

**Effects of Experiences and Brand-Self Image Congruity on  
Perceived Risk and Purchase Intention in Apparel Online Shopping Context**

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ABSTRACT

Retailers' ultimate concern is consumers' purchase intentions because increasing levels of purchase intention may lead to the actual purchase, which is directly related to retailers' sales and profits. Perceived risk has been proposed as one of the most important concepts for understanding how consumers make a purchase decision (Mitchell, 1999) and research findings supported that perceived risk was a significant factor affecting consumers' willingness to purchase (Heijden, Verhagen, & Creemers, 2001). Therefore, it is critical for online retailers in the apparel industry to understand consumer's perceived risk and purchase intention so that they can develop effective retail strategies and build long-term relationships with customers.

Consumers use internal information to help them in the purchase decision process by retrieving risk-related information from memory. Experience and product/brand knowledge are two common types of internal information that consumers use to reduce risks and make purchase decisions (Brucks, 1985; Engel, Blackwell, & Miniard, 1995). Studies showed that experience with previous in-home shopping for apparel products significantly reduced perceived risk and increased purchase intention in buying apparel products via in-home shopping channels (Kwon, Paek, & Arzeni, 1991; Park & Stoel, 2005; Sen, Johnson, Stanforth, Lennon, & Moore, 2000). Several researchers also have investigated the relationship between the familiarity with a website's brand and the perceived of risk and purchase intention (Laroche, Kim, & Zhou, 1996; Park & Stoel, 2005). However, the brand familiarity in these studies was measured as consumer's brand knowledge through frequent exposures, such as advertisement, instead of experiences

acquired through actual purchase and use of the brands. No study has examined if the purchase experience and actual usage of a specific brand are related to perceived risk when consumers shop for apparel products online. Brand image is one type of knowledge that consumers stored in their memory and may retrieve it during their decision making process. Studies showed that brand image was the most important and most frequently used tool to reduce consumers' perception of risk (Nandan, 2005). McCracken (1989) indicated that brand image helps an individual express oneself and develop one's self-identities; therefore, consumers prefer products with an image that matches their actual or ideal self-concept (Karande, Zinkhan, & Lum, 1997). Therefore, congruity between brand image and consumers' self image (brand-self image congruity) may help consumers to reduce their perceived risk and increase purchase intention in apparel online purchases. No study has examined the effect of brand-self image congruity in apparel online shopping context.

The purposes of the study were to investigate (a) the relationships between consumers' experience with apparel catalog/TV shopping and their experience with apparel online shopping, (b) the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand, and (c) the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention in apparel online shopping context. Two conceptual frameworks were developed. The first framework was for examining all participants, including participants with and without experience with a specific brand. The valence of experience with a specific brand was excluded in this framework. The second framework, including the valence of the experience with a specific brand, was for examining participants who had experience with a specific brand. Fifteen research hypotheses were generated with respect to the specific relationships proposed in the conceptual frameworks.

A 2 x 2 quasi-experimental between subjects design was used in this study to examine if experience with a specific brand (Experience vs. No Experience) and brand-self image congruity (Consistent vs. Inconsistent) were the antecedents of perceived risk and purchase intention in apparel online shopping context. In addition to the quasi-experimental design, a survey design was also used to examine the relationships among

experiences with catalog, TV, and online shopping for apparel products and the relationships among experience with apparel online shopping, perceived risk and purchase intention. Data was collected by online surveys using a national sample, and 455 apparel online shoppers living in the U.S. participated.

Factor analysis results showed that the valence and extent of the experiences were two different constructs, and therefore, the two aspects of experience were included in the study. The extent of the experience is about how often consumers buy products, how much money they spend, and how many items they buy (Klopping & McKinney, 2006; Seock, 2003; Ward, 2001). The feelings experienced are called the valence of the experience, and these feelings are usually described in the literature as good/bad, enjoyed/not enjoyed, or satisfied/ dissatisfied with the experience (Chen & Dubinsky, 2003; Folkes & Patrick, 2003; Mano & Oliver, 1993; Raghurir & Menon, 2005).

The first purpose of the study was to investigate the relationships between consumers' experience with apparel catalog/TV shopping and their experience with apparel online shopping. The results showed that participants who had more experiences and who had a positive feeling about their experience with buying apparel products from catalogs had more experiences with apparel online shopping. However, participants' TV shopping experiences did not have significant relationships with apparel online shopping. Participants who had more positive feelings about their experience with buying apparel products online purchased apparel product more frequently, bought more apparel items, and spent greater amount of money on apparel products online. The second purpose of the study was to investigate the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand. The results showed that participants who had more experiences with buying apparel products online and who perceived the image of a specific brand as more consistent with their self image had more experiences with a specific brand, indicating that they purchased apparel product of the brand more frequently, bought more items of the brand, and spent greater amount of money on the brand. The third purpose of the study was to investigate the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention in buying a specific brand online. The results of perceived risk showed that for all participants, including those with and without

experience with a specific brand, those had more experiences with a specific brand and those perceived the image of a specific brand as more consistent with their self-image perceived less risk in buying the apparel products of the brand online. However, participants who already had experience with a specific brand perceived less risk in buying the brand online if they had positive feeling about their experience with the brand despite of the frequency of previous experience (i.e., the extent of the experience with a specific brand). In the results of purchase intention, similar results to that of perceived risk were found for all participants. Those had more experiences with a specific brand and those perceived the image of a specific brand as more consistent with their self-image had higher purchase intention in buying the apparel products of the brand online. However, among the participants who had experience with the specific brand, only brand-self image congruity influenced their perceived risk and purchase intention. Either the extent or valence of the experience with the brand did not directly influence their purchase intention in buying the brand online. Instead, these experiences indirectly influenced the purchase intention through perceived risk.

