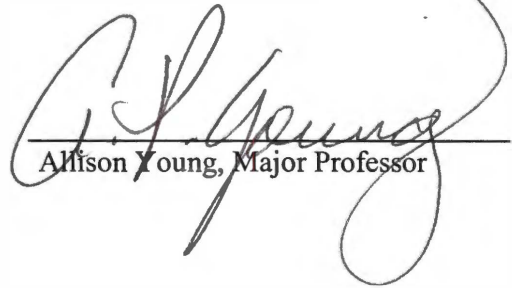


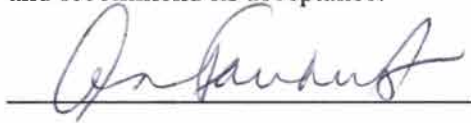
To the Graduate Council:

I am submitting herewith a thesis written by Kiseol Yang entitled "Consumer's Attitude Towards Customized Interactive Apparel Marketing on the Internet." I have examined the final paper copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Textile, Retail & Consumer Sciences.

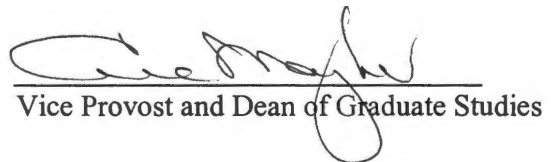


Allison Young, Major Professor

We have read this thesis
and recommend its acceptance:



Accepted for the Council:



Vice Provost and Dean of Graduate Studies

**CONSUMERS' ATTITUDES TOWARD CUSTOMIZED
INTERACTIVE APPAREL MARKETING ON THE INTERNET**

A Thesis

**Presented for the
Master of Sciences**

Degree

The University of Tennessee, Knoxville

Kiseol Yang

May, 2002

DEDICATION

Thesis
2002
.426

This thesis is dedicated to my parents: My father, Chil-Young Yang who taught me the value of persistence, independence, and has guided me to the world of knowledge.

My mother, Mrs. Ok-Ja who always prays for me provides love and peace in my mind.

Above all, I glorify my Lord and Saviour Jesus Christ.

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ABSTRACT

Customized apparel marketing is currently a new trend on the Internet. This study was to explore consumers' attitudes toward this emerging customized apparel marketing. By exploring consumer's attitude, this study attempted to contribute recognizing the effect of customized apparel marketing on the Internet on consumer's attitude.

Several hypotheses were tested to explore the effect of customized interactive apparel marketing on the Internet on consumers' attitudes. The empirical findings indicated that: (1) Consumers' attitudes are different between customized apparel websites and non-customized apparel websites. Consumers react to purchasing more positively on customized apparel websites than non- customized apparel websites. (2) Consumers' favorable attitudes toward customized apparel websites affect consumer's intention to purchase from customized apparel website. (3) Consumers' attitudes toward customized apparel websites vary according to the level of consumer's risk perception about Internet apparel buying. These findings indicated that the functions of customized apparel website do not significantly affect consumer's risk perception from Internet apparel buying. (4) When consumers perceive the price benefits given by customized apparel marketing on the Internet, they are more willing to make their personal data available in the customized websites.

Based on three theoretical models, Purchasing Decision Model, Theory of Reasoned Action, and Technology Acceptance Model, and findings of this study, this study proposed a model. This model (Consumers' attitudes toward the

customized interactive apparel marketing) indicated that consumers' attitudes are affected by the functions of customized apparel marketing on the website.

The findings indicated that the functions of customized apparel website affect consumers attitudes in terms of aiding a purchasing decision, enhancing effectiveness of consumers' search for alternatives, and improving perceived usefulness and perceived ease of use. However, this study found that customized apparel website cannot significantly affect consumer's risk perception in purchasing apparel from the Internet.

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CHAPTER I

INTRODUCTION

Background of the Study

E-commerce has grown in the last decade by embracing various product categories on the Internet. E-commerce is expanding at an unprecedented rate (Laruen & Peter, 2000). The retail market on the Internet has grown notably from a few million dollars in 1995 to prediction of \$152 billion in 2002 and \$233 billion in 2004, according to Gia Information Group, which predicts multi-channel retailers will benefit the most from the Internet (Pastore, 2000).

Among the most persuasive reasons to make purchases through the Internet are that the products are less expensive than in a store and that consumers are able to shop with the convenience of remote locations (Bhatnagar, Misra, & Rao, 2000). However, the power of the Internet is far deeper than the thrill of electronic coupons and the ability to shop from home 24 hours a day (Blackshaw, 2000). Consumers can receive plentiful information and compare prices and quality with other stores' websites from home. Along with the enormous potential benefits, there are perceived risks that may be apparent in discouraging consumers from purchasing on the Internet. These risks include financial, social, functional and privacy. Consumers fear the abuse of their personal information, especially credit card numbers, by other undetectable companies or hackers. The Internet's vast communications and powerful search engines allow large-scale data abuse (Lauren & Peter, 2000). Because consumers have serious concerns about the security of their

personal information and transactions they share through the Internet (Fields, 2000), they are afraid of purchasing products even though there are some merits in using the Internet buying. E-commerce retailers should minimize these risks and give more benefits to consumers to enhance purchasing on the Internet.

The technological format of the Internet market is a poor service delivery medium because it lacks the ability for direct personal interaction enjoyed by most non-Internet-based services (Kolesar & Galbraith, 2000). Retailers on the Internet are now aware of the need to renegotiate and interact with consumers and heed the new rules and consumers' needs (Blackshaw, 2000). The Internet is now changing how consumers do business and how they interact with business (Blackshaw, 2000).

In apparel marketing on the Internet, consumers have only limited information and images of products. Consumers can access information and images about apparel, which is represented by a catalogue-like layout. The format of apparel marketing on the Internet should be differentiated from other shopping methods to achieve higher patronage in the future. Therefore, retailers on the Internet are now aware of a unique set of challenges in the perception management of their customers (Kolesar & Galbraith, 2000). The new media of the Internet can give tremendous technological benefits to consumers in apparel buying, depending on how the retailers apply customization formats to each individual consumer. As the technological infrastructure is developed, apparel marketing on the Internet could utilize these developments by giving an enjoyable shopping method to consumers.

It is important to note that the Web can be used to interact with consumers to enhance the benefits of shopping on the Internet. The development of technology on the Web now can support the almost conversational level of interaction between retailer and consumer (Roehm, 1999).

Among the new appreciations of technology on the Internet, emerging customized interactive websites are among the most promising marketing tools on the Internet. These websites help to find the best item in a timely manner when consumers enter their personal information into the database. These websites send personalized e-mail messages that make use of the data to encourage consumers to purchase online (Liebmann, 2001). Some customized websites offer value-added services, like pricing alerts that are not available to customers who limit themselves to the traditional catalog or non-customized websites (Liebmann, 2001). Consumers can also access capabilities allowing for shopping while interacting with a salesperson on the Internet.

Statement of the Problem

Interactive apparel marketing through the use of customized web pages will be more popular when consumers are satisfied with the service and are accustomed to using the system, and when it can reduce perceived risk in purchasing apparel from the Internet. Studies have suggested that the salespersons can be more effective when they interact with individuals by customizing presentations to match particular aspects of the target consumer (Weitz, 1981; Weitz, Sujaan & Sujaan, 1986). Similar customization and matching strategies can be effective when communicating with consumers via a well-designed website (Pepper & Rogers, 1995).

Several issues must be addressed when studying how a customization system affects perceived risk in purchasing apparel on the Internet. First, by exploring what are important factors to consumers in terms of customized websites, this study may help determine how these factors influence consumers' attitudes toward Internet buying from customized websites. Secondly, it is important to determine how these

factors are related to consumers' concerning perceived risks and their decisions to purchase on the Internet.

Interactive apparel marketing in the form of a personally customized interaction may influence a consumer's attitude toward Internet buying and may reduce some perceived risks if the customization system on the website is effective.

Purpose of the Study

The purpose of this study is to examine factors concerning consumer's interaction on a personally customized apparel website. By doing so, this study investigates how this interactive marketing approach may affect the perceived risks in purchasing apparel from the Internet. In addition, this study explores how the personalized customization on the Internet may affect consumers' attitudes toward apparel marketing and purchasing decisions for the future users.

The primary objectives of this research are fourfold: (1) to explore what role customization on apparel websites can play in positively influencing a consumer's attitude, (2) to investigate how customization on apparel websites may reduce perceived risks in purchasing apparel from the Internet, (3) to explore how customized interactive apparel marketing can aid consumers' purchasing decisions, and (4) to attempt to measure the consumers' satisfaction and dissatisfaction in customized websites.

Research Hypotheses

This study focuses on consumers' attitudes toward interactive apparel marketing on customized websites. To inquire as to how the customized website

affects consumers' attitudes toward Internet buying and their purchasing decisions, this study was conducted based upon the following hypotheses.

The functions of customized website are different from non-customized websites; therefore, this study assumes that the consumers' attitudes may be different between those websites. The first hypothesis is suggested to confirm the difference of consumers' attitudes between customized websites and non-customized websites by predicting that;

H1: There will be a difference in consumers' attitudes between customized Internet apparel websites and non-customized Internet apparel websites.

If some factors associated with customized websites motivate consumers to buy apparel from the Internet, the consumers' beliefs about Internet buying may change positively. This study assumes that consumer's attitude toward customized and non-customized websites may affect the consumer's intention to purchase apparel from these websites. Finally, the sales volume of apparel marketing via the two website formats may be affected by the consumers' intentions. The next hypothesis has been developed to relate consumer's attitude toward customization to consumer's intention to purchase by predicting that

H2: The attitude toward customization on Internet apparel websites will affect consumers' intentions to purchase apparel from the Internet.

The attitude toward customization will differ according to the level of consumer's risk perceptions about buying apparel on the Internet. If a customized website may reduce perceived risks, consumers may be more willing to buy and patronize the customized websites than non-customized websites. The higher the level

of risk perceptions, the more significantly it is affected by the functions of customized website. This prediction is specifically articulated in the third hypothesis.

H3: There will be a difference in consumer's attitude towards expectations of shopping advantages associated with customized apparel websites according to their level of functional risk perception.

If the benefits given by customized websites positively affect consumer's attitude and behavioral intentions on customized websites, consumers may be willing to share their personal data with a website. Therefore, the final hypothesis states.

H4: Consumers may be willing to make their personal data available if the customized apparel marketing on the Internet provides benefits to consumers.

Definitions

For the purpose of this study, it is important to define the following terms.

Interactivity: Interactivity is defined as a continuous construct capturing the quality of two-way communication between two parties.

Customization (Personalization): Techniques used on the Internet based on information that is discreetly gathered about consumers, like their purchase history, preference or the web pages they have viewed (Stellin, 2000).

Tailoring System: This system provides advice with consumers' preference, social, status, and economic status when consumers select apparel on the Internet.

Personal Data: Consumers' apparel preference, body shape (size, height, and weight), the type of apparel they need and other personal information.

The Limitation of the Study

Since most consumers are not accustomed to Internet customization of apparel websites, this study will be limited due to the slow emergence of this technology. Due to the limitations of the proposed sampling techniques, the findings may not be generalized beyond those in the study.

CHAPTER II

LITERATURE REVIEW

There are many benefits of shopping apparel online, but consumers still hesitate to buy from the Internet. The reason preventing consumers from purchasing apparel online is that apparel may lead to a high level of perceived risk. Perhaps a contributing factor to the decreasing of apparel purchasing online may be the aspect of perceived risks. To minimize perceived risks, apparel marketing on the Internet may need to develop a system that can address consumers' perceived risks. One possible solution to address consumers' perception of risks may be the development of customized websites. The customized websites can develop a level of interactivity that will positively affect in order to provide consumer's purchasing decision. However, customized websites may not be used if customers do not perceive the values inherent in their uses. In the future, customized website may replace the function of salesperson in an actual retail store if consumers are willing to use this system and accept the usefulness.

In order to provide a framework for the study, this chapter will be divided into eight sections:

- 1) Apparel marketing on the Internet.
- 2) Risk perception associated with shopping apparel on the Internet.
- 3) Customized apparel marketing on the Internet.
- 4) Interactivity and personal customization on the Internet.
- 5) Service quality on the Internet.
- 6) Consumers' adoption of technological innovation on the Internet.

- 7) Theoretical perspectives.
- 8) Proposed model for the study.

Apparel Marketing on the Internet

According to a survey from Zona Research in 1999, online spending grew nearly 200%, led by first-time buyers. Almost one-third of purchases were for apparel. Apparel marketing on the Internet provides benefits such as saving time and money, as well as the avoidance of crowds and sales staff. Consumers who utilize the Internet may be also satisfied with better selections of items and enhanced comparison shopping opportunities across e-commerce sites. Consumers on the Internet tend to get benefits pertaining to information acquisition and processing that enable consumers to locate and select merchandise that will satisfy their needs, because the fundamental benefit of Internet shopping is to lower the cost of information search (Bakos, 1991).

