.00080	-0.04830	-0.08848	SHOP BOOKS
IS2	0.06558	0.37385	-0.01339	-0.10448	SHOP BUS SV
IS3	-0.11864	0.45913	-0.09368	-0.05849	SHOP LEG SV
IS4	0.01830	0.31097	-0.00621	-0.08013	SHOP FIN SV
IS5	0.30830	-0.06273	-0.02760	-0.12575	SHOP MUSIC
IS6	0.01476	-0.05923	0.11549	0.00482	SHOP CLOTH
IS7	0.44335	-0.03982	-0.12821	-0.02710	SHOP COMPUTER
IS8	-0.11563	-0.07771	-0.11501	1.07405	SHOP ELECTRONIC
IS9	-0.08141	-0.04716	0.65238	0.01436	SHOP FLOWERS
IS10	0.10975	-0.08714	0.13365	-0.07024	SHOP TRAVEL
IS11	-0.02191	-0.07734	0.00983	-0.09409	SHOP CHILD
IS12	-0.05653	-0.02293	0.22697	-0.00296	SHOP FOOD
IS13	-0.07473	-0.05200	-0.08133	-0.00638	SHOP COLLEGE
IS14	-0.06090	-0.01969	0.05223	0.06305	SHOP AUTO
IS15	-0.08437	0.11160	-0.01605	0.02858	SHOP MORT SV

	FACTOR5	FACTOR6	FACTOR7	
IS1	-0.06165	0.03552	-0.06635	SHOP BOOKS
IS2	0.16855	-0.09572	-0.45975	SHOP BUS SV
IS3	-0.11822	0.15265	-0.06035	SHOP LEG SV
IS4	-0.12488	-0.13617	0.18777	SHOP FIN SV
IS5	-0.14851	0.19770	0.14483	SHOP MUSIC
IS6	-0.08315	0.28427	0.01805	SHOP CLOTH
IS7	-0.01346	-0.24420	0.04946	SHOP COMPUTER
IS8	-0.11448	-0.04578	-0.20997	SHOP ELECTRONIC
IS9	-0.11351	-0.19431	-0.07505	SHOP FLOWERS
IS10	0.32180	-0.23302	0.07627	SHOP TRAVEL
IS11	0.17711	0.50894	-0.06282	SHOP CHILD
IS12	-0.01777	0.10383	-0.01782	SHOP FOOD
IS13	0.52443	0.03170	0.00962	SHOP COLLEGE
IS14	0.06610	0.00911	0.10049	SHOP AUTO
IS15	0.04343	0.02407	0.61846	SHOP MORT SV

Appendix E

Factor Analysis Store Characteristics for Internet

Means and Standard Deviations from 457 observations

	SC13	SC23	SC33	SC43	SC53
Mean	3.07221007	3.22757112	3.01750547	2.87964989	3.15973742
Std Dev	1.36899972	1.3445248	1.33595681	1.20705233	1.23307771

	SC63	SC73	SC83	SC93	SC103
Mean	3.27571116	3.13347921	3.25382932	2.46827133	2.55798687
Std Dev	1.23833185	1.1836401	1.32167806	1.24056963	1.26414223

Correlations

	SC13	SC23	SC33	SC43	
SC13	1.00000	0.69875	0.41898	0.43923	SAVE TIME INT
SC23	0.69875	1.00000	0.50689	0.43716	CONVENIENCE INT
SC33	0.41898	0.50689	1.00000	0.45281	EASY PAY INT
SC43	0.43923	0.43716	0.45281	1.00000	CO REP INT
SC53	0.55956	0.54548	0.46157	0.64650	BR REP INT
SC63	0.52248	0.52860	0.43584	0.45065	PRICE INT
SC73	0.49884	0.56790	0.40070	0.53468	MDSE QUAL INT
SC83	0.44072	0.46599	0.38995	0.41233	MDSE VAR INT
SC93	0.41132	0.41191	0.32981	0.44485	RED RISK INT
SC103	0.46706	0.49154	0.39025	0.50975	CUS SERV INT

	SC53	SC63	SC73	SC83	
SC13	0.55956	0.52248	0.49884	0.44072	SAVE TIME INT
SC23	0.54548	0.52860	0.56790	0.46599	CONVENIENCE INT
SC33	0.46157	0.43584	0.40070	0.38995	EASY PAY INT
SC43	0.64650	0.45065	0.53468	0.41233	CO REP INT
SC53	1.00000	0.59009	0.62844	0.46891	BR REP INT
SC63	0.59009	1.00000	0.61669	0.50249	PRICE INT
SC73	0.62844	0.61669	1.00000	0.53481	MDSE QUAL INT
SC83	0.46891	0.50249	0.53481	1.00000	MDSE VAR INT
SC93	0.47855	0.44966	0.52038	0.42757	RED RISK INT
SC103	0.56452	0.46466	0.56128	0.45712	CUS SERV INT

	SC93	SC103	
SC13	0.41132	0.46706	SAVE TIME INT
SC23	0.41191	0.49154	CONVENIENCE INT
SC33	0.32981	0.39025	EASY PAY INT
SC43	0.44485	0.50975	CO REP INT
SC53	0.47855	0.56452	BR REP INT
SC63	0.44966	0.46466	PRICE INT
SC73	0.52038	0.56128	MDSE QUAL INT
SC83	0.42757	0.45712	MDSE VAR INT
SC93	1.00000	0.64547	RED RISK INT
SC103	0.64547	1.00000	CUS SERV INT

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Inverse Correlation Matrix

	SC13	SC23	SC33	SC43	
SC13	2.21875	-1.12290	0.01283	-0.06574	SAVE TIME INT
SC23	-1.12290	2.45064	-0.44664	0.07791	CONVENIENCE INT
SC33	0.01283	-0.44664	1.53991	-0.30242	EASY PAY INT
SC43	-0.06574	0.07791	-0.30242	1.93712	CO REP INT
SC53	-0.36413	-0.07730	-0.12630	-0.78686	BR REP INT
SC63	-0.25357	-0.11278	-0.19274	0.05544	PRICE INT
SC73	0.09582	-0.43662	0.10217	-0.24927	MDSE QUAL INT
SC83	-0.11215	-0.11549	-0.14288	-0.06554	MDSE VAR INT
SC93	-0.08844	0.04670	0.00336	-0.12224	RED RISK INT
SC103	-0.07788	-0.18178	-0.06659	-0.20981	CUS SERV INT