In conclusion, participants' experience with apparel online shopping and brand-self image congruity were significant factors on their perceived risk and purchase intention in apparel online shopping context. Participants who had more and positive experience with apparel online shopping and those whose self image was more consistent with the brand image perceived less risk and had higher purchase intention in buying apparel products of the brand online. This study extends the understanding of consumers' apparel online shopping behavior by identifying the roles of experiences and brand-self image congruity in apparel online shopping context. Based on the findings, suggestions for marketing strategies in apparel online shopping were provided.

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## **CHAPTER I**

### **INTRODUCTION**

In this chapter, background information for the study is provided in three sections. The first section, introduction, presents the general information of online shopping, addresses the risks in apparel online shopping, and discusses two possible factors (i.e., consumer's previous experiences, the congruity between brand image and consumers' self image) to reduce perceived risk and increase purchase intention in apparel online shopping context. The second section states the purpose of the study. The chapter concludes with the objectives of the study and conceptual definitions of variables in the study.

#### **Introduction**

Since 2000, online retail sales have continued to increase at a rapid pace. In 2007, the business-to-consumer e-commerce market grew nearly six times faster than total retail sales. The online retail sales reached \$165.9 billion, which was an increase by 21.8% from \$136.2 billion in 2006 (Brohan, 2007). According to comScore, Inc., \$29.2 billion was spent online during the holiday season in 2007, marking a 19% gain versus the same period in 2006 (Lipsman, 2008). The increase of online shopping has stimulated various topics of research about attracting and retaining consumers from either a consumer- or a technology-oriented view (Jarvenpaa & Todd, 1997). The research from a consumer-oriented view focuses on the studies in consumers' characteristics, consumers' beliefs about online shopping, and how such beliefs influence consumers' purchase channel selection. For example, online consumer behavior has been examined from the perspectives of consumer demographics (Park, Lee, & Ahn, 2004; Teng, Huang, & Yeh, 2007; Xu & Paulines, 2005), shopping orientation (Allred, Smith, & Swinyard, 2006; Gehrt, Onzo, Fujita, & Rajan, 2007), cognitive/psychological characteristics (Huang, 2003; Wang, Chen, Chang, & Yang, 2007), shopping motivation

(Johnson, Moe, Fader, Bellman, & Lohse, 2004; Sorce, Perotti, & Widrick, 2005), and perceptions of risks and benefits toward online shopping (Garbarino & Strabilevitz, 2004; Ghazali & Mutum, 2006; Roman, 2007). The research from a technology-oriented view has investigated the techniques used in online stores, such as user interface features (Ballantine, 2005; Park & Kim, 2006), website content and design (Dadzie, Chelariu, & Winston, 2005; Seock, 2003; Shergill & Chen, 2005), and system usability (Badii, 2004; Demangeot & Broderick, 2006; Kim & Kim, 2006).

Although results of previous studies vary on different approaches of investigations and suggest that further studies are needed in each area, some trends related to online shopping could be identified. In the early stage of online shopping, the main reasons that consumers engaged in this type of shopping channel were convenience and variety-seeking (Burke, 1997; Spulber, 1996). However, the reasons for shopping online have extended over various motivations such as recreation and economic (Barlow, Siddiqui, & Mannion, 2004; Lee, Fiore, & Kim, 2006; Litan & Rivlin, 2001). Consumers with various shopping orientations become active in online shopping (Brown, Pope, & Voges, 2003). Female consumers who were previously known to be less interested in online shopping due to lack of face-to-face interaction now show continuous growth in their participation in online shopping and have a great potential to dominate the future of online shopping (Brown et al., 2003; Rohm & Swaminathan, 2004). As online consumers are diversified, studies showed that personalization of an online shopping environment, including the personalization of transactions, online help, and consumer services, becomes an important factor that e-retailers need to improve (Kim & Kim, 2006; Park & Kim, 2006). However, the concern of risk in online shopping has been consistently shown to be more important than those associated with benefits from the online shopping (e.g., convenience) (Bhatnagar & Ghose, 2004). Previous studies also showed that perceived risk had a critical influence on purchase intentions (Aqueveque, 2006; Heijden, Verhagen, & Creemers, 2001; Park & Stoel, 2005). How to reduce consumers' perceived risk in online shopping continues to be an essential task for online retailers.

In 2006, online shoppers spent more money on apparel products than on computers for the first time and made the apparel products the largest sales category in online shopping in that year (Mui, 2007). Consumers spent \$18.3 billion on clothes, accessories and shoes in

2006, indicating a 61% increase from 2005. During the holiday season in 2007, apparel and accessories ranked the top five fastest growing categories (Brohan, 2008). As the competition in e-commerce increased, it becomes more critical for apparel online retailers to understand how they can attract and retain consumers to their websites. Many studies about apparel online shopping showed that perceived risk was an important factor that determined consumers' decision on conducting online shopping (Park, Lennon, & Stoel, 2005; Vijayasarathy & Jones, 2000; Yoh, Damhorst, Sapp, & Lazniak, 2003). Park et al. (2005) found a negative relationship between perceived risk and apparel online purchase intention. If consumers perceived less risk in shopping online, they felt confident about their judgments, and thus, their purchase intention increased. To increase consumers' purchase intention in apparel online shopping, it is important to identify factors that can reduce perceived risk and increase purchase intention in apparel online shopping.