Kaufman (1999) reported that one of the main reasons for buying clothing online, besides convenience, was because apparel marketing on the Internet sometimes provided items that couldn't be found out in a regular store. According to a NPD survey company in 1999 that collects market information and delivers online, most apparel purchase on the Internet was made at specialty sites such as Gap.com and LandsEnd.com that focused just on clothing. Consumers shopping for apparel tend to seek information on apparel, but they hesitate to click at the check out screen. Hwang (2000) reported that consumers still like to try on clothing in a real retail store. Consumers still display a stubborn propensity toward buying things from an actual sales person. Thus, it has been suggested that the apparel marketing on the Internet cannot replace the traditional apparel store (Kaufman, 1999). According to NPD

(1999), nearly half the Internet users said that they never planned to buy clothing online. This survey also indicated that shopping online is likely if consumers perceived more benefits versus traditional stores. In order to overcome consumers' resistances to purchasing apparel from the Internet, some innovative functions, for example viewing how the clothing looks on their own body and tailoring of service attributes, need to be developed for future apparel marketing on the Internet (Yoh, 1999).

Risk Perception Associated with Shopping Apparel on the Internet

Although there has been a tremendous increase in the adoption rate of apparel shopping via the Internet compared to previous study findings, consumers still hesitate to shop for apparel through the Internet (Yoh, 1999). Since apparel is visible, worn in public, and subject to changing fashion trends, the inappropriate selection of apparel may involve high risks (Kwon et al., 1991; Laurent & Kapferer, 1985; Prasad, 1975).

Consumer will shop for apparel more often on the Internet if there are some incentives for shoppers such as free and easier product returns, innovative technology or service functions, and ensured credit card safety (Yoh, 1999). Interactive marketing has the potential to fundamentally change the manner in which people shop as well as the structure of consumer products and retail industries (Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer, & Wood, 1997). Most individual retailers websites provided information and advice to facilitate the search within their sites but avoid formats that will satisfy consumers' comprehensive needs (Alba et al, 1997).

Technologies being developed by the fashion industry in the United States are likely to make customization a reality (Eisenberg, 1998). Use of Web 3D and body scanners have allowed consumer's data to be on a smart card that gives the retailer all the information necessary to fit the individuals, who can, in turn, use the Internet to look up fabrics and position the clothing on a personalized mannequin of their body type (Eisenberg, 1998). If consumers adopt these innovative functions and they are accustomed to using these technologies, apparel marketing on the Internet can reduce the perceived risks in purchasing clothing and help their purchase decisions in Internet buying.

Customized Apparel Marketing on the Internet

Unlike catalogs or the television channel, the Internet is capable of interacting with consumers. The customized apparel websites can advise customers according to their preferences spontaneously. Consumers who purchase from catalogs can also compare photos, descriptions, and prices before purchasing, but similar types of comparisons are impossible in television shopping (Stanforth & Lennon, 1996). When consumers purchase apparel from home, they can't fully evaluate color, style, quality, fabric, and other product attributes (McCorkle, 1990). Apparel marketing on the Internet can minimize perceived risk when marketers apply a higher level of interactivity with customers and allow for customization. If consumers simply provide personal information, for example, their apparel preferences, body shape (size, height, and weight), the type of apparel they need and so on, the cyber salesperson will be able to reply with appropriate selections through personally customized web pages. It is also possible that, if consumers attach their scanned full body picture to a

customized web page by e-mail, retailers put the picture on the Internet with using 3D technology, and thus they allow retailers to make cyber dressing room for each individual consumer. Thus, it could minimize the perceived risks because it allows consumers to try apparel before purchasing online.

Recently, some online apparel companies, such as J.C Penny.com, Gap.com and LandsEnd.com have provided this customized service. These companies represent successful websites in individualizing consumers' online apparel shopping experience. Bloomingdale's.com also offers a personalized fashion website named 'b profile'. The 'b profile' allows consumer to create his or her own personal dressing rooms, thereby extending Bloomingdale's customer service directly to consumers. Gap.com and J.C Penny.com offer advice concerning size measurement to allow consumers easily find their proper sizes. These companies also allow consumers to match fashion items with offerings tailored to individual needs and interests within a particular price range. LandsEnd.com allows consumers to create a personalized virtual model to try on various items on the website. LandsEnd.com also provides consumers with access to an expert shopper who suggests products that suit consumers' unique preferences. As another example of increasing interactivity, LandsEnd took scanning equipment to key markets and to scan consumers' entire body. These actions allows consumers for the creation of an online model in order to "try on" clothing at their web site (Newsweek, 2000). LandsEnd.com is among the leading apparel websites trying to heighten the level of interactivity with consumers.

Interactive apparel marketing through a customized website may reduce some perceived risks associated with purchasing clothing from Internet, and provide some benefits to consumers. However, the development and maintenance of the

complex programming and databases to enable interaction with consumers can be quite costly (Harper, 1999). To enhance the effectiveness of interactive apparel marketing on the Internet, an investigation of specific factors that may reduce perceived risk in purchasing apparel from the Internet is needed.

Interactivity and Personal Customization on the Internet

Traditionally salespeople have been employed to interact with customers in a retail setting. As a new media alternative, the websites offer a medium that is as much interactive –in terms of both form and content- as salespeople’s sales (Roehm, 1999).

The interactive apparel market on the Internet can affect critical attributes in Internet buying: The market provides faithful reproduction of descriptive and experiential product information and a greatly expanded universe of offerings pertaining to what can be accessed now through local store or catalog shopping. The interactive market on the Internet provides what consumers may find one of the most appealing options for more detailed consideration by an efficient means of screen offering (Alba et al, 1997). From the e-marketer’s side, websites can be pre-programmed to ask questions to determine an individual consumer’s information needs to respond with appropriate content (Roehm, 1999).

Interactivity is defined as a continuous construct capturing the quality of two-way communication between two parties (Hoffman & Novak, 1996). Interaction is a way to take advantages of the many benefits of modern technology without losing contact with consumers (Spiegelman, 2000). The two parts of interactivity contain response time and response contingency. Response time will vary depending on

system capabilities such as modem speed, Internet browser versions, computer graphic capabilities, and general Internet traffic flows between consumers and marketers (Ruth, 2000). When the response can be made immediately to both parties, it is similar to the response time in face-to-face communications- in interactive marketing on the Internet (Alba et al, 1997).

The emerging interactive service system on the Internet can tailor a sales message to an individual consumer by responding directly to the question asked, noting reactions and adjusting accordingly to clarify points of confusion (Roehm, 1999). Consumers can interact with a cyber salesperson to adjust their wants immediately and get close to their desirable item through the interactive service system. From the consumer's side, consumers can get the benefits of choosing a customized item from a large variety of items with assistance. From the marketer's side, they can provide customers with exactly what they want. Thus, confidence in the informational process can be enhanced through interactive marketing (Berger & Mitchell, 1989). That will build satisfaction and loyalty in customers. When the interactivity helps a linkage between consumers' preferences and one's values and self-images, consumers' attitudes toward markets can change (Crosby & Taylor, 1983). Thus, marketers can provide consumers with best products/services that suite to a consumer's tastes through customized interactive service system. The customized interactive marketing activities will aid consumer's purchasing decisions.

The current implementations of personalization technologies are still in their infancy in the apparel markets (Stellin, 2000). Interactive and personalized service may help consumers to become accustomed to their services. The interactive and personalized service allows the form and content of information to be tailored to meet any given consumer's individual needs and preference (Roehm, 1999). If

consumers may allow additional personal information to Internet providers, they may actively search information and engage in dialogue very much. Communication with consumers will allow the Internet marketers to enjoy vast improvements in efficiency and effectiveness (Sealey, 1999). The expectation among consumers for interactive and personalized services on the Internet can play an effective role in giving benefits and being able to match individual consumer's preference.

Service Quality on the Internet

In e-retailing the benefits to the consumers are not in the purchased goods even though the consumers may receive a tangible good at the end of the transaction (Kolesar & Galbraith, 2000). The benefits to the consumers in e-commerce are saving time, increasing convenience and reducing the risk of dissatisfaction. Kolesar and Galbraith (2000) suggested that e-retailers needed to display more of the characteristics of a service transaction than a goods transaction since the service process is as important in building consumer perceptions as the outcome of the service delivery.

Consumers on the Internet expect on-time delivery, and they want to instant service gratification-or they tend to click away to another website (InformationWeek, 2000). Online shoppers still want human contact to get their questions answered and expect to receive the same customer service they get at brick and mortar retail stores, regardless of how high-tech consumers are (InformationWeek, 2000). Providing immediate interaction with an agent on the Internet is an innovative customer service capability. Consumers can make purchasing decisions with confidence (lack of perceived risk) though customized interactive marketing. In Gwinner, Gremler, and Bitner's study (1998) the authors reported that, in a wide range of services with a

different levels of contact and standardization, consumers consistently rated confidence benefits-knowing that consumers can trust their service provider and feel less vulnerable-and social benefits-going to a service provider who recognizes consumers themselves and treats them as friend-as important aspects of their service encounter. Interactive marketing via customized websites may build the confidence benefits in service encounters while helping to find out consumers' preferences. Service quality on the customized interactive websites may create loyal attitude and will lead to continued patronage.

A survey by Blackwell and Blackwell (1998) reported that loyalty is based primarily on having a relationship with a store and with its staff. Creating a relationship with consumers is difficult to achieve in e-market transaction, because consumers alienation in the transaction makes it difficult to build the kind of relationship that is often enjoyed in a non-Internet based service (Kolesar & Galibraith, 2000). Since customized interactive marketing on the Internet can interact with consumers on a personal level, the interactive role will significantly influence on the consumer's perception of service quality (Kolesar & Galibraith, 2000).

The technological innovations in interactive marketing will continue to be a critical component of customer-firm interactions (Meuter, Ostrom, Roundtree, & Bitner, 2000). Recently, some companies have tried to implement a customer-relationship management (CRM) application, which is software that manages customer contacts, including sales, customer service, and marketing interaction regardless of channels (InformationWeek, 2000). From a survey by InformationWeek Research, most of the CRM users have been measuring 35% significant improvement in customer satisfaction, with its customer retention and revenue (InformationWeek, 2000). Customized interactive market service quality may give more satisfaction to

consumers. Customized interactive marketing can spontaneously respond to consumers' needs in the terms of aiding consumers' purchasing decisions.

Consumers' Adoption of Technological Innovation on the Internet

Today's consumers seem to react to technology-based service encounters more actively than before. Even though there are some useful methods to shop and consumers can get benefits from technological-based services, they will be useless unless consumers are accustomed to their functions and the uses are satisfied with the services. E-commerce requires consumers to participate in an interactive experience, in which they must obey the script, or forfeit the entire experience (Soloman, Suprenant, Czelel, & Gutman, 1985; Kolesar & Galbraith, 2000). There is a learning step for consumers to overcome before the benefits of technological innovative service can be fully realized (Kolesar & Galbraith, 2000). Innovative technological-based service can enable consumers to learn, receive information, and train themselves (Meuter et al, 2000).

When consumers recognize that the innovative technological services can provide a perceived benefit, they may be willing to adopt the innovative system. However, if the process involving the innovative system is beyond the consumer's current level of computer or Internet literacy, or requires product knowledge that the consumer does not have, they will be reluctant to adopt the innovative technology system, and the benefits of engaging in the necessary learning will probably go unrecognized (Kolesar & Galbraith, 2000). Perceived ease of use concerning innovative technology systems influence user acceptance via controllable external environment (Davis et al, 1989).

E-marketers need to be aware what innovative technology services can deliver to consumer in an effective way.

Theoretical Perspectives

To investigate how the customized interactive apparel marketing change consumers' attitudes toward purchasing apparel from the Internet, this study adopts three existing theories and modifies them appropriately for this examination.

This study addresses how interactivity may influence consumer's purchasing decision on the Internet. With the development of computers and computerized networks, understanding the concept of interactivity has become much more important (Hoffman & Novak, 1996). When conceptualized for the purpose of this study, interactivity may be defined as a continuous construct capturing the quality of two-way communication between two parties in the context of electronic media (Hoffman & Novak, 1996). Simple computer system interactivity can help consumers better match their preferences, as well as have better memory and knowledge about the domain they are examining. Finally, interactive customized marketing vehicle of e-commerce will aid consumers in having more confidence in their purchasing decisions.

To investigate the effects of interactivity between e-retailer and consumer, it is necessary to understand how consumers make purchase decisions. To that purpose the classical consumer purchase decision model will be utilized. The classical model (Howard, 1977; Howard & Sheth, 1969) of the purchase decision process has become generally accepted in the study of consumer behavior. This model (see Figure 1) helps to predict a consumer's sequence of behavior in making purchases, aimed at solving a perceived problem or satisfying a recognized need (Peter, Olson, & Rosenblatt, 1996,

pp.148-69). Consumers are influenced by environmental stimuli as well as physical and psychological drivers in the purchasing process (Kolesar & Galbraith, 2000). When consumers begin to recognize needs, the purchase process begins. The problem of recognition is a product of the consumer's end goals, which are the most basic needs that the consumer wants to satisfy (Peter et al., 1996).