	SC53	SC63	SC73	SC83	
SC13	-0.36413	-0.25357	0.09582	-0.11215	SAVE TIME INT
SC23	-0.07730	-0.11278	-0.43662	-0.11549	CONVENIENCE INT
SC33	-0.12630	-0.19274	0.10217	-0.14288	EASY PAY INT
SC43	-0.78686	0.05544	-0.24927	-0.06554	CO REP INT
SC53	2.52790	-0.41850	-0.44369	-0.02266	BR REP INT
SC63	-0.41850	2.01405	-0.54873	-0.26337	PRICE INT
SC73	-0.44369	-0.54873	2.35531	-0.33287	MDSE QUAL INT
SC83	-0.02266	-0.26337	-0.33287	1.62705	MDSE VAR INT
SC93	-0.00774	-0.14574	-0.24636	-0.13538	RED RISK INT
SC103	-0.30974	0.04368	-0.24829	-0.13606	CUS SERV INT

	SC93	SC103	
SC13	-0.08844	-0.07788	SAVE TIME INT
SC23	0.04670	-0.18178	CONVENIENCE INT
SC33	0.00336	-0.06659	EASY PAY INT
SC43	-0.12224	-0.20981	CO REP INT
SC53	-0.00774	-0.30974	BR REP INT
SC63	-0.14574	0.04368	PRICE INT
SC73	-0.24636	-0.24829	MDSE QUAL INT
SC83	-0.13538	-0.13606	MDSE VAR INT
SC93	1.88351	-0.86415	RED RISK INT
SC103	-0.86415	2.17256	CUS SERV INT

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling all other Variables

	SC13	SC23	SC33	SC43	
SC13	1.00000	0.48156	-0.00694	0.03171	SAVE TIME INT
SC23	0.48156	1.00000	0.22992	-0.03576	CONVENIENCE INT
SC33	-0.00694	0.22992	1.00000	0.17510	EASY PAY INT
SC43	0.03171	-0.03576	0.17510	1.00000	CO REP INT
SC53	0.15375	0.03106	0.06401	0.35558	BR REP INT
SC63	0.11995	0.05077	0.10944	-0.02807	PRICE INT
SC73	-0.04192	0.18174	-0.05365	0.11670	MDSE QUAL INT
SC83	0.05902	0.05784	0.09027	0.03692	MDSE VAR INT
SC93	0.04326	-0.02174	-0.00198	0.06399	RED RISK INT
SC103	0.03547	0.07878	0.03640	0.10227	CUS SERV INT

	SC53	SC63	SC73	SC83	
SC13	0.15375	0.11995	-0.04192	0.05902	SAVE TIME INT
SC23	0.03106	0.05077	0.18174	0.05784	CONVENIENCE INT
SC33	0.06401	0.10944	-0.05365	0.09027	EASY PAY INT
SC43	0.35558	-0.02807	0.11670	0.03692	CO REP INT
SC53	1.00000	0.18548	0.18183	0.01118	BR REP INT
SC63	0.18548	1.00000	0.25194	0.14549	PRICE INT
SC73	0.18183	0.25194	1.00000	0.17004	MDSE QUAL INT
SC83	0.01118	0.14549	0.17004	1.00000	MDSE VAR INT
SC93	0.00355	0.07483	0.11697	0.07734	RED RISK INT
SC103	0.13217	-0.02088	0.10976	0.07237	CUS SERV INT

	SC93	SC103	
SC13	0.04326	0.03547	SAVE TIME INT
SC23	-0.02174	0.07878	CONVENIENCE INT
SC33	-0.00198	0.03640	EASY PAY INT
SC43	0.06399	0.10227	CO REP INT
SC53	0.00355	0.13217	BR REP INT
SC63	0.07483	-0.02088	PRICE INT
SC73	0.11697	0.10976	MDSE QUAL INT
SC83	0.07734	0.07237	MDSE VAR INT
SC93	1.00000	0.42719	RED RISK INT
SC103	0.42719	1.00000	CUS SERV INT

Kaiser's Measure of Sampling Adequacy: Over-all MSA = 0.91657845

SC13	SC23	SC33	SC43	SC53
0.890561	0.881068	0.935117	0.917998	0.919731

SC63	SC73	SC83	SC93	SC103
0.938061	0.929390	0.960353	0.900885	0.908312

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Prior Communality Estimates: SMC

SC13	SC23	SC33	SC43	SC53
0.549295	0.591943	0.350611	0.483769	0.604414

SC63	SC73	SC83	SC93	SC103
0.503488	0.575428	0.385392	0.469076	0.539715

Preliminary Eigenvalues: Total = 10 Average = 1

	1	2	3	4	5
Eigenvalue	9.8592	0.6874	0.3490	0.2383	0.0665
Difference	9.1718	0.3384	0.1108	0.1718	0.1778
Proportion	0.9859	0.0687	0.0349	0.0238	0.0067
Cumulative	0.9859	1.0547	1.0896	1.1134	1.1200

	6	7	8	9	10
Eigenvalue	-0.1113	-0.1668	-0.2404	-0.3146	-0.3674
Difference	0.0554	0.0736	0.0742	0.0528	
Proportion	-0.0111	-0.0167	-0.0240	-0.0315	-0.0367
Cumulative	1.1089	1.0922	1.0682	1.0367	1.0000

5 factors will be retained by the MINEIGEN criterion.