According to Bettman (1979), consumers search for risk-related information to help them with decision making. Information search often serves as input for the assessment of perceived risk (Conchar, Zinkhan, Peters, & Olavarrieta, 2004). Information searches related to risk can be classified into internal and external information searches. Internal information searches include processes such as scanning information that is stored in memory about risk learning and previous experiences with risk that pertain to the current situation (Brucks, 1985; Punj & Staelin, 1983). When consumers recognize a problem, relevant information from long-term memory is usually used first if a satisfactory solution is known (Engel, Blackwell, & Miniard, 1995). Experience and product/brand knowledge are two common types of internal information that consumers used to reduce risk and make purchase decisions (Brucks, 1985; Engel, et al, 1995). In this study, consumers' experience and one type of brand knowledge, brand image, were included as two aspects of internal information.

## **Experiences**

Experience may be the most frequently used internal information when consumers make a purchase decision. Prior experience acts as a memory schema and influences the perception of a current situation (Alba & Hasher, 1983). Consumers generally learn objective and affective responses to products through direct experiences (Smith, 1993; Smith & Swinyard, 1983). Padgett and Allen (1997) suggested that a consumer's experience includes

the thoughts and feelings that occur during the consumption of product and service. When consumers make a purchase decision, they retrieve knowledge based on previous experience to solve current problems.

When consumers are shopping for apparel, they like to physically examine the products to assess design, color, fabric, and fit (Dahl, Manchandra, & Argo, 2001; Eckman, Damhorst, & Kadolph, 1990; Geissler & Zinkhan, 1998; McKinney, 2000). The inability to examine merchandise before purchase places home shopping at a significant disadvantage. Several studies found that the inability to examine apparel products contributed to the perception of high risk associated with in-home shopping channels (Bhatnagar, Misra, & Rao, 2000; Kwon, Paek, & Arzeni, 1991). Bhatnagar et al. found that consumers considered purchasing apparel products online to be risky because of the uncertainty about color, fabrics, and fit. However, studies showed that if consumers had experience with home shopping, their concern related to the inability to examine products before purchase would be reduced. Sen, Johnson, Stanforth, Lennon, and Moore (2000) found that consumers who had previous experience with purchasing apparel through a television (TV) shopping channel perceived less risk associated with future purchases from this channel. Although consumers could not touch, feel, or try on the product, those who had a positive apparel purchasing experience from TV shopping gained confidence through their shopping experience and had less perceived risk than those who had no apparel purchasing experience with TV shopping. Similarly, Kwon et al. (1991) found that catalog shoppers perceived less risk in purchasing apparel products through catalogs than non-catalog shoppers. Experience also plays an important role in online shopping. Park and Stoel (2005) found that consumers who had an experience with apparel online shopping had less perceived risk in apparel online shopping. These studies showed that consumers' experience with buying apparel products at home through TV, catalogs, or online shopping channels may be an important source of internal information that helped consumers reduce their perceived risk and increase purchase intention in apparel online shopping.

In addition to the experience with catalog, TV and apparel online shopping, experience with brands may be another important aspect of internal information. Experience with a specific brand provides qualitative types of information about the brand, which often leads to unique beliefs about the brand (Wright & Lynch, 1995). Consumers consider more

positive aspects of the brands with which they have previous experience than that of new, not-experienced brands (Muthukrishnan, 1995). Extensive experiences with a brand increase the amount of information about the product attributes of that brand, and this information enhances consumers' confidence in the brand (Heath & Tversky, 1991; Muthukrishnan, 1995; Tan, 1999). These studies support Montgomery and Wernerfelt's (1992) notion that consumers rely on brands to handle risk. In apparel online shopping, when consumers cannot physically examine the product, experience with brands may play an even more important role in their perception of risk and purchase decision. Park and Stoel (2005) found that the more experiences consumers had with a website's brand, the less risk they perceived.

### **Brand Image and Brand-Self Concept Congruity**

Another type of internal information is product/brand knowledge stored in memory, which includes brand image (Engel et al., 1995). According to Timmerman (2001), perceived brand image is a network of meanings stored in memory. The core essence of brand image must stem from the consumer's memory. Although brand image itself is one of external information originally created and provided by company, consumers store brand image in their long-term memory after perceiving the image of the brand in their own way. This perceived brand image becomes internal information that could be used to solve problems in purchase decision process.

According to Blackwell, Miniard, and Engel (2001), a person's social image depends on the product that the person buys and consumes. Where we live, what we drive, the clothing we wear, and music we listen to contribute to our social image that perceived by others because they symbolically represent ourselves to others. Therefore, products that are highly visible and consumed publicly carry more social risk than those that are consumed in private (Kaplan, Szybillo, & Jacoby, 1974). Clothing items are highly visible and are worn in public, and thus, carry a high degree of social risk. Dahl et al. (2001) indicated that the decision of which outfit to wear is determined by the range of impressions that outfit may represent to others and by the probability of the approval or disapproval of others. Because individuals are concerned with how others think about what they wear, apparel products carry a high degree of social risk (Mitchell & Boustani, 1992).