Marketers are limited in their ability to influence a consumer's abstract goals such as purchasing appropriate items. However, with the ability to search the information for specific products and values, marketers can influence the consumers' perception of how their abstract goals may be achieved in the purchasing process (Kolesar & Glibraith, 2000).

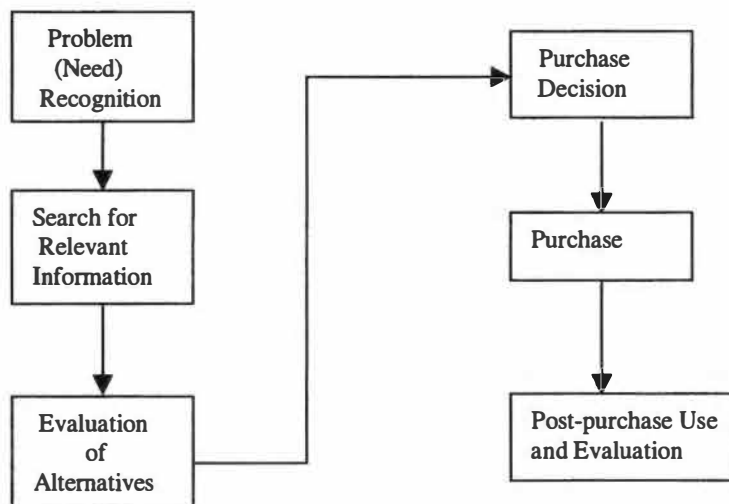


Figure 1. The Classical Consumer Purchase Decision Model

Note. From "Understanding Consumer Behavior" By Peter, P. J., Olson, J.C. and Rosenblatt, 1996. Copyright 1996 by First Canadian ed., McGraw-Hill Ryerson, Toronto.

E-marketers may reduce consumer's perceived risk through the interactions taking place while consumers are in search of alternatives to satisfy their needs through purchasing.

Interactivity makes demands on computer processing resources such as memory and modem speed, therefore, under some circumstances can have detrimental effects on consumers' purchasing decision quality, memory, knowledge, and confidence in an e-commerce setting (Haübl, 1999). However, the interactive decision aids have the ability to help consumers in the initial screening of alternatives and facilitate the comparison of alternatives (Haübl & Trifts, 1999). The interactive decision aids have a highly desirable impact on the quality and efficiency of consumers' purchase decisions in online shopping environments (Haübl & Trifts, 1999). With the development of technology, processing resources will no longer be a serious problem in the e-commerce setting. Effective personalization is not a technology issue but it is a business issue in these days (Liebmann, 2001). Retailers on the Internet should consider what is the effective way to aid consumer's purchasing decision.

Secondly, to predict and explain user acceptance of customized interactive marketing, this study employs the Theory of Reasoned Action (TRA) and the Technology Acceptance Model (TAM). Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) is a well-researched behavior across a wide variety of domains (see Figure 2). For studying the determinants of consumer attitudes toward customized e-commerce sites as consumers, this model is appropriate to address effective factors to motivate use of customized websites. Behavioral Intention (BI) is a measure of the strength of one's intention to perform a specified behavior, and Actual Behavior (A) is an individual's feeling (evaluative affect) about performing

the target behavior (Fishbein & Ajzen, 1975). Beliefs are the individual's subjective likelihood that they will perform the target behavior (Fishbein & Ajzen, 1975). Normative Beliefs (NB) are defined as perceived expectations of specific referent individuals or groups and Subjective Norm (SN) is the person's perception that most people who are important to think that they should or should not perform the behavior in question (Fishbein & Ajzen, 1975). In the aspect of measuring various external factors that can influence consumers' purchase attitudes, internal beliefs and motivation to comply with perceived expectations in interactive marketing on the Internet, this model is modified for this study.

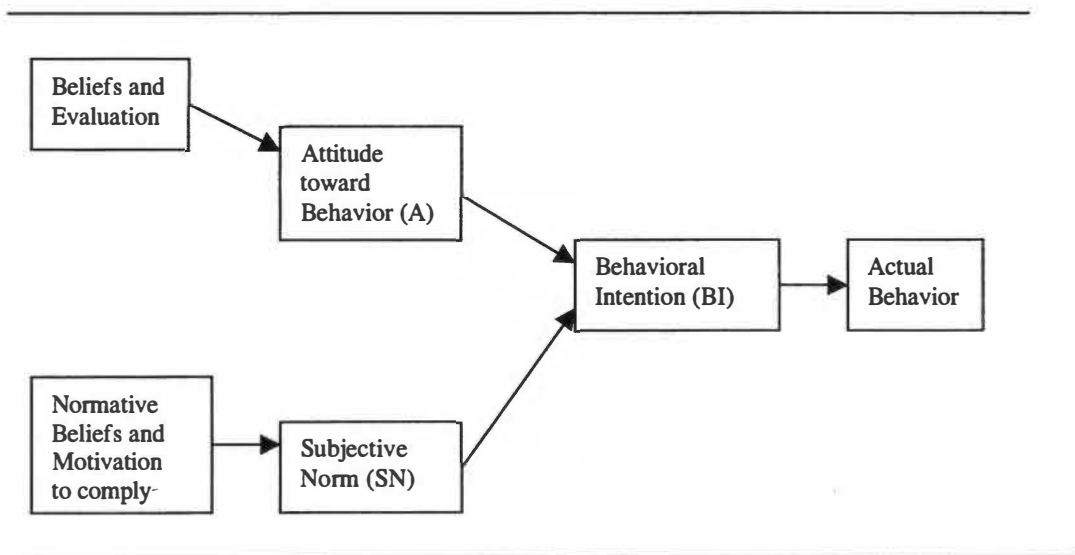


Figure 2. Theory of Reasoned Action (TRA)

Note. From “User Acceptance of Computer Technology: A Comparison of Two Theoretical Models” By Fred D. Davis, Richard P. Bagozzi, and Paul R. Warshaw, 1989. Management Sciences, 35(8). P984. Copyright 1989 by the Institute of Management Sciences.

The technology Acceptance Model (TAM) is an adaptation of TRA, which is meant to explain computer usage behavior, introduced by Davis (1986). Even though the value of customized interactive apparel marketing on the Internet may be positive for e-marketers, explaining whether or not consumers choose to use the system is also of significant value (Davis et al, 1989). Researchers can identify why a particular system may be unacceptable, and develop appropriate corrective steps (Davis, Bagozzi & Warshaw, 1989). The key purpose of TAM is to provide a basis for investigating the impact of external factors on internal beliefs, attitudes, and intentions (Davis et al, 1989). TAM (see Figure 3) suggested that two beliefs, *perceived usefulness* and *perceived ease of use*, affect consumers' computer acceptance behaviors.

Perceived usefulness (U) is defined as the perspective consumers' subjective probability that using a customized interactive system on the Internet will aid consumers' purchase decisions to the purpose of the study. In addition, *perceived usefulness* is regarded as an influence on the reduction of functional and social risks in Internet buying when consumers realize the usefulness of the system helps to minimize perceived risk. According to the above, this study will approach to test the reduction of perceived risks in *perceived usefulness* category according to this model.

Perceived ease of use (E) is the degree to which the prospective consumer expects the customized interactive system to be free of effort (Davis et al, 1989). The easier a system is to interact with, the greater should be the consumer's sense of efficacy (Bandura, 1982; Davis et al, 1989) and personal control (Lepper, 1985; Davis et al, 1989) regarding the consumer's ability to carry out the sequences of behavior needed to operate the system (Davis et al, 1989). Thus, e-marketers need to

investigate present website features to develop and enhance usability in customized apparel marketing via the Internet.

TAM and TRA are utilized as a basis to investigate consumers' attitudes toward interactive marketing on the Internet and adoption behavior in this study.

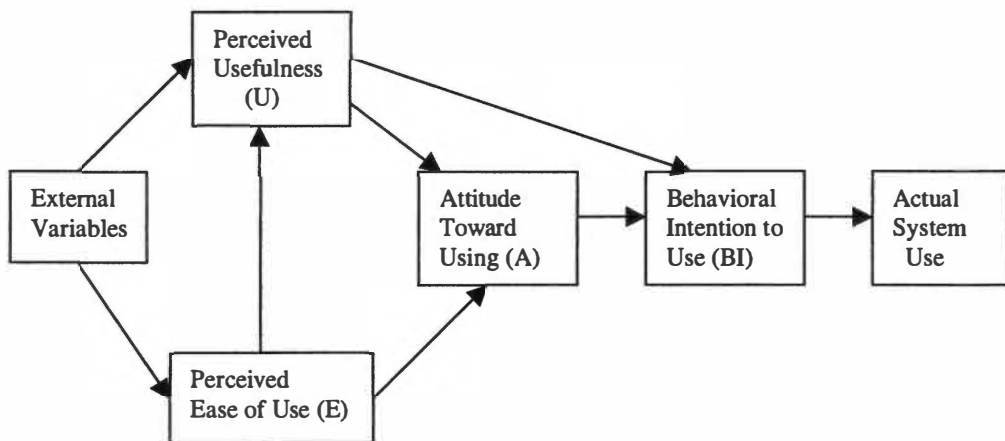


Figure 3. Technology Acceptance Model (TAM)

Note. From “User Acceptance of Computer Technology: A Comparison of Two Theoretical Models” By Fred D. Davis, Richard P. Bagozzi, and Paul R. Warshaw, 1989. *Management Science*, 35(8). P985. Copyright 1989 by the Institute of Management Sciences.

Proposed Model for the Study

The previously mentioned models have been modified for the proposed model of this study. With “The Classical Consumer Purchase Decision Model”, this study investigates how customized interactive apparel marketing may effectively aid consumer’s purchasing decision with emphasis on the “Evaluation of Alternatives” phase and “Purchase Decision” phase. Let us proposed that this system influences purchasing decisions, it may positively affect consumer’s beliefs toward online apparel buying and motivation to comply with sales presentation. Finally, consumer’s attitude and behavioral intention may change.

By utilizing the “Theory of Reasoned Action (TRA)” model, it is proposed that if the customized interactive apparel marketing process may change consumers’ beliefs and evaluations of Internet buying more positively than before, their normative beliefs would change and motivate them to comply in the e-apparel market. Consumer’s attitude toward behavior and the subjective norm may change positively toward the Internet buying. Finally, their behavioral intention toward the Internet buying would be affected by customized interactive apparel marketing. In the phase of “Actual Behavior”, we can see the how the customized apparel marketing actually influences Internet buying in the future.

As shown figure 2, in the “Technology Acceptance Model (TAM), this study investigates that consumers’ attitudes concerning the use of the technology customized involved with apparel marketing system would be useful and ease of use before whether this system works or not. Perception of usefulness and ease of use determine consumer’s use and subsequent purchasing. When consumers accept the

usability of this technology, this system would affect their behavioral intention to purchase apparel from this customized interactive apparel marketing.

A model was proposed (Figure 4) to investigate how the customized interactive apparel marketing system may affect consumer's attitudes, and finally, their behavioral intention toward purchasing apparel from the Internet. External factors in this model are using consumer's own virtual model, using a personal shopper who can interact and advise consumers via customized interactive apparel marketing.

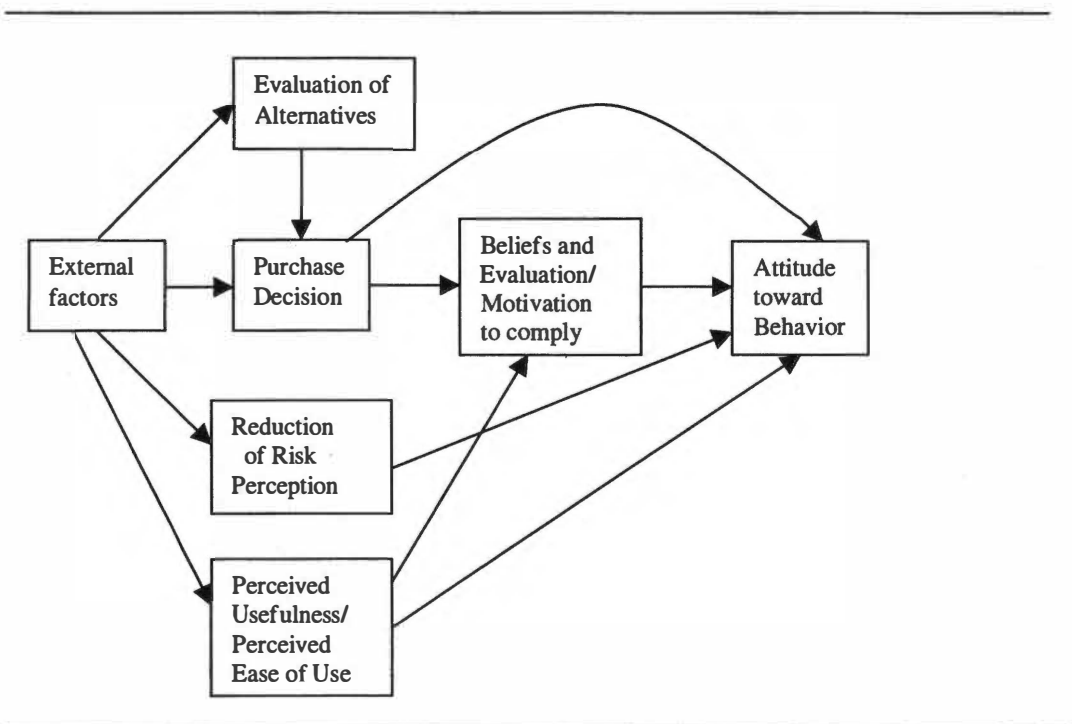


Figure 4. Proposed Model of Consumer's Attitude toward the Customized Interactive Apparel Marketing.