Iter	Change	Communalities
1	0.084098	0.60404 0.67578 0.38472 0.54383 0.67510 0.55870 0.63753 0.42688 0.53462 0.62381
2	0.044510	0.63143 0.72029 0.40720 0.57714 0.71202 0.58124 0.66121 0.44422 0.56716 0.66553
3	0.024254	0.64464 0.74454 0.42260 0.59587 0.73179 0.59035 0.66921 0.45106 0.58331 0.68655
4	0.013601	0.65062 0.75814 0.43396 0.60642 0.74253 0.59413 0.67105 0.45326 0.59126 0.69731
5	0.008971	0.65292 0.76603 0.44293 0.61224 0.74835 0.59588 0.67077 0.45349 0.59510 0.70295
6	0.007499	0.65339 0.77079 0.45043 0.61527 0.75145 0.59688 0.66998 0.45296 0.59686 0.70599
7	0.006542	0.65298 0.77380 0.45697 0.61662 0.75302 0.59759 0.66924 0.45220 0.59758 0.70772
8	0.005887	0.65219 0.77582 0.46285 0.61694 0.75374 0.59816 0.66870 0.45140 0.59778 0.70879
9	0.005415	0.65128 0.77724 0.46827 0.61665 0.75402 0.59863 0.66834 0.45065 0.59771 0.70951

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

10	0.005057	0.65037 0.77828 0.47333 0.61598 0.75410 0.59903 0.66813 0.44997 0.59752 0.71006
11	0.004775	0.64953 0.77908 0.47810 0.61509 0.75410 0.59936 0.66802 0.44936 0.59727 0.71052
12	0.004543	0.64879 0.77970 0.48264 0.61405 0.75412 0.59962 0.66797 0.44881 0.59699 0.71094
13	0.004348	0.64814 0.78018 0.48699 0.61294 0.75418 0.59982 0.66796 0.44833 0.59670 0.71132
14	0.004180	0.64759 0.78055 0.49117 0.61178 0.75431 0.59997 0.66798 0.44790 0.59641 0.71169
15	0.004032	0.64713 0.78082 0.49520 0.61059 0.75451 0.60008 0.66801 0.44751 0.59613 0.71205
16	0.003901	0.64675 0.78102 0.49911 0.60939 0.75478 0.60015 0.66804 0.44717 0.59584 0.71240
17	0.003784	0.64645 0.78113 0.50289 0.60819 0.75513 0.60020 0.66808 0.44686 0.59556 0.71274
18	0.003678	0.64621 0.78118 0.50657 0.60699 0.75554 0.60021 0.66812 0.44658 0.59529 0.71308
19	0.003582	0.64604 0.78117 0.51015 0.60579 0.75600 0.60021 0.66816 0.44632 0.59502 0.71342
20	0.003493	0.64592 0.78111 0.51364 0.60461 0.75652 0.60019 0.66820 0.44609 0.59475 0.71374
21	0.003413	0.64586 0.78099 0.51706 0.60343 0.75708 0.60015 0.66823 0.44588 0.59449 0.71407
22	0.003338	0.64583 0.78083 0.52039 0.60226 0.75768 0.60010 0.66827 0.44569 0.59423 0.71439
23	0.003270	0.64586 0.78062 0.52366 0.60111 0.75832 0.60004 0.66831 0.44552 0.59398 0.71471
24	0.003206	0.64592 0.78038 0.52687 0.59996 0.75898 0.59996 0.66834 0.44535 0.59373 0.71502
25	0.003147	0.64601 0.78009 0.53002 0.59883 0.75967 0.59988 0.66838 0.44521 0.59348 0.71533
26	0.003092	0.64614 0.77978 0.53311 0.59772 0.76039 0.59979 0.66842 0.44507 0.59323 0.71563
27	0.003041	0.64630 0.77943 0.53615 0.59662 0.76112 0.59969 0.66846 0.44494 0.59299 0.71593

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

28	0.002993	0.64648	0.77905	0.53914	0.59553	0.76187
		0.59959	0.66849	0.44482	0.59276	0.71623
29	0.002948	0.64670	0.77865	0.54209	0.59446	0.76264
		0.59948	0.66853	0.44471	0.59252	0.71652
30	0.002906	0.64694	0.77822	0.54500	0.59341	0.76341
		0.59937	0.66858	0.44461	0.59229	0.71681

Maximum iterations exceeded.

Eigenvalues of the Weighted Reduced Correlation Matrix:
Total = 10 Average = 1

	1	2	3	4	5
Eigenvalue	8.0686	0.7579	0.4901	0.3834	0.3040
Difference	7.3107	0.2679	0.1067	0.0793	0.2233
Proportion	0.8069	0.0758	0.0490	0.0383	0.0304
Cumulative	0.8069	0.8827	0.9317	0.9700	1.0004

	6	7	8	9	10
Eigenvalue	0.0808	0.0363	0.0015	-0.0399	-0.0827
Difference	0.0445	0.0348	0.0414	0.0427	
Proportion	0.0081	0.0036	0.0001	-0.0040	-0.0083
Cumulative	1.0085	1.0121	1.0123	1.0083	1.0000

Eigenvectors

	1	2	3	
SC13	0.31220	0.39116	0.31250	SAVE TIME INT
SC23	0.30266	0.48324	0.35217	CONVENIENCE INT
SC33	0.29061	0.31511	-0.37358	EASY PAY INT
SC43	0.31550	-0.13943	-0.55957	CO REP INT
SC53	0.32276	-0.03359	-0.40871	BR REP INT
SC63	0.33113	0.09714	0.01446	PRICE INT
SC73	0.33582	-0.11220	0.03171	MDSE QUAL INT
SC83	0.33843	-0.01232	0.09849	MDSE VAR INT
SC93	0.30271	-0.51078	0.30460	RED RISK INT
SC103	0.30689	-0.45885	0.23428	CUS SERV INT

	4	5	
SC13	0.10749	-0.38766	SAVE TIME INT
SC23	0.21131	-0.13384	CONVENIENCE INT
SC33	0.43976	0.59089	EASY PAY INT
SC43	0.16550	-0.23225	CO REP INT
SC53	-0.12487	-0.48597	BR REP INT
SC63	-0.49867	0.20302	PRICE INT
SC73	-0.45629	0.02824	MDSE QUAL INT
SC83	-0.27156	0.37388	MDSE VAR INT
SC93	0.19282	0.09571	RED RISK INT
SC103	0.37367	-0.03998	CUS SERV INT