According to McEnally and de Chernatony (1999), consumers use brand image as a device in decision making and the brand becomes a symbol for consumers. Studies showed that brand image was the most important and most frequently used tool to estimate product quality and value in order to reduce consumers' perception of risk, especially when they face uncertainty about the product (Brucks, Zeithaml, & Naylor, 2000; Grewal, Krishnan, Baker, & Borin, 1998; Nandan, 2005). McCracken (1989) indicated that brand image helps an individual express oneself and develop one's self-identities. Consumers prefer products with an image that matches their actual or ideal self-concept (Karande, Zinkhan, & Lum, 1997). It is possible that consumers perceive less risk of buying products from the apparel brand that carries an image consistent with the consumer's self-concept because the likelihood of miss-purchase of a product that does not express his or her identities is lower. Therefore, the congruity between brand image and consumers' self-concept (brand-self image congruity) may help consumers to reduce their perceived risk and increase purchase intention in apparel online purchases.

### **Purpose of the Study**

Retailers' ultimate concern is the consumers' purchase intention because increasing levels of purchase intention may lead to the actual purchase, which is directly related to retailers' sales and profits. Perceived risk has been proposed as one of the most important concepts for understanding how consumers make a purchase decision (Grewal, Gotlieb, & Marmorstein, 1994; Mitchell, 1999) and research findings supported that perceived risk was a significant factor affecting consumers' willingness to purchase (Heijden et al., 2001). Therefore, it is critical for online retailers in the apparel industry to understand consumer's perceived risk and purchase intention so that they can develop effective retail strategies and build long-term relationships with customers.

Among the studies examining apparel online shopping, several studies have examined the relationship between customers' experience with the format of online retailers' web pages and the perception of risk and their purchase intention (Elliot & Fowell, 2000; Stanforth, Lennon, & Moore, 2000; Yoh, 1999). Some researchers also have investigated the relationship between the familiarity with a website's brand and the perceived risk and

purchase intention (Laroche, Kim, & Zhou, 1996; Park & Stoel, 2005). However, the brand familiarity in these studies was measured as consumer's brand knowledge through frequent exposures, such as advertisements, instead of experiences acquired through actual purchase and use of the brands. No studies have examined if the purchase experience and use of a specific brand are related to perceived risk when consumers shop for apparel products online.

When researchers studied the role-of psychological factors in forming brand image, the focus has mainly been on how to match the brand image to the target customers' self-image. The assumption was that consumers would use products to express their actual self-concept or enhance their self-concept towards their ideal self (Evans, 1993; Lewis & Hawksley, 1990). Brand-self image congruity shows whether a consumer believes the brand image is consistent with his/her actual or ideal self-concept. Previous studies indicated that brand-self image congruity could affect consumers' product preferences and their purchase intentions (Ericksen, 1996; Han, 2006). However, no research has examined the effect of brand-self image congruity in apparel online shopping context.

The purposes of the study were to examine (a) the relationships between consumers' experience with apparel catalog/TV shopping and their experience with apparel online shopping, (b) the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand, and (c) the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention in apparel online shopping context. The results of the study could expand the understanding of consumers' apparel online shopping behavior by identifying the roles of experiences and brand-self image congruity in the apparel online shopping context. Based on the findings, suggestions for marketing strategies in apparel online shopping could be provided.

### **Objectives of the Study**

To accomplish research purposes, the following objectives were formulated. The objectives were to determine:

1. the relationship between consumers' extent of the experience with apparel catalog/TV shopping and their extent of the experience with apparel online shopping

2. the relationship between consumers' valence of the experience with apparel catalog/TV shopping and their valence of the experience with apparel online shopping
3. the effect of consumers' experience with apparel online shopping on their experience with a specific brand
4. the effect of brand-self image congruity on consumers' experience with a specific brand
5. the effect of consumers' experience with a specific brand on their perceived risk in a specific brand online
6. the effect of brand-self image congruity on consumers' perceived risk in a specific brand online
7. the effect of consumers' perceived risk in buying a specific brand online on their purchase intention in buying a specific brand online

### **Conceptual Definitions**

Conceptual definitions of independent and independent variables in the study are as below:

1. **Experience with apparel catalog shopping** is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via catalog.
2. **Experience with apparel TV shopping** is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via television.
3. **Experience with apparel online shopping** is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via the Internet.
4. **Experience with a specific brand** is consumers' knowledge of a particular brand obtained from searching, examining, purchasing, and using any apparel product of the brand.
5. **Brand image and self-concept congruity (brand-self image congruity)** is the consistency between the perceived image of a specific brand and consumer's self-image of their ideas, feelings, and thoughts towards themselves.

6. **Perceived risk in buying a specific brand online** is the uncertainty and expected negative consequences that consumers perceive during the decision making process of buying apparel of a particular brand via the Internet.
7. **Purchase intention in buying a specific brand online** is the consumers' predicted behavior while purchasing apparel products of a particular brand via the Internet.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

In this chapter, the literature is reviewed in six sections. The first section includes definitions and an explanation of the dependent and independent variables of the study, as well as how the variables have been measured in previous literatures. The second section is a discussion of characteristics of online shoppers and online shopping. The third section, apparel online shopping, presents the characteristics of apparel online shoppers and the unique characteristics of apparel online shopping. The fourth section, factors related to purchase intention in apparel online shopping, discusses possible variables influencing purchase intention in apparel online shopping. These factors are: (a) experiences, including experiences with catalog, television (TV), and online shopping for apparel products and experiences with brands, (b) brand image and self-concept congruity (i.e., brand-self image congruity), and (c) perceived risk of online shopping. The fifth section reviews the previous literature on purchase intention in apparel online shopping. A summary is provided at the end of the chapter.