CHAPTER III

RESEARCH METHODOLOGY

Research Design

The objective of this exploratory study is to explore how external factors associated with customized interactive apparel website affect consumers' attitudes toward Internet apparel buying. Will there be a significant affect of their attitudes toward Internet apparel buying? If the consumers accept the technology in the customized apparel marketing, will their perceived risks be reduced? This study investigated consumer's attitude toward customized interactive apparel marketing based on the Theory of Reasoned Action (TRA) and Technology Acceptance Model (TAM) researched by Fishbein and Ajzen in 1975.

Cross-sectional survey was conducted via e-mail. The self-administered survey questionnaire presented web page that provides web site hosting services. The survey questionnaire was utilized to gather data for this study.

Sample Selection

Because usage and experience with a customized interactive apparel marketing system is not yet a common phenomenon, a simple random sample of the population will likely result in a sample with limited experienced with customized apparel marketing on the Internet experiences. The sample for this study consisted of a database of respondents from the opt-in e-mail marketing firm the Internet. Opt-in e-mail sending e-mails for the purpose of promoting a business to consumers who have registered. Incentives were provided to consumers who responded to incentives. A

convenience sample was drawn from the database of members who signed up and indicated Internet marketing and Apparel as an interest in the opt-in e-mail marketing website. The sample was selected based on the following reasons: First, it was judged the Internet user sample could have more knowledge and experience concerning e-commerce than the general population. Second, the Internet users in the e-mail marketing firm could be willing to access the customized apparel marketing due to their interests. Third, a national sample was utilized for this study. However, the sample did not represent all regions equally. Due to incentives offered at this website, it was presumed a better response rate could be achieved. It would overcome the errors of deleting without reading the messages by potential respondents and non-response rate in the respect of this study required. The researcher presumed that this sample would have experiences with customized websites. Respondents were administered the survey via e-mail.

Instrumentation

Pilot testing of the instrument took place with a sample of 18 participants composed of Human Ecology students at the University of Tennessee at Knoxville. Participants completed the survey offline after the researcher presented an example of a customized interactive apparel marketing websites. Upon the completion of the pilot testing, the researcher assessed the time to complete the survey and revised the survey questionnaire for clarity.

The survey instrument consisted of an informed consent form, five sections, and demographic information (Appendix 1). An informed consent statement was sent in e-mail messages to the sample before completing the survey. The survey was comprised of 5 sections. A frequently used questioning procedure is referred to as the

items-in-a- series format, that is, a number of each questions for which responses are to be answered by choosing among identical response categories. Section 1 tests their feelings concerning apparel marketing on the Internet. It consisted of 5 items indicating agreement on a five-point scale (from 'strongly disagree coded as 1' to 'strongly agree coded as 5'). Section 2 contained the statements concerning customized apparel marketing on the Internet system. It consisted of 18 items on a five-point scale (from 'strongly disagree coded as 1' to 'strongly agree coded as 5'). Section 3 contained the attitude statements concerning the technology of customized apparel marketing on the Internet system. It consisted of 4 items on a five-point scale agreement. Section 4 measures the consumer's satisfaction and dissatisfaction with the customized apparel marketing on the Internet system. It consisted on 9 items. Three items were used a five-point scale (from 'strongly disagree coded as 1' to 'strongly agree coded as 5'). One item measures the satisfaction of quality of website on a five-point scale (from 'unacceptable coded as 1' to ' very high quality coded as 5'). Five items indicated satisfaction on a five-point scale (from' very dissatisfied coded as 1' to 'very satisfied coded as 5'). Section 5 contained the demographic information. The overall items of reliability excluded section 5 demographic information is .8656. The survey was developed by the researcher based on the theoretical perspectives and experience.

Some components of the questionnaire are from survey agency (www.surveyprom.com). Therefore, this survey was not directly tested. Published validity, reliability figures, and internal consistency are not available for the proposed model. As an incentive to complete the survey, a random drawing for three \$30 value of food baskets offered by the University of Tennessee was held. The data was transferred for analysis.

Data Collection

Data was collected electronically between September through October 2001. As previously described, the survey questionnaire was placed on the Web site, and e-mail messages were sent to the members of the database requesting their participation and asking them to click on the specific web site address where the survey questionnaire was placed. The complete surveys were sent to the researcher's account with the Internet survey company. Two thousand e-mail messages were distributed. A usable sample of 107 was used for analysis purpose. This study regarded the fact most of the members in the mailing lists may block out the e-mail from the paid e-mail marketing firm due to receiving mass e-mail messages as the reason for 5% low response rate. However, the 5% low response rate was acceptable when comparing the 6% reported by Tse (1998) in his exploratory study of e-mail response rates. In addition, investigation reveal that potential 363 respondents clicked the survey website, and thus, it was judged that 107 completed surveys showed 34% response rate out of 363 clicking the website.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) and Amos (version 4.01) that implements the general approach to data analysis known as structural equation modeling, analysis of covariance structures, or causal modeling. These two statistical software packages were used to analyze the data with regard to specific research objectives and hypotheses. Reliability was determined by calculating Cronbach (1951) Alpha coefficients procedure.

To determine the nature of the data, descriptive analysis of the data was conducted. Factor analysis was initiated to determine commonalities among survey items. The Pearson's Product Moment correlation assessed the strength of the relationship between the variables in this study.

AMOS techniques approached the data as path analytical model was used for an additional analysis to test the proposed model.

Operational Hypotheses and Variables

Independent variables are the functions and benefits provided to consumers via the customized interactive apparel e-commerce web sites. The factors included using a consumer's own virtual model and using a personal shopper who can interact and advise consumers. The levels of reduction of consumers' perceived risks, satisfaction, and dissatisfaction are the dependent variables in this study.

Operational hypotheses are used to explore the consumers' attitudes toward the customized interactive apparel marketing on the Internet. This study was conducted with the appropriate variables based upon the following hypotheses.

H1: There will be a difference in consumers' attitudes between customized

Internet apparel websites and non-customized Internet apparel websites.

Enhancing shopping effectiveness (Survey item 14), Safety (Survey item 16), Time saving (Survey item 17) were conducted as independent variables. Preference to use customized website (Survey item 23) were conducted as a dependent variable in this study. These items are developed by the researcher to measure the difference of consumer's attitude between customized websites and non-customized websites.

H2: The attitude toward customization on the Internet apparel websites

will affect consumers' intentions to purchase apparel from the Internet.

Survey items, which are Aiding purchasing decisions (Survey item 6), Making informed customer decisions (Survey item 9), Using the Virtual Model (Survey item 12), Capability of salesperson (Survey item 19), Trust to transmit personal information (Survey item 20), and Easy of use (Survey item 24) were used as independent variables and Encouraging purchasing apparel (Survey item 26) variable was tested as dependent variables in the analysis. The independent variables measured the attitude and the dependent variables measured the consumer's intention in the Hypothesis 2.

H3: There will be a difference in consumer's attitude towards expectations of shopping advantages associated with customized apparel websites according to their level of functional risk perception.

Assisting purchasing decisions (Survey item 6), Helping to find best item (Survey item 7), The interactivity with the salesperson in the customized website (Survey item 8), Allowing to make informed customer decisions (Survey item 9), Getting better price (Survey item 10), The ability of examining clothing (Survey item 10), and Using virtual model (Survey item 11) were used as independent variables in order to measure consumers' attitudes towards customized apparel websites. The inability to try on clothing (Survey item 2) and Preference to purchase apparel in an actual retail store (Survey item 5) were used dependent variables associated the functional risk perception.

H4: Consumers may be willing to make their personal data available if the customized apparel marketing on the Internet provides benefits to consumers.

Price benefit (Survey item 10) and the benefit of examining clothing in customized apparel websites (Survey item 11) were tested as independent variables. The willingness to put personal information in customized apparel websites (Survey item 21) was used as dependent variable in the Hypothesis 4.

This study measured satisfaction and dissatisfaction through Section 4 using descriptive statistics.

Variable Measurements for the Proposed Model

- External factors: It was measured by the interactivity with a personal shopper in customized websites (Survey item 8) and the ability of examining of clothing (Survey item 11).
- Evaluation of Alternatives: It was measured by the ability of search alternatives (Survey items 7 and 10).
- Purchase Decision: It was measured by the assisting (Survey item 6) and informed (Survey item 9) customer decision.
- Reduction of Risk Perception: It was measured by the ability of examining clothing (Survey item 11).
- Perceived Usefulness and Perceived Ease of Use: It was measured by the usability (Survey item 14) and easy to use (Survey item 24) of customized apparel websites.
- Beliefs and Evaluation/ Motivation to Comply: It was measured by the survey items 12, 21, 26, and 27.
- Attitude toward Behavior: It was measured by survey items 23, 28, and 29.

CHAPTER IV

RESULTS

Demographic Description of Sample

A total of 107 respondents completed the online questionnaire.

Demographic descriptions of the respondents are presented in Table 1. The respondents were composed of more women (66.4%) than men (33.6%). In regard to age, the largest category of respondents were between the ages of 31 and 40 years old (41.1%).

In terms of education, 69.1% of the sample had an associate's degree or a more advanced college degree.

The income distribution ranged from less than \$25,000 (23.4%) to more than \$ 70,000 (11.2%). The most common income represented was between \$ 25,001 and \$40,000 (28.0%).

The frequency of purchases yielded the apparel from the Internet, 42.1% of the following respondents never purchased apparel from the Internet in the past year, while 36.4% of the respondents indicated purchases between one through five range.

36.4% of the respondents indicated professional job as their current occupations. Respondents (95.3%) have their own computer.

The majority of respondents (64.5%) also access the Internet at home.

Overall the respondents were slightly younger and were primary women and had higher education than the Internet users.

Table 1. Demographic Description of Sample

Characteristic	Frequency	Percent	Cumulative Percent
Gender			
Male	36	33.6	33.6
Female	71	66.4	100.0
Total	107	100.0	100.0
Education			
High school graduate	8	7.5	7.5
Some college	25	23.4	30.8
College graduate	41	38.3	69.2
Post graduate	33	30.8	100.0
Total	107	100.0	100.0
Apparel Items most Likely to Purchase On Internet			
Athletic Apparel	18	16.8	16.8
Casual Apparel	64	59.8	76.6
Career Apparel	12	11.2	87.9
Formal Apparel	11	10.3	98.1
Other	2	1.9	100.0
Total	107	100.0	100.0
Income			
\$25,000 or less	25	23.4	23.4
\$25,001-40,000	30	28.0	51.4
\$40,001-55,000	23	21.5	72.9
\$55,001-70,000	17	15.9	88.8
More than \$70,000	12	11.2	100.0
Total	107	100.0	100.0
Occupation			
Student	18	16.8	16.8
Homemaker	16	15.0	31.8
Not employed	7	6.5	38.3
Management	16	15.0	53.3
Professional	36	33.6	86.9
Sales	6	5.6	92.5
Other	8	7.5	100.0
Total	107	100.0	100.0

Table 1 (Continued)

Characteristic	Frequency	Percent	Cumulative Percent
Computer Ownership			
Yes	102	95.3	95.3
No	5	4.7	100.0
Total	107	100.0	100.0
Age			
Under 18	2	1.9	1.9
19-30	34	31.8	33.6
31-40	44	41.1	74.8
41-50	17	15.9	90.7
More than 50	10	9.3	100.0
Total	107	100.0	100.0
Internet Access Location			
School	11	10.3	10.3
Home	69	64.5	74.8
Work	25	23.4	98.1
Other	2	1.9	100.0
Total	107	100.0	100.0
Frequency of Internet Apparel Purchase			
Never	45	42.1	42.1
1-5 times	39	36.4	78.5
6-10 times	11	10.3	88.8
More than 10 times	12	11.2	100.0
Total	107	100.0	100.0

Hypotheses Test Results

The following is a report concerning the four hypotheses tested and measured satisfaction and dissatisfaction in customized apparel websites for the purpose of the study.