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Coefficient Alpha for each factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
0.973404	-0.354840	-1.156074	-1.787128	-2.543552

Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	
SC13	0.71328	0.27390	0.17596	SAVE TIME INT
SC23	0.75841	0.37113	0.21749	CONVENIENCE INT
SC33	0.60940	0.20253	-0.19307	EASY PAY INT
SC43	0.69035	-0.09351	-0.30177	CO REP INT
SC53	0.80104	-0.02555	-0.25000	BR REP INT
SC63	0.72818	0.06547	0.00784	PRICE INT
SC73	0.77999	-0.07987	0.01815	MDSE QUAL INT
SC83	0.64099	-0.00715	0.04598	MDSE VAR INT
SC93	0.66175	-0.34223	0.16411	RED RISK INT
SC103	0.73805	-0.33821	0.13886	CUS SERV INT

	FACTOR4	FACTOR5	
SC13	0.05353	-0.17192	SAVE TIME INT
SC23	0.11542	-0.06510	CONVENIENCE INT
SC33	0.20101	0.24052	EASY PAY INT
SC43	0.07894	-0.09865	CO REP INT
SC53	-0.06756	-0.23412	BR REP INT
SC63	-0.23904	0.08666	PRICE INT
SC73	-0.23101	0.01273	MDSE QUAL INT
SC83	-0.11212	0.13746	MDSE VAR INT
SC93	0.09188	0.04061	RED RISK INT
SC103	0.19589	-0.01867	CUS SERV INT

Variance explained by each factor

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
Weighted	8.068643	0.757946	0.490084	0.383375	0.304026
Unweighted	5.105699	0.505404	0.317820	0.237276	0.184757

Final Communality Estimates and Variable Weights

Total Communality: Weighted = 10.004073 Unweighted = 6.350957

	SC13	SC23	SC33	SC43	SC53
Communality	0.647173	0.777785	0.547920	0.592357	0.764188
Weight	1.545750	1.284991	1.834870	1.685178	1.309910

	SC63	SC73	SC83	SC93	SC103
Communality	0.599252	0.668618	0.444504	0.592056	0.717105
Weight	1.668428	1.495716	2.249177	1.688366	1.395063

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Residual Correlations With Uniqueness on the Diagonal

	SC13	SC23	SC33	SC43	
SC13	0.35283	0.00050	-0.00660	0.00435	SAVE TIME INT
SC23	0.00050	0.22221	0.00400	-0.00161	CONVENIENCE INT
SC33	-0.00660	0.00400	0.45208	0.00064	EASY PAY INT
SC43	0.00435	-0.00161	0.00064	0.40764	CO REP INT
SC53	0.00255	-0.00562	0.00021	-0.00209	BR REP INT
SC63	0.01147	-0.01643	0.00755	-0.01615	PRICE INT
SC73	-0.02427	0.02953	-0.01157	0.01371	MDSE QUAL INT
SC83	0.00701	-0.00560	-0.00088	0.00544	MDSE VAR INT
SC93	0.00624	-0.00660	-0.00070	0.00228	RED RISK INT
SC103	-0.00486	0.00330	0.00090	-0.00679	CUS SERV INT

	SC53	SC63	SC73	SC83	
SC13	0.00255	0.01147	-0.02427	0.00701	SAVE TIME INT
SC23	-0.00562	-0.01643	0.02953	-0.00560	CONVENIENCE INT
SC33	0.00021	0.00755	-0.01157	-0.00088	EASY PAY INT
SC43	-0.00209	-0.01615	0.01371	0.00544	CO REP INT
SC53	0.23581	0.01456	-0.00648	-0.00864	BR REP INT
SC63	0.01456	0.40075	-0.00252	-0.00288	PRICE INT
SC73	-0.00648	-0.00252	0.33138	0.00579	MDSE QUAL INT
SC83	-0.00864	-0.00288	0.00579	0.55550	MDSE VAR INT
SC93	-0.00353	0.00735	-0.00539	-0.00188	RED RISK INT
SC103	0.00826	-0.00327	0.00156	-0.00023	CUS SERV INT

	SC93	SC103	
SC13	0.00624	-0.00486	SAVE TIME INT
SC23	-0.00660	0.00330	CONVENIENCE INT
SC33	-0.00070	0.00090	EASY PAY INT
SC43	0.00228	-0.00679	CO REP INT
SC53	-0.00353	0.00826	BR REP INT
SC63	0.00735	-0.00327	PRICE INT
SC73	-0.00539	0.00156	MDSE QUAL INT
SC83	-0.00188	-0.00023	MDSE VAR INT
SC93	0.40794	0.00129	RED RISK INT
SC103	0.00129	0.28290	CUS SERV INT

Root Mean Square Off-diagonal Residuals: Over-all = 0.00877588

SC13	SC23	SC33	SC43	SC53
0.010008	0.011918	0.005302	0.007859	0.007084

SC63	SC73	SC83	SC93	SC103
0.010596	0.014516	0.005065	0.004582	0.004274

Factor Analysis Store Characteristics for Internet

Initial Factor Method: Alpha Factor Analysis

Partial Correlations Controlling Factors

	SC13	SC23	SC33	SC43	
SC13	1.00000	0.00179	-0.01653	0.01146	SAVE TIME INT
SC23	0.00179	1.00000	0.01261	-0.00535	CONVENIENCE INT
SC33	-0.01653	0.01261	1.00000	0.00149	EASY PAY INT
SC43	0.01146	-0.00535	0.00149	1.00000	CO REP INT
SC53	0.00884	-0.02455	0.00065	-0.00673	BR REP INT
SC63	0.03049	-0.05507	0.01773	-0.03995	PRICE INT
SC73	-0.07098	0.10882	-0.02990	0.03731	MDSE QUAL INT
SC83	0.01584	-0.01595	-0.00175	0.01142	MDSE VAR INT
SC93	0.01645	-0.02193	-0.00163	0.00560	RED RISK INT
SC103	-0.01538	0.01315	0.00253	-0.01998	CUS SERV INT