#### **Definitions and Measurement of Independent and Dependent Variables of the Study**

This section provides a definition for the following variables in this study, including experience with apparel shopping, experiences with apparel catalog shopping, experience with apparel TV shopping, experience with apparel online shopping, experience with a specific brand, self-brand image congruity, perceived risk, and purchase intention. It also explores how each variable has been measured in previous studies.

## **Experience with Apparel Shopping**

Experience is defined as the fact or state of having been affected by or gained knowledge through direct observation or participation (Merriam-Webster Dictionary, n. d.). Consumers generally learn objective and affective responses to products through direct experiences (Smith, 1993; Smith & Swinyard, 1983). Prior information acts as a memory schema and may influence the perception of a current experience (Alba & Hasher, 1983).

Apparel usually refers to clothing, particularly outer garments (e.g., dress, shirts) (American Heritage Dictionary, n. d.). In a broader sense, apparel products include coverings for the body (e.g., shirts, scarf, belts), the head and face (e.g., hats, caps, glasses, cosmetics), hands (e.g., gloves), and feet (e.g., shoes). Shopping is to make a search and examine goods or services with intent to buy (Merriam-Webster Dictionary, n. d.). In the current study, the definition of experience with apparel shopping is consumers' knowledge of apparel products that cover any part of body obtained from searching, examining, purchasing, and using these products.

Researchers often measure the extent and valence of the experience when measuring experience. The extent of the experience with shopping is usually measured by questions such as how often consumers buy products, how much they bought in capital, and how many items they bought (Klopping & McKinney, 2006; Seock, 2003; Ward, 2001). Klopping and McKinney (2006) measured the extent of experience by asking three questions about how frequently or how many times a week the respondents engaged in online shopping activities on a five-point scale with end points of "Strongly Disagree" and "Strongly Agree." Seock (2003) measured experience by asking five questions, one of which was "Over the past 12 months, about how much did you buy clothes on the Internet?" (p. 205). All five questions were measured on a four-point scale, ranging from "Never" to "A lot." The feelings experienced are called the valence of the experience that usually are measured on scales of favorable/unfavorable, good/bad, positive/negative, happy/not happy, or satisfied/dissatisfied with the experience (Chen & Dubinsky, 2003; Folkes & Patrick, 2003; Keaveney & Parthasarathy, 2001; Mano & Oliver, 1993; Raghurir & Menon, 2005). Chen and Dubinsky (2003) measured the valence of the experience with online shopping by asking three questions, one of which was "When shopping on \_\_\_\_, I have a/an (unpleasant/pleasant) experience." (p. 337). The questions were measured on a five-point scale ranging from

“Strongly Disagree” to “Strongly Agree.” Bruner, Hensel, and James (2005) reported that Mano and Oliver (1993) used 12 questions to measure feelings of experience. One example of the questions was “Owning this \_\_\_ has been a good experience” (Bruner et al., 2005, p. 504-505). These items were measured on a seven-point scale ranging from “Strongly Disagree” to “Strongly Agree.”

### **Experience with Apparel Catalog Shopping**

Catalogs are brochures sent to consumers’ homes to present merchandise and solicit orders (Peter & Olsen, 2005). In the current study, the definition of experience with catalog shopping for apparel products is consumers’ knowledge obtained from searching, examining, purchasing, and using of apparel products via catalog.

Klopping and McKinney (2006) measured experience with catalog shopping by asking how frequently and how many times a week the respondents engaged in the shopping activities, and all items were measured on a five-point Likert-type scale with end points of "strongly agree" and "strongly disagree." Ward (2001) examined consumers’ experiences with catalog shopping by asking whether the respondent has purchased a product from 17 product categories (e.g., apparel/shoes, food, home electronics).

### **Experience with Apparel TV Shopping**

TV shopping includes cable channels dedicated to shopping, infomercials, and direct-response advertising shown on cable and broadcast networks (Peter & Olsen, 2005). In the current study, the definition of experience with TV home shopping for apparel product is consumers’ knowledge obtained from searching, examining, purchasing, and using of apparel products via television.

Park and Lennon (2006) measured experience with television shopping by using the question of "Have you purchased clothing from television shopping programs?" (p. 61) Kaufman-Scarborough and Lindquist (2002) asked respondents to indicate their shopping frequencies in five non-store settings, the Internet, catalogs, TV regular programming, TV infomercials, and TV shopping channels, over the last 12 months by responding "never," "rarely," "a few times a year," "a few times a month," "a few times a week," and "everyday."

## **Experience with Apparel Online Shopping**

Online refers to connection through a computer or telecommunications system (i.e., the Internet) (Merriam-Webster Online, n. d.). Chen, Gillenson, and Sherrell (2002) indicated that online shopping behavior included both product purchasing and product information seeking. In the current study, the definition of experience with apparel online shopping is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via the Internet.