Hypothesis 1

H1: There will be a difference in consumers' attitudes between customized Internet apparel websites and non-customized Internet apparel websites.

The following steps were undertaken to test Hypothesis 1. Survey items, that refer to Hypothesis 1, Enhancing effectiveness (Survey item 14), Safety (Survey item 16), Time saving (Survey item 17), and Preference to use customized website (Survey item 23) were developed by the researcher to measure the difference of consumer's attitude between customized websites and non-customized websites. Those items were created by the researcher for the purpose of testing the attitude difference between customized websites and non-customized websites in a cross-sectional manner.

One-Sample T-Tests were conducted to test the significance of each single variable. In addition, when conducting the one-sample T Test, this study can test whether the mean of a single variable differs from a specified constant. In this case, constant was a score of 3 as "Neutral" which meant no attitude difference. Table 2 shows that the mean of each variable more than 3.0, which the researcher previously indicated five-scale items (from 'strongly disagree coded as 1' to 'strongly agree

coded as 5'). Table 3 shows that each variable is significant in the 99% confidence interval level when the test value was 3.

This result indicates that consumers' attitudes are significantly different between customized websites and non-customized websites. The difference of consumer's attitude shows that consumers prefer using customized apparel websites than non-customized website in the future. In addition, it shows that the functions of customized apparel websites positively affect consumers' attitudes and may change their intention to use.

Table 2. Mean, Standard Deviation and T-test on consumer's attitude between customized websites and non-customized websites.

	N	Mean	Std. Deviation	Std. Error Mean
Enhancing the shopping effectiveness in customized apparel websites.	107	3.4953	.86192	.08332
Customized apparel websites are safer way to shop than non-customized websites.	107	3.2710	.80763	.07808
Customized apparel websites allow one to do shopping quicker than non-customized websites.	107	3.4393	.84872	.08205
Indicated preference to use customized apparel websites.	107	3.3551	.82705	.07995

Table 3. Test the Mean Difference among the Variables.

Test Value = 3					
	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
				Lower	Upper
Enhancing the shopping effectiveness in customized apparel websites.	5.94	5.9	.00*	.3301	.6605
Customized appare websites are safer way to shop than non-customized websites.	3.47	106	.00*	.1162	.4258
Customized apparel websites allow one to do shopping quicker than non-customized websites.	5.35	106	.00*	.2766	.6019
Indicated preference to use customized apparel websites	4.44	106	.00*	.1966	.5137

*P<.05

Hypothesis 2

H2: The attitude toward customization on Internet apparel websites will affect consumers' intentions to purchase apparel from the Internet.

The following several steps were undertaken to test Hypothesis 2.

First, in testing the reliability, Cronbach's alpha was estimated for reliability tests among question items related to Hypothesis 2. To see the relation of each item to the scale and delete items that contributed to the low alpha coefficient, and then to raise reliability, item-to-total correlation was also utilized for each scale. One item was deleted from the scale when its item-total correlation was 0.40 or below. Table 4 shows the alpha coefficient of the 6 item scale was 0.7458 from the reliability test.

Second, the effects of the independent variables retained from the earlier reliability analysis on each of the dependent variables were tested by multiple regression analysis. Survey items associated with customization of apparel websites, which are Aiding purchasing decisions (Survey item 6), Making informed customer decisions (Survey item 9), Using the Virtual Model (Survey item 12), Capability of salesperson (Survey item 19), Trust to transmit personal information (Survey item 20), and Easy of use (Survey item 24) used as independent variables and Encouraging purchasing apparel (Survey item 26) variable was tested as dependent variables in the analysis. Finally, to select the best predictors of consumer's intention to purchases apparel from the Internet, Backward selection and Analysis of Variance were used. Durbin-Watson's residual 2.226 indicated second model is best model to test hypothesis as shown Table 5. This study excluded variable 24 with p-value 0.186

>0.05 due to insignificant. In addition, from the Variation Inflation factor, five entered variables are not affected by Muticollinearity problems as shown Table 6. Therefore, Hypothesis 2 tested with second model

This study obtained best predictors of consumer's intention to purchases apparel from the Internet. Five variables retained from the results were used. The five independent variables explained 53% of consumer's intention to purchase apparel from the Internet ($F(5,101)$ $R^2=.529$, $p<.001$). Therefore, it indicated that consumers' attitude toward customization on the Internet apparel websites significantly affect consumer's intention to purchase apparel from the Internet.

Table 4. Reliability test on factors associated with customized apparel websites.

Item-total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Aiding purchasing decisions	16.1682	7.7828	.5810	.6821
Making informed customer decisions	15.9346	7.8353	.6235	.6729
Using the Virtual Model	16.2991	7.5135	.3730	.7648
Capability of salesperson	16.2897	8.2643	.5163	.7016
Trust to transmit personal information	16.2056	8.0139	.5755	.6858
Easy of use	15.9252	9.4472	.3251	.7465
Reliability Coefficients				
N of Cases = 107.0		N of Items = 6		
Alpha = .7458				

Table 5. Selecting the best model on intention to purchase apparel from the Internet.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.733	.537	.509	.56773	.537	19.326	6	100	.000	
2	.727	.529	.505	.56990	-.008	1.772	1	102	.186	2.226

Table 6. Coefficients of factors associated with customized apparel websites.

Model		Standardized Coefficients				Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance VIF
2		.421	.301		1.398	.170	
	Aiding purchasing decisions.	.343	.090	.351	3.805	.00*	.549 1.822
	Making informed customer decisions.	.251	.097	.241	2.570	.01*	.532 1.880
	Using the virtual model .	-.177	.053	.245	3.299	.00*	.848 1.179
	Capability of salesperson.	.261	.085	.249	3.068	.00*	.708 1.412
	Trust to transmit personal information.	-.177	.087	-.171	-2.04	.04*	.669 1.496

*P<.05

Hypothesis 3

H3: There will be a difference in consumer's attitude towards expectations of shopping advantages associated with customized apparel websites according to their level of functional risk perception.

To test Hypothesis 3, first, Pearson correlation coefficients were estimated to investigate bivariate relationship between each of the independent variables and the dependent variables. Second, the effects of the independent variables obtained from the correlation analysis on the dependent variables were tested by Analysis of Variance. The level of risk perception was measured survey items 2 and 5. This study categorized the dependent variables into low level of risk perception group (lower 25% distribution) and high level of risk perception group (Upper 75% distribution).

Table 7 shows p-values of the correlation coefficients between each of the 7 independent variables, from Assisting purchasing decisions, Helping to find best item (Survey item 6), The interactivity with the salesperson in the customized websites (Survey item 7), Allowing to make informed customer decisions (Survey item 8), Getting better price (Survey item 9), The ability of examining clothing (Survey item 10), and Using virtual model (Survey item 11) had not strong relationships with both perceived risks (Survey items 2 and 5). The low coefficients of risk perception indicated that the relationship between the levels of risk perception was not strong. Consumer's attitude on customized website was not related to each other.

Seven analyses of variances were conducted. Table 8 shows the levels of consumer's risk perception among respondents was not significantly different in the aspect of consumer's attitude toward customized websites. Therefore, the result of

statistical analysis of consumer's attitude toward customized websites and the level of consumer's risk perception were not affected. Hypothesis 3 is rejected.

Table 7. Correlation between the consumer's attitude and perceived risk variables

Variable	The inability to try on clothing	Preference going to an actual retail store
Assisting purchasing decisions	.75	.02*
Helping to find best item	.52	.02*
The interactivity with the salesperson in the customized website	.15	.09
Allowing to make informed Customers' decisions	.84	.35
Allowing to get better price	.70	.42
The ability of examining clothing	.45	.25
Using a virtual model	.29	.08

*P<.05

Table 8. Analysis of Variance tests on the difference among the variables according to the levels of consumer's risk perception.

		Sum of Squares	df	Mean Square	F	Sig.
Assisting purchasing decisions	Between Groups	.587	1	.587	.603	.445
	Within Groups	22.373	23	.973		
	Total	22.960	24			
Helping to find best item	Between Groups	.794	1	.794	1.200	.285
	Within Groups	15.206	23	.661		
	Total	16.000	24			
The interactivity with the salesperson in the customized website	Between Groups	.011	1	.011	.015	.903
	Within Groups	17.429	23	.758		
	Total	17.440	24			
Allowing to make informed customers' decisions	Between Groups	.483	1	.483	.723	.404
	Within Groups	15.357	23	.668		
	Total	15.840	24			
Allowing to get better price	Between Groups	.005	1	.005	.006	.941
	Within Groups	20.635	23	.897		
	Total	20.640	24			
The ability of examining clothing	Between Groups	.534	1	.534	.693	.414
	Within Groups	17.706	23	.770		
	Total	18.240	24			
Using a virtual model	Between Groups	2.515	1	2.515	1.471	.238
	Within Groups	39.325	23	1.710		
	Total	41.840	24			

Hypothesis 4

H4: Consumers may be willing to make their personal data available if the customized apparel marketing on the Internet provides benefits to consumers.

To test hypothesis 4, price benefit (Survey item 10) and the benefit of examining clothing in customized apparel websites (Survey item 11) as two independent variables were tested. The willingness to put personal data (Survey item 21) was used as dependent variable. Table 9 shows that price benefit is not a significant variable with the 95% confidence interval level, however, the price benefit in customized websites makes consumers willing to make put their personal data available to customized websites with 90% confidence interval level ($F(1,50) = 3.24$, $P = .078$). Allowing to examining clothing benefit is not a significant variable ($F(1,50) = 2.46$, $P = .123$). Therefore, consumers are willing to make their personal data available when they may realize the price benefit from customized apparel websites. However, the benefit of examining clothing in the privacy of home cannot make consumers release their personal data. Therefore, this study considers that the benefit of examining clothing cannot easily replace of trying clothing at an actual retail store.

Table 9. Analysis of Variance test on the difference attitude of the willingness to put personal data depending on the benefits.

		Sum of Squares	df	Mean Square	F	Sig.
Allow to get better price	Between Groups	3.333	1	3.333	3.240	.078
	Within Groups	3.333	50	1.029		
	Total	51.436	51			
Allow to examine clothing	Between Groups	54.769	1	2.180	2.459	.123
	Within Groups	2.180	50	.887		
	Total	44.339	51			

Measuring satisfaction and dissatisfaction

This study attempted to measure the consumers' satisfaction and dissatisfaction in customized websites through some items related to ask satisfaction questions. Table 10 shows the satisfaction and dissatisfaction each category. Table 10 indicates that 37.4% of respondents were satisfied with the appropriateness of the Customized Apparel Marketing on the Internet Systems (CAMIS) while 54.2% respondents were neutral. As shown in table 11, 44.9% of respondents expressed neutral satisfaction of the quality of the Customized Apparel Marketing on the Internet Systems (CAMIS) while 44.9% of respondents are satisfied. Table 12 indicated that 43.9% respondents are satisfied with the usability of the Customized Apparel Marketing on the Internet Systems (CAMIS). Overall with the Customized Apparel Marketing on the Internet Systems (CAMIS), 48.6% of respondent are neutral and 39.3% respondents are satisfied. 52.3% of respondents are neutral with the product representations in the Customized Apparel Marketing on the Internet Systems (CAMIS) information provided while 32.7% of respondents are satisfied.

Testing the Proposed Model

The proposed model was tested to identify the effects of each construct.

The following path analytical model that modified with Purchasing Decision model, Theory of Reasoned Action (TRA), and Technology Acceptance Model (TAM) can now be presented below:

Using AMOS version 4.01 (Arbuckle, 1999), path analytical model developed and tested the proposed model. Several measurements of model fit were generated to find the best model.

Table 10. Measuring Satisfaction and Dissatisfaction in Customized websites.

Item	Frequency	Percent	Cumulative Percent
The appropriateness of the CAMIS information			
Very dissatisfied	2	1.9	1.9
Somewhat dissatisfied	7	6.5	8.4
Neutral	58	54.2	62.6
Somewhat satisfied	35	32.7	95.3
Very satisfied	5	4.7	100.0
Total	107	100.0	100.0
The quality of the CAMIS information provided			
Very dissatisfied	2	1.9	1.9
Somewhat dissatisfied	9	8.4	10.3
Neutral	48	44.9	55.1
Somewhat satisfied	40	37.4	92.5
Very satisfied	8	7.5	100.0
Total	107	100.0	100.0
The usability of the CAMIS information provided			
Very dissatisfied	2	1.9	1.9
Somewhat dissatisfied	11	10.3	12.1
Neutral	47	43.9	56.1
Somewhat satisfied	38	35.5	91.6
Very satisfied	9	8.4	100.0
Total	107	100.0	100.0
Overall with the CAMIS information provided			
Very dissatisfied	2	1.9	1.9
Somewhat dissatisfied	12	11.2	13.1
Neutral	52	48.6	61.7
Somewhat satisfied	32	29.9	91.6
Very satisfied	9	8.4	100.0
Total	107	100.0	100.0
Product representations in the CAMIS information			
Very dissatisfied	2	1.9	1.9
Somewhat dissatisfied	14	13.1	15.0
Neutral	56	52.3	67.3
Somewhat satisfied	27	25.2	92.5
Very satisfied	8	7.5	100.0
Total	107	100.0	100.0

Chi-Square and Degree of Freedom

A Chi-Square statistic was adjusted for degrees of freedom from the measurements. To be considered a reasonable model fit to the data, the Chi-Square number must be less than 5 (Wheaton, Muthen, Alwen, & Summers, 1977). This model was achieved Chi-Square=29.232 and Degrees of Freedom = 10.