	SC53	SC63	SC73	SC83	
SC13	0.00884	0.03049	-0.07098	0.01584	SAVE TIME INT
SC23	-0.02455	-0.05507	0.10882	-0.01595	CONVENIENCE INT
SC33	0.00065	0.01773	-0.02990	-0.00175	EASY PAY INT
SC43	-0.00673	-0.03995	0.03731	0.01142	CO REP INT
SC53	1.00000	0.04735	-0.02319	-0.02386	BR REP INT
SC63	0.04735	1.00000	-0.00692	-0.00611	PRICE INT
SC73	-0.02319	-0.00692	1.00000	0.01349	MDSE QUAL INT
SC83	-0.02386	-0.00611	0.01349	1.00000	MDSE VAR INT
SC93	-0.01139	0.01818	-0.01465	-0.00395	RED RISK INT
SC103	0.03196	-0.00972	0.00510	-0.00059	CUS SERV INT

	SC93	SC103	
SC13	0.01645	-0.01538	SAVE TIME INT
SC23	-0.02193	0.01315	CONVENIENCE INT
SC33	-0.00163	0.00253	EASY PAY INT
SC43	0.00560	-0.01998	CO REP INT
SC53	-0.01139	0.03196	BR REP INT
SC63	0.01818	-0.00972	PRICE INT
SC73	-0.01465	0.00510	MDSE QUAL INT
SC83	-0.00395	-0.00059	MDSE VAR INT
SC93	1.00000	0.00380	RED RISK INT
SC103	0.00380	1.00000	CUS SERV INT

Root Mean Square Off-diagonal Partials: Over-all = 0.02751446

SC13	SC23	SC33	SC43	SC53
0.028308	0.042917	0.013562	0.020431	0.024100

SC63	SC73	SC83	SC93	SC103
0.030957	0.047346	0.012665	0.012868	0.014803

Factor Analysis Store Characteristics for Internet

Rotation Method: Varimax

Orthogonal Transformation Matrix

	1	2	3	4	5
1	0.49415	0.47880	0.48062	0.43542	0.32555
2	-0.70718	0.63509	0.00409	-0.11587	0.28830
3	0.36787	0.46598	0.05936	-0.69357	-0.40371
4	0.34239	0.17668	-0.80516	-0.03044	0.44983
5	0.05619	-0.34505	0.34232	-0.56127	0.66752

Rotated Factor Pattern

	FACTOR1	FACTOR2	FACTOR3	
SC13	0.23216	0.66625	0.25242	SAVE TIME INT
SC23	0.22818	0.74303	0.26371	CONVENIENCE INT
SC33	0.16922	0.28296	0.20274	EASY PAY INT
SC43	0.31774	0.17853	0.21617	CO REP INT
SC53	0.28565	0.31967	0.34430	BR REP INT
SC63	0.23944	0.32175	0.57284	PRICE INT
SC73	0.37021	0.28599	0.56598	MDSE QUAL INT
SC83	0.30805	0.25655	0.44810	MDSE VAR INT
SC93	0.66313	0.17819	0.26632	RED RISK INT
SC103	0.72098	0.24434	0.19747	CUS SERV INT

	FACTOR4	FACTOR5	
SC13	0.25167	0.14946	SAVE TIME INT
SC23	0.16941	0.27456	CONVENIENCE INT
SC33	0.23467	0.58570	EASY PAY INT
SC43	0.57369	0.28927	CO REP INT
SC53	0.65860	0.16767	BR REP INT
SC63	0.26268	0.20310	PRICE INT
SC73	0.33617	0.12816	MDSE QUAL INT
SC83	0.17431	0.22938	MDSE VAR INT
SC93	0.18838	0.11896	RED RISK INT
SC103	0.26876	0.16236	CUS SERV INT

Variance explained by each factor

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
Weighted	2.461476	2.310039	2.149702	1.871800	1.211056
Unweighted	1.565990	1.552690	1.298840	1.230089	0.703349

Final Communality Estimates and Variable Weights

Total Communality: Weighted = 10.004073 Unweighted = 6.350957

	SC13	SC23	SC33	SC43	SC53
Communality	0.647173	0.777785	0.547920	0.592357	0.764188
Weight	1.545750	1.284991	1.834870	1.685178	1.309910

	SC63	SC73	SC83	SC93	SC103
Communality	0.599252	0.668618	0.444504	0.592056	0.717105
Weight	1.668428	1.495716	2.249177	1.688366	1.395063

Factor Analysis Store Characteristics for Internet

Rotation Method: Varimax

Scoring Coefficients Estimated by Regression

Squared Multiple Correlations of the Variables with each Factor

FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5
0.649224	0.672963	0.493557	0.572539	0.391854

Standardized Scoring Coefficients

	FACTOR1	FACTOR2	FACTOR3	
SC13	-0.03843	0.40163	-0.05324	SAVE TIME INT
SC23	-0.09874	0.70871	-0.12444	CONVENIENCE INT
SC33	-0.06863	-0.06707	-0.04006	EASY PAY INT
SC43	0.01054	-0.12051	-0.12220	CO REP INT
SC53	-0.15137	-0.01258	-0.00190	BR REP INT
SC63	-0.08634	-0.02293	0.43003	PRICE INT
SC73	0.02962	-0.11094	0.47805	MDSE QUAL INT
SC83	0.02318	-0.03978	0.21719	MDSE VAR INT
SC93	0.40782	-0.07517	0.00897	RED RISK INT
SC103	0.64400	-0.05728	-0.21070	CUS SERV INT

	FACTOR4	FACTOR5	
SC13	0.00210	-0.13736	SAVE TIME INT
SC23	-0.21506	0.12369	CONVENIENCE INT
SC33	-0.02618	0.60332	EASY PAY INT
SC43	0.35868	0.17853	CO REP INT
SC53	0.73134	-0.15165	BR REP INT
SC63	-0.08901	0.03218	PRICE INT
SC73	0.01540	-0.14778	MDSE QUAL INT
SC83	-0.09340	0.08395	MDSE VAR INT
SC93	-0.11091	-0.04356	RED RISK INT
SC103	-0.06499	-0.01738	CUS SERV INT