Goldsmith and Goldsmith (2002) examined participants' apparel online shopping experiences by asking whether they had ever purchased any apparel online. Ha and Stoel (2004) asked the question, "During the past six months, how often have you used the Internet to purchase apparel related products (e.g. shoes, accessories, handbags, clothing, hats etc.)?" (p. 381) to measure the experience of apparel online shopping. Respondents were asked to select one of five options: never (1), once or twice a year (2), every few months (3), every month (4), and at least once a week (5). Seock (2003) measured respondents' previous experience with favorite clothing websites by asking questions related to their information search, purchase frequency, and purchase quantity on these websites over the past 12 months. For example, "About how much did you search the Internet for information about clothes you might buy?" "About how much did you buy clothes on the Internet?" and "About how many items of clothing did you buy on the Internet?" (p. 207) Scales used for these questions were never/none, seldom/few, occasionally/some, and a lot. Bruner et al. (2005) reported the three seven-point Likert-type items, which used by Keaveney and Parthasarathy (2001) to measure the valence of online service experiences. The questions were "On the whole, I am/was satisfied with my experience with this/that service," "Overall, my negative experience outweighs/outweighed my positive experience with the service," and "In general, I am/was happy with the service experience" (Bruner et al., 2005, p. 518).

## **Experience with a Specific Brand**

Alba and Hutchinson (1987) defined consumers' brand experience as consumers' knowledge of and familiarity with a brand or brand category. Padgett and Allen (1997) suggested that a consumer's experience includes the thoughts and feelings that occur during product and service consumption. In the current study, experience with a specific brand



refers to consumers' knowledge of a particular brand obtained from searching, examining, purchasing, and using any apparel product of the brand.

Garretson and Niedrich (2004) measured brand experience by asking the frequency of use of a brand. Three seven-point items of never chosen/always chosen, unpreferred/preferred, and rarely used/always used were used to assess this measure. Carpenter, Moore, and Fairhurst (2005) examined participants' experience with three apparel brands by asking the subjects if they had a shopping experience in one of the three selected apparel stores (i.e., Banana Republic, Abercrombie & Fitch, Old Navy) during the past six months with the intent of purchasing a retail branded apparel product for themselves. Bruner et al. (2005) reported that Fitzsimons (2000) and Huffman and Kahn (1998) used six questions to measure consumer's experience with a product after he or she had made a selection among a variety of brands. These items were measured on a seven-point agree/disagree or a ten-point strongly agree/strongly disagree response format. One example of the questions was "I am very happy with the \_\_\_ I purchased" (Bruner et al., 2005, p. 499).

### **Brand Image and Self-Concept Congruity**

Brand image is knowledge and beliefs about the brand, the consequences of brand use, appropriate consumption situations, as well as evaluations, feelings, and emotions associated with the brand (Dobni & Zinkhan, 1990). Timmerman (2001) interpreted brand image as a network of meanings stored in memory. Self-concept can be viewed as the sum total of an individual's ideas, thoughts and feelings about themselves in relation to other objects in a socially determined frame of reference (Onkvisit & Shaw, 1994). It is an individual's perception of one's own abilities, limitations, appearance, and characteristics, including one's own personality. Zinkham and Hong (1991) described self-concept as the knowledge of oneself which includes the driving thrust of other behaviors. In the current study, Onkvisit and Shaw's (1994) definition of self-concept was adopted, which refers to the sum of total image of an individual's ideas, feelings, and thoughts towards oneself in relation to other objects in a socially determined frame of reference. Higgins (1983) proposed that the self can be classified into three categories: actual self, ideal self, and ought self. Higgins defined the actual self is how an individual actually sees oneself; the ideal self is how an

individual would like to be; and the ought self is how an individual feels one should be. The current study included the actual self and ideal self and Higgins' definitions of these two types of self were adopted in the study.

What a consumer buys can be influenced by the image that the consumer has of him/herself because consumers would use products to demonstrate their self-concepts to themselves (Wallendorf & Arnould, 1988; Zinkham & Hong, 1991). Through the purchase and use of products, consumers can define, maintain and enhance their self-concept. Therefore, consumers often buy products or brands that are perceived to be similar to their own self-concept (Graeff, 1996). This phenomenon is often described as product/brand image and self-image congruity or in short "brand-self image congruity" (Sirgy et al., 1997). The brand-self image congruity is defined as the consistency between consumers' perception of the image of a specific brand and consumer's self-image that is the ideas, feelings, and thoughts towards themselves.

Sirgy et al. (1997) developed a method of measuring brand-self image congruity, which measured the brand-self image congruity experience directly rather than indirectly through the comparison of product images and self images. For example, the authors asked a self-brand image congruity question such as "Wearing Reebok shoes in casual situations is consistent with how I see myself" (p. 235), rather than asking two separate questions for product image and self-image. This method can allow subjects to conjure up the product image right at the moment of response rather than through the use of some predetermined images, and thus, capture the congruity experience more directly. Sirgy et al. (1997) compared the predictive validity of the two methods (old and new) in six studies involving different customer groups, products, consumption settings, and dependent variables. Jamal and Goode (2001) studied the impact of self-brand image congruity on brand preference and satisfaction. In the study, the authors measured self-brand image congruity by asking questions such as "Wearing the Cartier brand of precious jewelry at formal occasions is consistent with how I see myself," "People similar to me wear the Cartier brand of precious jewelry at formal occasions," and "Wearing the Cartier brand of precious jewelry at formal occasions reflects who I am." (p. 485). Han (2006) used similar questions to directly measure the self-brand image congruity. The author asked three questions to measure participants' actual self-image and three questions for ideal self-image. For example, "Skiing with

Rossignol poles is consistent with how I see myself” (p. 171) was for the actual self-image question and “Skiing with Rossignol poles is consistent with how I would like to be” (p. 171) was for the ideal self-image question. The scale was ranged from “Strongly Disagree” to “Strongly Agree.”