Goodness of Fit Index (GFI) and Adjusted GFI (AGFI)

These measure the amount of variances and co-variances attributed to the model. The values are generally between 0 and 1, where 1 shows a perfect fit to the data. The GFI and AGFI greater than .90 indicate a good fitting model.

Normed Fit Index (NFI) and the Comparative Fit Index (CFI)

These indices compare the proposed model to that of a fully saturated. The values are generally between 0 and 1. The values greater than .90 for both indices indicate a good fit model. Table 11 shows the goodness of fit tests for default model.

The table 11 reveals the adequacy of fit of the final path model. The final model shows goodness of fit measures that exceed all suggested indices. Detail path diagrams appear in Appendix 2.

Table 11. Fit Measures

Fit Measure	Default model	Saturated
Chi-Square	29.232	0.000
Degrees of freedom	10	0
P – value	0.001	0.001
GFI	0.938	1.000
Adjusted GFI	0.825	
Normed fit index	0.933	1.000
Comparative fit index	0.954	1.000

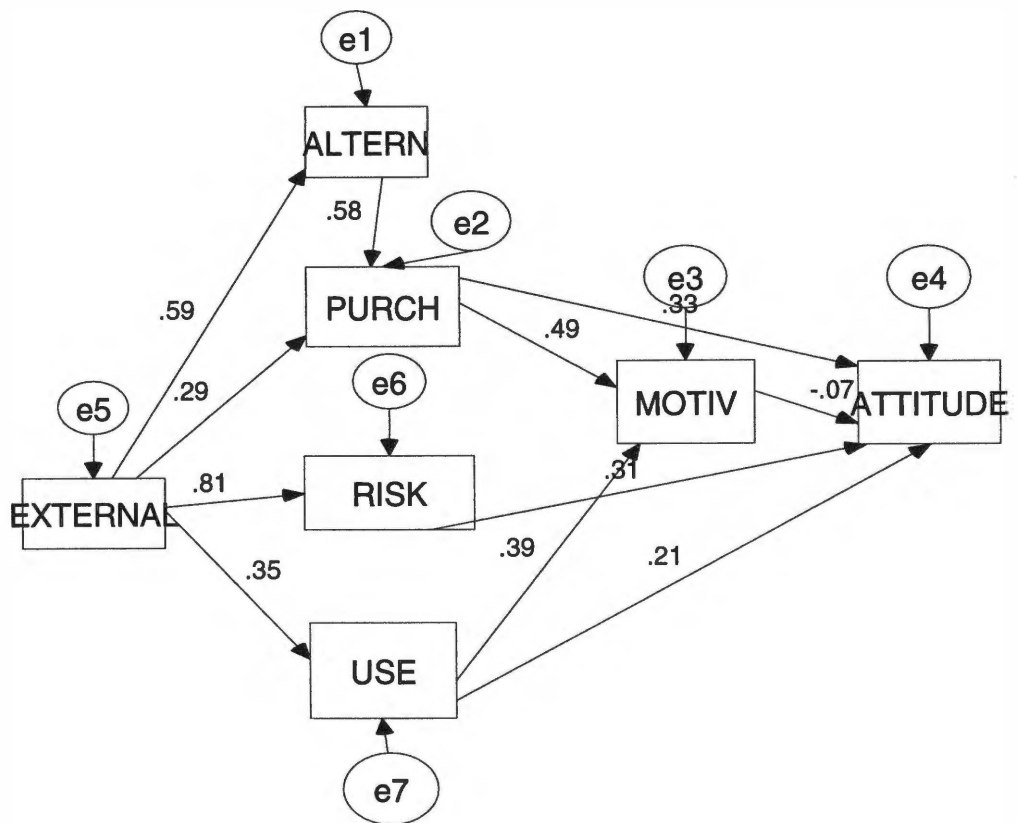


Figure 5. Standardized Estimates

Chi-square = 29.232
 Degrees of freedom = 10
 Probability level = 0.001

The resulting model indicates the following. Using virtual model to try on clothing and interactivity with salesperson on the Internet significantly affect four variables that Evaluation of Alternatives, Purchasing Decision, Reduction of Risk Perception, and Perceived Usefulness and Perceived Ease of Use. The Evaluation of Alternatives, Purchasing Decision, and Perceived Usefulness and Perceived Ease of Use affect consumer's Beliefs and Evaluation and Motivation to Comply, however, Reduction of Risk Perception variable does not significantly affect that. These results indicated that the variable of consumer's Beliefs and Evaluation and Motivation to Comply cannot affect Reduction of Risk Perception, however, Consumer's Attitude toward Behavior is significantly affected by Reduction of Risk Perception. The proposed model indicated that variables comprised model are needed to determine the relationship of consumer's attitude toward customized apparel websites. This model is initial approach to conceptualize consumer's attitude toward customized apparel marketing.

Even though the model has statistically proven, a limitation of the model is the lack of prior development of each variable.

Additional Findings

The study attempted to determine if any relationship existed between the frequency of purchase apparel from the Internet and perceived risk associated with the inability to try on clothing online, which is a functional perceived risk. In addition, the study also tested the relationship between the frequency of purchase apparel from the Internet and the intention to use customized websites.

The Analysis of Variance indicated that there are significant effects between the frequency of purchasing apparel from the Internet and the inability try on

apparel in purchasing apparel online ($F(3,103) = 3.597, P = .01$). Multiple Comparison (Appendix 3) shows that the frequency of purchasing apparel from the Internet groups of in the categories of “Never” and “6-10 times” have a different aspect to the inability to try on clothing online. For the selected Tukey post hoc procedure, two homogeneous groups are defined as shown in table 16. The group purchasing apparel 6-10 times on the Internet in the past 1 year responded “Neutral” the aspect of the inability to try on clothing online. However, the other groups agree that the inability to try on clothing online before purchasing is a problem regardless of their frequency of purchasing apparel from the Internet.

Analysis of Variance was used to identify if any effects between the frequency of purchase apparel from the Internet and the intention to using customized websites. It resulted that there is no significant effects each other ($F(3,103) = 2.594, P = .057$). As shown table 17, the results of Tukey post hoc procedure as shown table 17, one homogeneous group is defined. The four groups are not different from the aspect of the intention to using customized apparel websites. Regardless of the frequency of purchasing apparel on the Internet, they slightly agree with intention to use customized apparel websites in the future.

Table 12. Homogeneous Subsets to test the relationship between the inability to try on apparel on the Internet is a problem and the frequency of purchasing apparel.

			Subset for alpha = .05	
The frequency of purchasing apparel.			1	2
	N			
Tukey HSD	6-10 times	11	3.0000	
	More than 10 times	12	3.8333	3.8333
	1-5 times	39		3.9231
	Never	45		4.1111
	Sig.		.069	.842

Table 13. Homogeneous Subsets to test the relationship between the intention to use customized apparel websites and the frequency of purchasing apparel.

The frequency of purchasing apparel		N	Subset for alpha = .05
			1
Tukey HSD	Never	45	3.0222
	1-5 times	39	3.4615
	More than 10 times	12	3.5000
	6-10 times	11	3.5455
	Sig.		.257

CHAPTER V

DISCUSSION

Summary of Findings

This study explored consumers' attitudes toward customized apparel marketing on the Internet. Since customized apparel marketing is still in its infancy, it is important to understand consumers' attitudes toward customized apparel marketing for appreciation towards future users. Further, based on the results of study, the recognition of the important factors that positively affect consumer's attitude towards Internet apparel buying may be useful for marketing strategies.

The study found that consumers' attitudes are different concerning customized Internet apparel websites and non-customized Internet apparel websites. Respondents of the study held more favorable attitudes towards customized apparel websites than non-customized apparel websites. The interactivity inherent in customized apparel marketing positively affected consumers' attitudes towards using the system and possible purchases from customized apparel marketing. Results also indicated that customized apparel websites enhance effectiveness in shopping for apparel online, safety in purchasing apparel, interacting salesperson on the Internet, and time savings more than non-customized apparel websites.

The function of aiding a purchasing decision via the interaction with a salesperson on the Internet encourages consumers to purchase apparel in customized apparel websites. The respondents also trusted these websites to

transmit their personal information due to its aiding purchasing decision efficiently. Results also indicated that the most critical function of customized apparel marketing is aiding consumer's purchasing decision.

The study focused on how customized apparel marketing may reduce consumers' risk perceptions in purchasing apparel online, since perceived risks associated with purchasing apparel online have been the major obstacle in growth apparel e-commerce. The study predicted that the emerging customized apparel marketing on the Internet could ease these risk perceptions in purchasing apparel online. However, the results indicate that customized apparel marketing cannot affect consumers' risk perceptions. In addition, there is no significant difference of consumer's attitude depending on the level of consumer's risk perception. Apparel marketing on the Internet cannot replace the function of an actual retail store.

To use the customized apparel website it is necessary that consumers make their personal data available in customized apparel websites. The benefit of using customized apparel website may encourage consumers to input their personal data in customized apparel websites. The results indicate that price benefit makes consumers willing to put their personal data in customized apparel websites. Consumers are more likely to purchase apparel online if price benefit is given by e-retailers.

The study found that consumers are satisfied with information given by customized apparel websites from the analysis of overall satisfaction and dissatisfaction of customized apparel marketing.

Limitations of the Study

Generalizability

A major limitation of the study is the limited sample size. This author had a difficulty in finding a sample that had experienced and is familiar with customized apparel marketing on the Internet due to the emerging customized apparel marketing. Even though the sample may not be representative of the general population, the target population of online survey participants was purposely selected to meet the needs of this study. This study may not be generalized across the general consumer population.

Low Response Rate

The survey method used in the study was considered the most applicable because participants easily go to and experienced customized apparel websites on web-based survey via their computers. However, administration of this web-based survey has resulted in a low response rate. The low response rate was expected because the survey was relatively long and required respondents' experience with customized apparel websites prior to taking the survey. The study assumed that the low response rate was due to the following reasons. First, when the respondents went to the customized apparel websites, they would fail to go back to complete the survey. Secondly, the survey format required completion of all sections of the survey, therefore incomplete surveys may not return and other available responses were not retained. Third, this researcher sent no reminder e-mail messages to the possible respondents. Due to the opt-in e-mail marketing firm's privacy policy, it did not give the respondents e-mail addresses for their policy. Their policy is to send e-mail messages just one time.

Finally, the sample was drawn from the database of members who signed up and indicated Internet marketing and Apparel as an interest in the opt-in e-mail marketing website. This researcher considered that many people would sign up both of them as their interests. The redundant messages for those people who signed up both of them as their interests caused reducing possible sample for this study.

In addition, since it is difficult to develop response rates to web page-based surveys (Kehoe & Pitkow, 1996), the comparing web page-based survey methods to traditional survey data collection methods such as mail and telephone survey is tricky (Sheehan & Hoy, 1999). However, the 5% low response rate was acceptable when comparing the 6% reported by Tse (1998) in his exploratory study of e-mail response rates.

Contribution

Despite of these limitations, exploring customized apparel marketing has added to the body of knowledge by providing valuable information and an understanding of this marketing system. Few if any studies exist concerning the emerging customized apparel marketing. There is a need to develop some functions to facilitate increased purchasing of apparel online. On theoretical perspectives, this study contributed by identifying the factors can affect consumer's attitude and behavior. It provides an initial approach to conceptualizing the consumers' attitudes toward customized apparel marketing. The model may give valuable information to understand consumer's behavior.

On practical perspectives, this study provide problems that customized apparel marketing may not replace of the functions of an actual retail store, however, those problems may find solutions to give benefits that an actual retail store can not

give to consumers. This study may help e-marketers to figure out the problems and solutions further developments.

Implications for Marketers

From the results of the study, the following implications are recommended for marketers. First, marketers need to diffuse the functions of customized apparel marketing for their target consumers. The study found that most people do not have experience in this type of marketing due to emerging trend on the Internet. However, this marketing system has been activated more than 1 year and is still in a developmental phase. Based on the findings, consumer's attitude toward customized apparel marketing is more favorable than non-customized apparel marketing. But most of respondents did not have any experience before taking the survey. Marketers need to make an effort to promote customized apparel marketing.