Appendix F

Regression Analysis with Individual Store Characteristics

General Linear Models Procedure

Dependent Variable: INTENT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	39	4060.490527	104.115142	621.01	0.0001
Error	7352	1232.597403	0.167655		
Corrected Total	7391	5293.087931			

R-Square	C.V.	Root MSE	INTENT Mean
0.767131	-9999.99	0.409457	-0.000000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SC13	1	292.697988	292.697988	1745.84	0.0001
SC23	1	29.723274	29.723274	177.29	0.0001
SC33	1	29.548291	29.548291	176.24	0.0001
SC43	1	10.029487	10.029487	59.82	0.0001
SC53	1	4.281684	4.281684	25.54	0.0001
SC63	1	10.260243	10.260243	61.20	0.0001
SC73	1	14.293576	14.293576	85.26	0.0001
SC83	1	0.008124	0.008124	0.05	0.8258
SC93	1	5.531317	5.531317	32.99	0.0001
SC103	1	20.235405	20.235405	120.70	0.0001
INCCD	1	28.944084	28.944084	172.64	0.0001
AGE	1	3.257681	3.257681	19.43	0.0001
SEXD1	1	34.133618	34.133618	203.59	0.0001
MARD2	1	17.190743	17.190743	102.54	0.0001
MARD3	1	18.299483	18.299483	109.15	0.0001
EDD1	1	3.375925	3.375925	20.14	0.0001
EDD3	1	0.846316	0.846316	5.05	0.0247
OCCPD2	1	2.604859	2.604859	15.54	0.0001
OCCPD3	1	19.419292	19.419292	115.83	0.0001
OCCPD4	1	12.239884	12.239884	73.01	0.0001
OCCPD5	1	0.000228	0.000228	0.00	0.9706
RACED1	1	7.606002	7.606002	45.37	0.0001
RACED2	1	6.576142	6.576142	39.22	0.0001
RESZD1	1	4.114949	4.114949	24.54	0.0001
RESZD2	1	2.119305	2.119305	12.64	0.0004
RESZD3	1	3.651686	3.651686	21.78	0.0001
RESZD4	1	0.184262	0.184262	1.10	0.2945
INCM	1	7.993160	7.993160	47.68	0.0001
HSRDS	1	1.170222	1.170222	6.98	0.0083
CHHH	1	0.455223	0.455223	2.72	0.0994
OPL	1	64.720522	64.720522	386.03	0.0001
DSI	1	14.389927	14.389927	85.83	0.0001
MMP	1	1.133843	1.133843	6.76	0.0093
PDI	1	0.012926	0.012926	0.08	0.7813
NATL	1	2.962223	2.962223	17.67	0.0001
REC	1	1037.327709	1037.327709	6187.29	0.0001
SERV	1	1246.960075	1246.960075	7437.67	0.0001

Regression Analysis with Individual Store Characteristics

General Linear Models Procedure

Dependent Variable: INTENT

Source	DF	Type I SS	Mean Square	F Value	Pr > F
GIFT	1	1082.930825	1082.930825	6459.29	0.0001
ELEC	1	19.260022	19.260022	114.88	0.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SC13	1	0.337170	0.337170	2.01	0.1562
SC23	1	0.312345	0.312345	1.86	0.1723
SC33	1	0.274406	0.274406	1.64	0.2008
SC43	1	0.064212	0.064212	0.38	0.5360
SC53	1	0.091374	0.091374	0.55	0.4604
SC63	1	0.222241	0.222241	1.33	0.2496
SC73	1	0.638041	0.638041	3.81	0.0511
SC83	1	1.525143	1.525143	9.10	0.0026
SC93	1	0.576953	0.576953	3.44	0.0636
SC103	1	6.971519	6.971519	41.58	0.0001
INCCD	1	1.524000	1.524000	9.09	0.0026
AGE	1	1.839359	1.839359	10.97	0.0009
SEXD1	1	13.927551	13.927551	83.07	0.0001
MARD2	1	0.809544	0.809544	4.83	0.0280
MARD3	1	0.301555	0.301555	1.80	0.1799
EDD1	1	3.142219	3.142219	18.74	0.0001
EDD3	1	0.236828	0.236828	1.41	0.2347
OCCPD2	1	3.172205	3.172205	18.92	0.0001
OCCPD3	1	0.005796	0.005796	0.03	0.8525
OCCPD4	1	0.284226	0.284226	1.70	0.1929
OCCPD5	1	0.013985	0.013985	0.08	0.7727
RACED1	1	1.050018	1.050018	6.26	0.0124
RACED2	1	6.981908	6.981908	41.64	0.0001
RESZD1	1	2.156887	2.156887	12.87	0.0003
RESZD2	1	0.640581	0.640581	3.82	
0.0507RESZD3	1	0.003930	0.003930	0.02	
0.8783					
RESZD4	1	1.260155	1.260155	7.52	0.0061
INCM	1	0.512694	0.512694	3.06	0.0804
HSRDS	1	0.591124	0.591124	3.53	0.0605
CHHH	1	0.192124	0.192124	1.15	0.2844
OPL	1	18.208777	18.208777	108.61	0.0001
DSI	1	2.095746	2.095746	12.50	0.0004
MMP	1	0.000569	0.000569	0.00	0.9536
PDI	1	0.013407	0.013407	0.08	0.7773
NATL	1	7.824909	7.824909	46.67	0.0001
REC	1	1157.836785	1157.836785	6906.08	0.0001
SERV	1	1278.745807	1278.745807	7627.26	0.0001
GIFT	1	1069.315633	1069.315633	6378.08	0.0001
ELEC	1	19.260022	19.260022	114.88	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > |T|	Std Error of Estimate
INTERCEPT	-.4552600571	-8.10	0.0001	0.05617597