### **Perceived Risk**

Bauer (1960) first introduced the concept of consumer perceived risk in 1960, defining perceived risk as the uncertainty and consequences of the decision which affects the extent of search and information sought. Since then, the subject of perceived risk has been widely discussed and has led to numerous extended definitions. However, uncertainty and consequence are still the two common elements used to define perceived risk. Uncertainty is related to the identification of buying goals or the process of matching goals with the purchase decision (Cunningham, 1967; Dowling & Staelin, 1994). Consequences may be related to functional, performance or psychological goals, and the money, time, and effort invested to achieve those goals (Bauer, 1960; Cox, 1967; Cunningham, 1967). These early studies defined consequences as losses, but more recent measurement approaches consider a more integrated conceptualization of risk as the expectation and importance of losses (Mowen, 1992; Venkatraman, 1989; Yavas, Riecken, & Babakus 1993). Peter & Olsen (2005) emphasized the expected negative consequences of performing an action and referred perceived risk as uncertainty and the expected negative consequences of making a purchase decision. In the current study, Peter and Olsen’s definition of perceived risk was adopted as the uncertainty and expected negative consequences that consumers perceive during the decision making process of buying apparel of a particular brand via the Internet.

Ueltschy, Krampf, and Yannopoulos (2004) measured perceived risk towards online shopping by using a multi-measure scale which was first developed by Jacoby and Kaplan (1972) and later used and further validated by Murray and Schlacter (1990). This measure of overall perceived consumer risk is made up of six types of risk: financial, performance, physical, psychological, social and time/convenience. Overall perceived consumer risk was calculated as the mean of the six types of risk. Each is measured by a seven point Likert-type scale anchored by improbable (1) and probable (7). In the study by Doolin, Dillon, Thompson, and Corner (2005), perceived risk was also conceptualized as a multidimensional

construct comprising economic risk (e.g., inability to compare price or quality of similar products), product performance risk (e.g., inability to inspect product), security risk (e.g., risk of credit card abuse), and privacy risk (e.g., risk of compromising personal information) of making a poor purchase decision. Park and Stoel (2005) measured perceived risks in online shopping for apparel products by asking a total of 24 questions, containing three dimensions: functional (e.g., It may not be durable when cleaned), social/psychological (e.g., Your friends will think you look funny when you wear it), and economic/financial/privacy risks (e.g., You may feel that you just wasted time shopping via Internet) with a five-point scale ranging from “Strongly Disagree” and “Strongly Agree.”

### **Purchase Intention**

Purchase intention usually refers to a decision plan or intention to buy a particular product or brand (Grossman & Shapiro, 1988). Engel et al. (1995) stated that purchase intention is related to customers' predicted or planned behavior. Kim and Shim (2002) defined purchase intention as the possibility of beliefs and attitudes being converted into acts. Peter and Olsen (2005) proposed that intentions are produced when beliefs about the behavioral consequences of the action and social normative beliefs are considered and integrated to evaluate alternative behaviors and select among them. In the current study, purchase intention refers to the consumers' predicted behavior while purchasing apparel products of a particular brand via the Internet.

In marketing research, many investigators asked the likelihood of future purchase to measure purchase intention (Aaker & Day, 1980; Peterson, 1982; Smith & Swinyard, 1983). Coyle and Thorson (2001) used similar questions such as “It is very likely that I will buy (brand name)” and “I will purchase (brand name) the next time I need a (product)” (p. 71) to measure purchase intention for brands. Brown, Pope, and Voges (2003) asked respondents to rate their online purchase intention for six diverse services or products (i.e., clothing, travel services, automobiles, insurance services, sporting equipment, entertainment tickets) and to state whether or not they had ever made a purchase of any kind via the Internet before. Kim and Kim (2004), in their study of predicting online purchase intentions for clothing products, measured respondents' online purchase intentions as the extent to which respondents were likely to purchase clothes, jewelry, or accessories via the Internet in the next six months on a

seven-point scale (1 = very unlikely; 7 = very likely). Park and Stoel (2005) measured purchase intention in online shopping for apparel products by asking seven questions, one of which was “How likely is it that you will buy the apparel item from the websites that you saw today in the next 12 months?” (p. 176) on a five-point scale ranging from “Very Unlikely” and “Very Likely.”