Secondly, from the study findings, apparel buying online cannot replace the functions of the brick and mortar stores. Consumers recognize the difference inherent in the two shopping methods of using the Internet and the brick and mortar stores. Customized apparel marketing cannot minimize consumer's perceived risks in purchasing apparel from the Internet. However, customized apparel marketing can effectively give alternative information to suit consumer's preference in a time efficient manner. E-marketers need to focus on how they effectively help consumer's purchasing decision through the functions of customized apparel marketing on the Internet. Efficient interactions between cyber salespersons and customers will be a looming challenge for companies operating customized apparel marketing, these factors may determine the success of these websites.

Third, the study found that consumers regard using virtual model and personal shopper as an enhancement to the shopping effectiveness on the Internet. E-marketers need to focus on enhancing the benefits of customized websites can provide such as giving the information of products, price benefits, and saving time that can not be given by brick and mortar retail stores. That makes customized apparel marketing on the Internet different from the brick and mortar stores as one of shopping methods. Consumers may patronize customized apparel websites when they feel that shopping for apparel in customized apparel websites enhance their effectiveness of shopping on the Internet. Therefore, e-marketers need to explore the benefits that may give consumers in shopping on the Internet, but the brick and mortar stores may not.

In addition, based on the findings, the most conscious benefit that consumers tend to take from shopping on the Internet is a price benefit. Consumers pursue the price benefit while shopping on the Internet. E-marketers need to focus on enhancing the price benefit to make difference in shopping at brick and mortar stores.

Implications for Future Study

Web Page-Based Survey Methodology

Using the web page-based survey method, there were challenges and benefits. This study had a difficulty to collect data associated with it's use for the study. However, web page-based survey methods give numerous benefits for this study. First, web page – based survey tend to collect broad-based data a nationwide (Sheehan & Hoy, 1999). Secondly, the data can be collected in a time efficient manner (Smith, 1997; McCullough, 1998). Third, researchers can minimize the cost of both data collection and analysis by using web page – based survey (McCullough, 1998). Fourth, Anonymity in responses is allowed by using web page – based survey,

since respondent can choose whether to provide his or her name or not (Sheehan & Hoy, 1999). Finally, the most important benefit to use web page –based survey for this study was allowing respondents to go specific customized apparel marketing websites in clicking web addresses provided by the researcher. These benefits allow the researcher to get appropriate sample characteristics that other survey method may not provide. Using web page –based survey is among the most appropriate method for researchers who intend to study Internet.

Despite of these benefits, difficulty was encountered concerning e-mail list provider not allowing follow-up e-mail messages. For researchers, this is of significance since these follow-up e-mail messages, remind possible respondents to take the survey. In the aspect of the follow-up e-mail messages can increase the response rate, future researchers should confirm whether e-mail list provider would allow follow-up e-mail messages to possible respondents or not before distributing the survey.

Another problem that may be encountered with using web page –based survey is that survey method may cause multiple and inappropriate responses. It may also cause bias for the study. To prevent to multiple and inappropriate responses, future researchers need to give security number to participants in order to enter web page –based survey.

It is possible that e-mail addresses may become out-of-date quickly due to changing the nature of the Internet (Smith, 1997). The future researchers need to prepare for dealing with delivery failures like a block out e-mails by the e-mail address host (Sheehan & Hoy, 1999).

Study of Customized Apparel Marketing on the Internet

Since apparel products differ from other product categories successfully sold on the Internet there are aspects that must be considered in the development of customized apparel websites.

First, explore the effects of web design displayed in customized apparel marketing. This study assumes that it is important to develop web design of customized apparel marketing in using a virtual model and in interacting with a salesperson on the Internet. Addressing the importance of web design in customized apparel marketing can give consumers for entering a special store on the Internet.

Secondly, investigating the reduction of risk perception in purchasing apparel on the Internet is still considered an important matter, since the perceived risks have been major obstacles of purchasing apparel on the Internet. Future researchers need to investigate the ways of reduction of risk perceptions in purchasing apparel on the Internet.

Third, the model presented in the study is an initial approach to conceptualize consumer's attitude toward customized apparel marketing. It has statistically proven to have a good model fit, however, variables comprised of the model did not fully supported of survey items in regard to theoretical backgrounds. This path analytical model can develop structural equation model when future researcher put developed survey item in relation to consumer's attitude towards customized apparel marketing. This study suggests for future researchers to investigate variables of the model in a depth.

Finally, this study suggests for future study to investigate other benefits possibly given by customized apparel marketing for enhancing the shopping effectiveness and increasing sales volumes. Based on the study findings, price benefit

makes consumers patronize in customized apparel websites. There should be some benefits that consumers want to take in using customized apparel marketing.

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Appendices

Appendix 1. Survey Instrument

Dear e-friends,

I am a graduate student at the University of Tennessee-Knoxville in the Department of Retail and Consumer Sciences. I am conducting a survey to determine consumer's attitude toward personally customized apparel marketing on the Internet (CAMIS).

For participating in this survey, you will be entered in a drawing for \$30 value gourmet food basket from the University of Tennessee. Please note that all of your answers to this survey are private and confidential and will only be used for research purposes. Before starting this survey, I encourage you to visit some of websites in relation to personally customized interactive apparel marketing, especially, visit www.landsend.com.

[Consumer's Attitude toward Customized Apparel Marketing on the Internet]

(Information Sheet)

You are invited to participate in a research study. The purpose of this study is to investigate the consumer's attitude toward personally customized interactive apparel marketing on the Internet.

Information:

Participants in this study will be asked to complete a questionnaire via e-mail.

This researcher strongly encourages participants to visit some of websites in a relation to personally customized interactive apparel marketing. Some website addresses are as follows: www.LandsEnd.com, www.JcPenny.com, www.gap.com. The time commitment for the participant is 15 to 20 minutes.

Risk:

There are no risks posed to the participants in this study.

Benefits:

No direct benefit to your participation. However, the benefit gained from your participation in this study is the contribution to develop personally customized interactive apparel marketing on the Internet.

Confidentiality:

This researcher assures you that your responses will remain confidential, and will not be released in any individually identifiable form without your prior consent unless otherwise required by law.

Confidentiality cannot be guaranteed, but confidentiality will be maintained to the best of my ability.

The questionnaire will be coded for data entry purpose only. No identification will be listed on the survey.

Contact:

If you have any questions at any time about the study or the procedures, you may contact the researcher, Kiseol Yang e-mail to kyang1@utk.edu. If you have any qu

estions about rights as a participant, contact the Compliance Section of the Office of Research at (865) 974-3466.

Participation:

Your participation in this study is voluntary. You may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be destroyed.

Consent:

The return of the completed survey constitutes your consent to participate.

Please click on the following Web Site to fill out the survey, and return the questionnaire by clicking the "submit " button at the end of the questionnaire.

http://www.surveympro.com/cgi-bin/surveympro/run_survey.cgi?id=1246

I appreciate your help. Thanks for your time. Remember, if you complete the survey, you will be entered in a drawing for \$30 value gourmet food basket from the University of Tennessee. You can contact me at kyang1@utk.edu

Sincerely,

Kiseol Yang
Graduate Student
Department of Retail and Consumer Sciences
University of Tennessee-Knoxville

For participating in this survey, you will be entered in a drawing for \$30 value gourmet food basket from the University of Tennessee. Please note that all of your answers to this survey are private and confidential and will only be used for research purposes. Before starting this survey, I encourage you to visit some of websites in relation to personally customized interactive apparel marketing, especially visit [www.landsend.com]. What is a personally customized interactive apparel marketing system? This system helps to find the best item while salespersons on the Internet interact with customers. Personal shoppers are available to find an appropriate match to customers' preferences. Customers can see where the clothing works or not through their own virtual model. This system can assist consumers with their purchasing decisions.

- Questions marked with * require a Valid Response

Apparel e-commerce: The following questions deal with how comfortable you feel with purchasing apparel on the Internet.

	Disagree strongly	Disagree	Neutral	Agree	Agree strongly
*I would purchase apparel from the Internet.	☐	☐	☐	☐	☐
*The inability to try on apparel prior to purchasing from the Internet is a problem.	☐	☐	☐	☐	☐
*I would purchase apparel from the Internet if the return policy was easy and free.	☐	☐	☐	☐	☐
*I would be concerned about credit card safety on the Internet.	☐	☐	☐	☐	☐
*I would prefer to purchase apparel in an actual retail store.	☐	☐	☐	☐	☐

Customized Apparel Marketing Internet Systems (CAMIS): The following questions will examine how you feel concerning Customized Apparel Marketing on the Internet System (CAMIS).

	Disagree strongly	Disagree	Neutral	Agree	Agree strongly
*The CAMIS plays an effective role in assisting purchasing decisions.	☐	☐	☐	☐	☐
*The CAMIS helps to find the best item for me.	☐	☐	☐	☐	☐
*The interactivity with the salesperson in the CAMIS is similar to the experience with an actual salesperson.	☐	☐	☐	☐	☐
*Using the CAMIS would allow me to make informed customer decisions.	☐	☐	☐	☐	☐
*Using the CAMIS would allow me to get better prices when shopping.	☐	☐	☐	☐	☐
*Using the CAMIS would allow me to					

examine clothing in the privacy of my home.	☐	☐	☐	☐	☐
*I would prefer using the virtual model on the CAMIS to try on clothing.	☐	☐	☐	☐	☐
*I would prefer going to an actual retail store to try on clothing.	☐	☐	☐	☐	☐
*Shopping with the CAMIS would enhance my effectiveness at shopping more than non-customized websites.	☐	☐	☐	☐	☐
*Shopping with the CAMIS would be very risky.	☐	☐	☐	☐	☐
*Shopping with the CAMIS would be a safer way to shop than non-customized websites.	☐	☐	☐	☐	☐
*Shopping with the CAMIS would allow me to do my shopping quicker than non-customized websites.	☐	☐	☐	☐	☐
*I believe supplying personal available data such as body measurements will aid my shopping experience with the CAMIS.	☐	☐	☐	☐	☐
*I am confident in the Knowledge and competency of salesperson on CAMIS.	☐	☐	☐	☐	☐
*I would trust CAMIS to transmit personal information necessary for me to shop with the CAMIS.	☐	☐	☐	☐	☐
*I am willing to give my personal information to use CAMIS because of its service benefits.	☐	☐	☐	☐	☐
*CAMIS does not change my intention to purchase apparel on the Internet.	☐	☐	☐	☐	☐
*I would prefer using the CAMIS rather than non-customized websites.	☐	☐	☐	☐	☐

CAMIS Technology: The following questions address Customized Apparel Marketing Internet Systems (CAMIS).

	Disagree strongly	Disagree	Neutral	Agree	Agree strongly
*The CAMIS is easy to use.	☐	☐	☐	☐	☐
*I am willing to learn how to use the CAMIS because of its service benefits.	☐	☐	☐	☐	☐
*The CAMIS encourages me to purchase apparel on the Internet.	☐	☐	☐	☐	☐
*I will use the CAMIS in the future.	☐	☐	☐	☐	☐

Satisfaction: The following questions will examine how satisfied you are with Customized Apparel Marketing Internet Systems (CAMIS).

Disagree strongly	Disagree	Neutral	Agree	Agree strongly
--------------------------	-----------------	----------------	--------------	-----------------------

*The CAMIS is attractive to me.	☐	☐	☐	☐	☐
*The CAMIS can not replace the help of the retail store personnel.	☐	☐	☐	☐	☐
*The CAMIS can not replace my ability to try on the apparel in the real store.	☐	☐	☐	☐	☐

	Very high quality	High quality	Average	Below average	Unacceptable
*Based on your experience, you would rate the quality of the CAMIS as being	☐	☐	☐	☐	☐

How satisfied are you with these aspects of the Customized Apparel Marketing Internet Systems(CAMIS):

	Very dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Very satisfied
*With the appropriateness of the CAMIS information to your needs?	☐	☐	☐	☐	☐
*With the quality of the CAMIS information provided?	☐	☐	☐	☐	☐
*With the usability of the CAMIS information provided?	☐	☐	☐	☐	☐
*Overall with the CAMIS information provided?	☐	☐	☐	☐	☐
*With product representations in the CAMIS information?	☐	☐	☐	☐	☐

Demographic information: The following questions provide demographic information about you.

*If you have, or plan to purchase apparel on the Internet, what kind of apparel would you be the most interested in?

Athletic Apparel	Casual Apparel	Career Apparel	Formal Apparel	Other (Please Specify)
☐	☐	☐	☐	☐

*What is your gender?

Male ☐ Female ☐

*Where do you access the Internet the most (Choose only one)?

School ☐ Home ☐ Work ☐ Other (Please Specify) ☐

***How many times have you purchased apparel from the Internet in the past 1 year?**

Never 1-5 times 6-10 times More than 10 times

☐ ☐ ☐ ☐

Do you own a computer?