Regression Analysis with Individual Store Characteristics

General Linear Models Procedure

Dependent Variable: INTENT

Parameter	Estimate	T for H0: Parameter=0	Pr > |T|	Std Error of Estimate
SC13	-.0079096976	-1.42	0.1562	0.00557754
SC23	-.0079919355	-1.36	0.1723	0.00585521
SC33	-.0058770441	-1.28	0.2008	0.00459378
SC43	-.0036052033	-0.62	0.5360	0.00582545
S53	0.0047991416	0.74	0.4604	0.00650070
SC63	0.0066169687	1.15	0.2496	0.00574719
SC73	0.0127074499	1.95	0.0511	0.00651391
SC83	0.0147119396	3.02	0.0026	0.00487778
SC93	-.0104975122	-1.86	0.0636	0.00565880
SC103	0.0384995594	6.45	0.0001	0.00597035
INCCD	-.0346947237	-3.01	0.0026	0.01150744
AGE	-.0224688834	-3.31	0.0009	0.00678354
SEXD1	0.0984466838	9.11	0.0001	0.01080119
MARD2	-.0342438817	-2.20	0.0280	0.01558370
MARD3	0.0239856763	1.34	0.1799	0.01788450
EDD1	-.0936313840	-4.33	0.0001	0.02162774
EDD3	0.0051341111	1.19	0.2347	0.00431973
OCCPD2	0.1284326793	4.35	0.0001	0.02952588
OCCPD3	0.0063122386	0.19	0.8525	0.03394841
OCCPD4	0.0186697616	1.30	0.1929	0.01433886
OCCPD5	-.0049082036	-0.29	0.7727	0.01699443
RACED1	0.0629751761	2.50	0.0124	0.02516396
RACED2	0.2217598121	6.45	0.0001	0.03436399
RESZD1	-.0589612966	-3.59	0.0003	0.01643846
RESZD2	-.0263145827	-1.95	0.0507	0.01346224
RESZD3	-.0026565641	-0.15	0.8783	0.01735165
RESZD4	0.0672693551	2.74	0.0061	0.02453653
INCM	-.0071981189	-1.75	0.0804	0.00411621
HSRDS	0.0105671009	1.88	0.0605	0.00562761
CHHH	0.0154625818	1.07	0.2844	0.01444439
OPL	0.0143962298	1042	0.0001	0.00138139
DSI	0.0057235806	3.54	0.0004	0.00161885
MMP	-.0000599316	-0.06	0.9536	0.00102915
PDI	0.0021072016	0.28	0.7773	0.00745153
NATL	-.1199442922	-6.83	0.0001	0.01755690
REC	0.9600326487	83.10	0.0001	0.01155235
SERV	0.9826152367	87.33	0.0001	0.01125121
GIFT	0.9786880487	79.86	0.0001	0.01225460
ELEC	-.0769263468	-10.72	0.0001	0.00717719

Appendix G

Regression Analysis Using Store Characteristic Factor Scores

General Linear Models Procedure

Dependent Variable: INTENT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	34	4056.262003	119.301824	709.64	0.0001
Error	7357	1236.825927	0.168116		
Corrected Total	7391	5293.087931			

R-Square	C.V.	Root MSE	INTENT Mean
0.766332	-9999.99	0.410019	-0.000000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
SCFAC1	1	186.565885	186.565885	1109.75	0.0001
SCFAC2	1	125.763273	125.763273	748.08	0.0001
SCFAC3	1	45.294796	45.294796	269.43	0.0001
SCFAC4	1	19.737987	19.737987	117.41	0.0001
SCFAC5	1	17.303960	17.303960	102.93	0.0001
INCCD	1	33.194110	33.194110	197.45	0.0001
AGE	1	3.177965	3.177965	18.90	0.0001
SEXD1	1	34.188586	34.188586	203.36	0.0001
MARD2	1	17.930022	17.930022	106.65	0.0001
MARD3	1	20.872287	20.872287	124.15	0.0001
EDD1	1	3.824795	3.824795	22.75	0.0001
EDD3	1	0.414016	0.414016	2.46	0.1166
OCCPD2	1	3.179356	3.179356	18.91	0.0001
OCCPD3	1	20.718789	20.718789	123.24	0.0001
OCCPD4	1	12.331744	12.331744	73.35	0.0001
OCCPD5	1	0.064372	0.064372	0.38	0.5361
RACED1	1	7.157717	7.157717	42.58	0.0001
RACED2	1	5.584840	5.584840	33.22	0.0001
RESZD1	1	4.223955	4.223955	25.13	0.0001
RESZD2	1	1.728203	1.728203	10.28	0.0014
RESZD3	1	5.570012	5.570012	33.13	0.0001
RESZD4	1	0.114427	0.114427	0.68	0.4094
INCM	1	8.910320	8.910320	53.00	0.0001
HSRDS	1	0.555963	0.555963	3.31	0.0690
CHHH	1	0.071425	0.071425	0.42	0.5145
OPL	1	67.699826	67.699826	402.70	0.0001
DSI	1	15.235744	15.235744	90.63	0.0001
MMP	1	1.458150	1.458150	8.67	0.0032
PDI	1	0.042067	0.042067	0.25	0.6169
NATL	1	2.629396	2.629396	15.64	0.0001
REC	1	1039.442596	1039.442596	6182.91	0.0001
SERV	1	1251.205547	1251.205547	7442.53	0.0001
GIFT	1	1082.235701	1082.235701	6437.45	0.0001
ELEC	1	17.834171	17.834171	106.08	0.0001

Regression Analysis Using Store Characteristic Factor Scores

General Linear Models Procedure

Dependent Variable: INTENT

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SCFAC1	1	0.031597	0.031597	0.19	0.6646
SCFAC2	1	7.781887	7.781887	46.29	0.0001
SCFAC3	1	2.483397	2.483397	14.77	0.0001
SCFAC4	1	0.520714	0.520714	3.10	0.0785
SCFAC5	1	0.006862	0.006862	0.04	0.8399
INCCD	1	1.168418	1.168418	6.95	0.0084
AGE	1	3.077701	3.077701	18.31	0.0001
SEXD1	1	14.433178	14.433178	85.85	0.0001
MARD2	1	0.695284	0.695284	4.14	0.0420
MARD3	1	0.422960	0.422960	2.52	0.1127
EDD1	1	2.919654	2.919654	17.37	0.0001
EDD3	1	0.172916	0.172916	1.03	0.3105
OCCPD2	1	2.664963	2.664963	15.85	0.0001
OCCPD3	1	0.006505	0.006505	0.04	0.8441
OCCPD4	1	0.497690	0.497690	2.96	0.0854
OCCPD5	1	0.071895	0.071895	0.43	0.5132
RACED1	1	1.097632	1.097632	6.53	0.0106
RACED2	1	6.320000	6.320000	37.59	0.0001
RESZD1	1	2.460165	2.460165	14.63	0.0001
RESZD2	1	0.674234	0.674234	4.01	0.0453
RESZD3	1	0.000001	0.000001	0.00	0.9980
RESZD4	1	1.085998	1.085998	6.46	0.0111
INCM	1	0.281123	0.281123	1.67	0.1960
HSRDS	1	0.503625	0.503625	3.00	0.0835
CHHH	1	0.322633	0.322633	1.92	0.1660
OPL	1	20.071415	20.071415	119.39	0.0001
DSI	1	1.894056	1.894056	11.27	0.0008
MMP	1	0.000551	0.000551	0.00	0.9544
PDI	1	0.008774	0.008774	0.05	0.8193
NATL	1	6.733095	6.733095	40.05	0.0001
REC	1	1159.106962	1159.106962	6894.71	0.0001
SRV	1	1282.592706	1282.592706	7629.23	0.0001
GIFT	1	1068.384875	1068.384875	6355.06	0.0001
ELEC	1	17.834171	17.834171	106.08	0.0001

Parameter	Estimate	T for H0: Parameter=0	Pr > |T|	Std Error of Estimate
INTERCEPT	-.3374944570	-5.88	0.0001	0.05740824
SCFAC1	-.0030745165	-0.43	0.6646	0.00709184
SCFAC2	0.0454150321	6.80	0.0001	0.00667515
SCFAC3	0.0301736734	3.84	0.0001	0.00785071
SCFAC4	0.0126358850	1.76	0.0785	0.00717976
SCFAC5	-.0017107580	-0.20	0.8399	0.00846780
INCCD	-.0301837716	-2.64	0.0084	0.01144928
AGE	-.0285224257	-4.28	0.0001	0.00666618
SEXD1	0.0998339212	9.27	0.0001	0.01077460
MARD2	-.0312164942	-2.03	0.0420	0.01534994
MARD3	0.0280787591	1.59	0.1127	0.01770240

Regression Analysis Using Store Characteristic Factor Scores

General Linear Models Procedure

Dependent Variable: INTENT

Parameter	Estimate	T for H0: Parameter=0	Pr > |T|	Std Error of Estimate
EDD1	-.0899393845	-4.17	0.0001	0.02158182
EDD3	0.0043647378	1.01	0.3105	0.00430372
OCCPD2	0.1159860021	3.98	0.0001	0.02913157
OCCPD3	-.0065824777	-0.20	0.8441	0.03346312
OCCPD4	0.0245642168	1.72	0.0854	0.01427668
OCCPD5	-.109841446	-0.65	0.5132	0.01679655
RACED1	0.0639124623	2.56	0.0106	0.02501273
RACED2	0.2092704007	6.13	0.0001	0.03413133
RESZD1	-.0625628565	-3.83	0.0001	0.01635454
RESZD2	-.0269528323	-2.00	0.0453	0.01345870
RESZD3	-.0000432529	-0.00	0.9980	0.01723972
RESZD4	0.0616578800	2.54	0.0111	0.02425929
INCM	-.0052986331	-1.29	0.1960	0.00409751
HSRDS	0.0095452685	1.73	0.0835	0.00551491
CHHH	0.0197700951	1.39	0.1660	0.01427112
OPL	0.0149867048	10.93	0.0001	0.00137158
DSI	0.0054318908	3.36	0.0008	0.00161830
MMP	0.0000584106	0.06	0.9544	0.00102054
PDI	0.0016884637	0.23	0.8193	0.00739103
NATL	-.1091440447	-6.33	0.0001	0.01724633
REC	0.9599852381	83.03	0.0001	0.01156130
SERV	0.9812714127	87.35	0.0001	0.01123437
GIFT	0.9775157054	79.72	0.0001	0.01226207
ELEC	-.0737321559	-10.30	0.0001	0.00715870

Appendix H

Correlation Analysis of Attitude Scales
Correlation Analysis

4 'VAR' Variables: OPL DSI MMP PDI

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
OPL	7392	15.0281	4.8515	111088	6.0000	25.0000
DSI	7392	15.8550	3.2500	117200	6.0000	30.0000
MMP	7392	21.0931	5.2843	155920	6.0000	30.0000
PDI	7392	3.9930	0.7394	29516	1.0000	5.0000

Pearson Correlation Coefficients / Prob > |R| under Ho: Rho=0 / N = 7392

	OPL	DSI	MMP	PDI
OPL	1.00000 0.0	0.32167 0.0001	0.35354 0.0001	0.22093 0.0001
DSI	0.32167 0.0001	1.00000 0.0	0.15923 0.0001	0.10272 0.0001
MMP	0.35354 0.0001	0.15923 0.0001	1.00000 0.0	0.23135 0.0001
PDI	0.22093 0.0001	0.10272 0.0001	0.23135 0.0001	1.00000 0.0

VITA

Michelle Kunz received the Bachelor of Arts in Home Economics, with teaching certification in secondary education from Kansas Wesleyan University, Salina, Kansas in 1977. After teaching at The Brown Mackie College, Salina, Kansas, for a year and a half, she worked in retail sales and management in interior design, home furnishings, gifts and accessories. In 1983 she returned to teaching at The Brown Mackie College and began pursuit of the Master of Science Degree in Clothing, Textiles, and Interior Design at Kansas State University while teaching. Upon the completion of the Master of Science Degree in 1987, she accepted the position of Assistant Professor at Morehead State University, Morehead, Kentucky. She began pursuit of the Doctor of Philosophy in Human Ecology at The University of Tennessee, Knoxville in 1989, and continued teaching at Morehead State University. The doctoral degree was received December, 1997.

She is presently teaching as Assistant Professor in the Retail Merchandising and Design Program, Department of Human Sciences, Morehead State University.