Yes No

☐ ☐

***What is your level of education?**

High School Graduate Some College College Graduate Postgraduate

☐ ☐ ☐ ☐

***What is your annual household income?**

\$25,000 or less \$25,001-\$40,000 \$40,001-\$55,000 \$55,001-\$70,000 More than \$70,000

☐ ☐ ☐ ☐ ☐

***What is your current occupation (choose only one)?**

Student Homemaker Not Employed Management Professional Sales Other (Please Specify)

☐ ☐ ☐ ☐ ☐ ☐

***What is your age?**

Under 18 19-30 31-40 41-50 More than 50

☐ ☐ ☐ ☐ ☐

We would like to hear your suggestion on how Customized Apparel Marketing on the Internet System can be improved. What other information or services would you like to see on the CAMIS type websites? Please, type your idears in the box below.

Please, type your e-mail address in the box below to be entered in a drawing for \$30 value gourmet food basket from the University of Tennessee.

Thank you for participating in this survey!! Click the submit button below!!

Submit



**Appendix 2. Proposed Model Summary
(by AMOS 4.01)**

amos1
Wednesday, November 14, 2001 08:40:11

Amos
by James L. Arbuckle
Version 4.01

Copyright 1994-1999 SmallWaters Corporation
1507 E. 53rd Street - #452
Chicago, IL 60615 USA
773-667-8635
Fax: 773-955-6252
<http://www.smallwaters.com>

Title

amos1: Wednesday, November 14, 2001 08:40 PM

Your model contains the following variables

ALTERN	observed	endogenous
EXTERNAL	observed	endogenous
PURCH	observed	endogenous
RISK	observed	endogenous
USE	observed	endogenous
MOTIV	observed	endogenous

ATTITUDE	observed	endogenous
e1	unobserved	exogenous
e5	unobserved	exogenous
e2	unobserved	exogenous
e3	unobserved	exogenous
e4	unobserved	exogenous
e6	unobserved	exogenous
e7	unobserved	exogenous

Number of variables in your model: 14
 Number of observed variables: 7
 Number of unobserved variables: 7
 Number of exogenous variables: 7
 Number of endogenous variables: 7

Summary of Parameters

Intercepts	Total	Weights	Covariances	Variances	Means	
		-----	-----	-----	-----	-----
7	Fixed:	7	0	0	0	0
0	Labeled:	0	0	0	0	0
18	Unlabeled:	11	0	7	0	0
		-----	-----	-----	-----	-----
25	Total:	18	0	7	0	0

NOTE:
 The model is recursive.

Sample size: 107

Model: Default model

Computation of degrees of freedom

Number of distinct sample moments: 28
 Number of distinct parameters to be estimated: 18

 Degrees of freedom: 10

0e 3	0.0e+000	-1.0888e-001	1.00e+004	3.24321689433e+002	0
1.00e+004					
1e* 0	3.3e+001	0.0000e+000	1.71e+000	5.35717116232e+001	19
7.10e-001					
2e 0	1.4e+001	0.0000e+000	3.29e-001	3.17853089067e+001	1
1.02e+000					

3e	0	8.9e+000	0.0000e+000	7.62e-002	2.93617629186e+001	1
1.12e+000						
4e	0	8.5e+000	0.0000e+000	1.76e-002	2.92331719726e+001	1
1.05e+000						
5e	0	8.7e+000	0.0000e+000	1.54e-003	2.92322871787e+001	1
1.01e+000						
6e	0	8.7e+000	0.0000e+000	1.25e-005	2.92322871215e+001	1
1.00e+000						

Minimum was achieved

Chi-square = 29.232
 Degrees of freedom = 10
 Probability level = 0.001

Maximum Likelihood Estimates

Regression Weights: Label		Estimate	S.E.	C.R.
-----		-----	-----	-----
par-1	ALTERN <----- EXTERNAL	0.608	0.080	7.589
par-2	PURCH <----- EXTERNAL	0.316	0.080	3.945
par-4	USE <----- EXTERNAL	0.319	0.084	3.797
par-5	PURCH <----- ALTERN	0.608	0.078	7.770
par-3	RISK <----- EXTERNAL	1.048	0.073	14.299
par-6	MOTIV <----- PURCH	0.472	0.069	6.856
par-7	MOTIV <----- USE	0.441	0.081	5.477
par-8	ATTITUDE <----- RISK	0.180	0.055	3.304
par-9	ATTITUDE <----- PURCH	0.231	0.074	3.104
par-10	ATTITUDE <----- USE	0.173	0.076	2.290
par-11	ATTITUDE <----- MOTIV	-0.050	0.079	-0.627

Standardized Regression Weights:	Estimate
-----	-----
ALTERN <----- EXTERNAL	0.593
PURCH <----- EXTERNAL	0.293
USE <----- EXTERNAL	0.346

PURCH <----- ALTERN	0.578
RISK <----- EXTERNAL	0.812
MOTIV <----- PURCH	0.492
MOTIV <----- USE	0.393
ATTITUDE <----- RISK	0.305
ATTITUDE <----- PURCH	0.327
ATTITUDE <----- USE	0.210
ATTITUDE <----- MOTIV	-0.067

Variances: Label		Estimate	S.E.	C.R.
-----		-----	-----	-----
	e5	0.452	0.062	7.280
par-12				
	e1	0.308	0.042	7.280
par-13				
	e2	0.200	0.027	7.280
par-14				
	e7	0.338	0.046	7.280
par-15				
	e3	0.251	0.035	7.280
par-16				
	e6	0.257	0.035	7.280
par-17				
	e4	0.167	0.023	7.280
par-18				

Correlations of Estimates

	par-1	par-2	par-3	par-4	par-5	par-6	par-7
---	-----	-----	-----	-----	-----	-----	-----
par-1	1.000						
par-2	0.000	1.000					
par-3	-0.000	-0.000	1.000				
par-4	0.000	0.000	0.000	1.000			
par-5	-0.000	-0.593	-0.000	0.000	1.000		
par-6	0.000	0.000	-0.000	0.000	0.000	1.000	
par-7	0.000	0.000	-0.000	0.000	-0.000	-0.220	1.000
par-8	0.000	0.000	0.000	0.000	-0.000	-0.000	-
par-9	0.000	0.000	-0.000	0.000	0.000	-0.000	-
par-10	0.000	0.000	-0.000	0.000	-0.000	-0.000	-
par-11	-0.000	0.000	-0.000	0.000	-0.000	0.000	
par-12	0.000	-0.000	-0.000	-0.000	-0.000	0.000	
par-13	0.000	-0.000	-0.000	0.000	0.000	0.000	-
par-14	-0.000	-0.000	-0.000	0.000	0.000	0.000	-
par-15	0.000	0.000	-0.000	-0.000	-0.000	-0.000	

```

par-16      0.000      0.000     -0.000      0.000      0.000      0.000      -
0.000
par-17      0.000      0.000     -0.000      0.000     -0.000     -0.000
0.000
par-18      0.000      0.000      0.000      0.000      0.000     -0.000      -
0.000

14      par-8      par-9      par-10      par-11      par-12      par-13      par-
-----
par-8      1.000
par-9      -0.419      1.000
par-10     -0.178      0.163      1.000
par-11     -0.000     -0.503     -0.462      1.000
par-12      0.000      0.000      0.000     -0.000      1.000
par-13     -0.000      0.000     -0.000      0.000      0.000      1.000
par-14     -0.000      0.000     -0.000      0.000      0.000     -0.000
1.000
par-15     -0.000     -0.000      0.000      0.000      0.000     -0.000      -
0.000
par-16      0.000      0.000      0.000     -0.000      0.000      0.000      -
0.000
par-17      0.000     -0.000     -0.000     -0.000      0.000     -0.000      -
0.000
par-18      0.000      0.000      0.000     -0.000      0.000      0.000
0.000

      par-15      par-16      par-17      par-18
-----
par-15      1.000
par-16     -0.000      1.000
par-17     -0.000     -0.000      1.000
par-18      0.000      0.000     -0.000      1.000

```

Summary of models

	Model	NPAR	CMIN	DF	P	CMIN/DF
	Default model	18	29.232	10	0.001	2.923
	Saturated model	28	0.000	0		
	Independence model	7	436.039	21	0.000	20.764

	Model	RMR	GFI	AGFI	PGFI
	Default model	0.034	0.938	0.825	0.335
	Saturated model	0.000	1.000		
	Independence model	0.225	0.376	0.169	0.282

	Model	DELTA1 NFI	RHO1 RFI	DELTA2 IFI	RHO2 TLI
CFI	-----	-----	-----	-----	-----

0.954	Default model	0.933	0.859	0.955	0.903
1.000	Saturated model	1.000		1.000	
0.000	Independence model	0.000	0.000	0.000	0.000

Model	PRATIO	PNFI	PCFI
Default model	0.476	0.444	0.454
Saturated model	0.000	0.000	0.000
Independence model	1.000	0.000	0.000

Model	NCP	LO 90	HI 90
Default model	19.232	6.699	39.386
Saturated model	0.000	0.000	0.000
Independence model	415.039	350.847	486.659

Model	FMIN	F0	LO 90	HI 90
Default model	0.276	0.181	0.063	0.372
Saturated model	0.000	0.000	0.000	0.000
Independence model	4.114	3.915	3.310	4.591

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.135	0.079	0.193	0.009
Independence model	0.432	0.397	0.468	0.000

Model	AIC	BCC	BIC	CAIC
Default model	65.232	68.171	148.370	131.343
Saturated model	56.000	60.571	185.325	158.839
Independence model	450.039	451.182	482.370	475.749

Model	ECVI	LO 90	HI 90	MECVI
Default model	0.615	0.497	0.806	0.643
Saturated model	0.528	0.528	0.528	0.571
Independence model	4.246	3.640	4.921	4.256

Model	HOELTER .05	HOELTER .01
-------	----------------	----------------

-----	-----	-----
Default model	67	85
Independence model	8	10

Execution time summary:

Minimization: 0.050
Miscellaneous: 1.480
Bootstrap: 0.000
Total: 1.530

Appendix 3. Multiple Comparisons

Multiple Comparisons

Dependent Variable: The inability to try on apparel prior to purchasing from the Internet is a problem.

	(I) How many times have you purchased apparel from the Internet in the past 1 year?	(J) How many times have you purchased apparel from the Internet in the past 1 year?	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Tukey HSD	Never	1-5 times	.829	-.3885	.7646
		6-10 times	.008	.2248	1.9975
		More than 10 times	.832	-.5784	1.1339
	1-5 times	Never	.829	-.7646	.3885
		6-10 times	.042	.0234	1.8227
		More than 10 times	.993	-.7802	.9597
	6-10 times	Never	.008	-1.9975	-.2248
		1-5 times	.042	-1.8227	-.0234
		More than 10 times	.203	-1.9333	.2667
	More than 10 times	Never	.832	-1.1339	.5784
		1-5 times	.993	-.9597	.7802
		6-10 times	.203	-.2667	1.9333
Dunnett t (2-sided) ^a	Never	More than 10 times	.679	-.4886	1.0442
	1-5 times	More than 10 times	.981	-.6890	.8685
	6-10 times	More than 10 times	.112	-1.8180	.1513

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

Multiple Comparisons

Dependent Variable: I will use the CAMIS in the future

	(I) How many times have you purchased apparel from the Interent in the past 1 year?	(J) How many times have you purchased apparel from the Interent in the past 1 year?	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Tukey HSD	Never	1-5 times	.091	-.9249	.0462
		6-10 times	.265	-1.2697	.2233
		More than 10 times	.313	-1.1989	.2433
	1-5 times	Never	.091	-.0462	.9249
		6-10 times	.992	-.8416	.6738
		More than 10 times	.999	-.7711	.6942
	6-10 times	Never	.265	-.2233	1.2697
		1-5 times	.992	-.6738	.8416
		More than 10 times	.999	-.8810	.9719
	More than 10 times	Never	.313	-.2433	1.1989
		1-5 times	.999	-.6942	.7711
		6-10 times	.999	-.9719	.8810
Dunnett t (2-sided) ^a	Never	More than 10 times	.183	-1.1233	.1677
	1-5 times	More than 10 times	.997	-.6943	.6174
	6-10 times	More than 10 times	.998	-.7839	.8748

a. Dunnett t-tests treat one group as a control, and compare all other groups against it.

VITA

Kiseol Yang was born and grew up in Korea. She obtained a Bachelor of Arts degree in French Language and Literature from Wonkwang University, Iksan, Korea in 1996. After having working experience in the retail industry, she started her graduate program in Retail and Consumer Sciences at the University of Tennessee, Knoxville in 1999. She was a vice president of the University of Tennessee at Knoxville Korean Student Association in 2000. She also was a teaching assistant in 2001. She received her Master of Sciences degree in Retail and Consumer Sciences in 2002.