### **Online Shopping**

Ever since the inception of the World Wide Web (WWW) in the early 1990s, the Internet has increasingly been used for marketing. Internet marketing, defined as the application of the Internet and related digital technologies to achieve marketing objectives (Chaffey, Mayer, Johnston, & Ellis-Chadwick, 2000), has become a tool for firms to gain access to new markets. There are a number of marketing functions to which the Internet can contribute, such as a new medium for advertisement, public relations, customer service, and product distribution (Peterson, Balasubramanian, & Bronnenberg, 1997). Conceptually, the Internet represents an extremely efficient medium for accessing, organizing, and communicating information. Technically, the Internet is a highly decentralized network of computer networks that includes backbone networks, wide area networks, and local area networks. Before 2000, compared to the other Internet marketing mediums such as e-mails, e-newsletters, and search marketing (e.g., Google, Yahoo!), online shopping or business-to-customer (B2C) electronic commerce (e-commerce) lagged in its development. Quelch and Klein (1996) suggested that this lag was partly due to the fact that many companies were not proactively developing their website in an integrated manner to support their marketing activities. However, since 2000 online retail sales have increased continuously at a rapid pace. The fastest growing product categories were: apparel and accessories; computer software; home and garden; toys and hobbies; jewelry and watches; event tickets; furniture; and flowers, greeting products and gifts (Burns, 2006). In 2007, the business-to-consumer e-commerce market grew nearly six times faster than total retail sales. Online retail sales reached \$165.9 billion, an increase of 21.8% from \$136.2 billion in 2006 (Brohan, 2008). According to comScore, Inc., \$29.2 billion was spent online during the holiday season in 2007, marking a 19% gain versus the same period in 2006 (Lipsman, 2008). Mulpuru (2006)

predicted that non-travel online retail revenues would top the quarter-trillion-dollar mark by 2011. The driver of this growth is the active Web shopping households which number roughly eight million.

### **Characteristics of Online Shoppers**

According to the survey by Ernst and Young in late 1990 (Internet shopping, 1998), 64% of online shoppers were between 40 and 64 years of age. Online shoppers in the U.S. were typically well educated with higher income status that 41% of these shoppers held a college degree or higher with an average household income of \$59,000 (Global online retailing, 2000). The article, "Consumer Trends in Online Shopping" (2001) reported in the *Stores* magazine predicted that as the internet has become more ubiquitous, the profile of the online shopper will resemble that of the general population. Studies after 2000 did show that online shoppers could be found in all types of consumer segments, including people of a younger age and lower education, as well as lower income (Weiss, 2001; Swinyard & Smith, 2003). Online shoppers are extremely comfortable with technology and value convenience above all else in the online retail experience (Mulpuru, 2006).

Although the age gap between online and non-online consumers is diminishing, the relationship of age and consumers' intention to purchase online remains unclear. Some studies identified a positive relationship between consumers' age and their likelihood to purchase products online (Stafford, Turan, & Raisinghani, 2004), whereas others reported a negative relationship (Joines, Scherer, & Scheufele, 2003) or no relationship (Rohm & Swaminathan, 2004). Such a discrepancy in research findings might be caused by different classifications of age groups in different studies. For example, Stafford et al. (2004) used a 10-year span, Donthu and Garcia (1999) used a 15-year span, and Rohm and Swaminathan (2004) used a 20-year span to measure participants' age.

Some studies identified a positive relationship between education and the time and money consumers spent online (Liao & Cheung 2001; Susskind 2004); however, most studies found no significant relationship between education and online shopping (Bagchi & Mahmood 2004; Bellman, Lohse, & Johnson, 1999; Donthu & Garcia 1999; Mahmood, Bagchi, & Ford, 2004; Susskind, 2004). It is possible that nowadays, conducting online shopping is a relatively easy task, which does not require a high education. A user interface

system is now very user friendly. It can assist shoppers in navigating the store or in purchasing products, and therefore, minimize the effort needed to perform choice and purchasing tasks (Hoque & Lohse, 1999; Szymanski & Hise, 2000).

Some researchers (Bagchi & Mahmood 2004; Mahmood et al., 2004) speculated that online shoppers may earn more money than traditional store shoppers because the most popular items purchased online (i.e., apparel, books, CDs, holiday and leisure travel, PC hardware, and software) are products that are not a necessity. The demand for these products usually increases as income increases. However, no study was found that actually compared the income of online and offline shoppers.

Traditionally, shopping is more favored by women than men. It is women who are usually in charge of household shopping and hold more positive attitudes towards the traditional store and catalogue shopping than men do (Alreck & Settle, 2002). However, the new shopping channel provided by the Internet seems to result in a different gender pattern. Men are more convenience-oriented and less motivated by social interaction than women (Swaminathan, Lepkowska-White, & Rao, 1999). Most studies have shown that men are more likely than woman to purchase products and/or services from the Internet (Korgaonkar & Wolin, 1999; Van Slyke, Comunale, & Belanger, 2002), make more purchases (Stafford, et al, 2004) and spend more money online (Susskind, 2004). The function of shopping online as a social activity is weak compared with shopping in traditional stores. Women did not find online shopping as practical and convenient as their male counterparts (Rodgers & Harris, 2003). Rodgers and Harris (2003) found that the lack of face-to-face interaction with sales associates online was one of the reasons that women were less interested in shopping online.

### **Characteristics of Online Shopping**

Many researches have studied the characteristics of online shopping (Jarvenpaa & Todd, 1997; Liu & Arnett, 2000; Lohse & Spiller, 1998; Szymanski & Hise, 2000), and these attributes can be classified into six categories: merchandising; competitive price and price sensitivity; navigation; customer service; convenience; and security and risk.

## Merchandising

Jarvenpaa and Todd (1997) classified the product-related attributes of assortment, variety, and product information as components of merchandising. A rich product assortment can increase the probability of meeting and satisfying consumer needs. However, Szymanski and Hise (2000) indicated that not all the products available in the merchant's catalog or physical store were available online. This condition may increase the frustration of online shoppers. For example, if a product listed in the merchant's catalog is not available online, the consumer needs to make a trip to the physical store or wait until the product is available online.

Product information is another important characteristic related to merchandising. According to Lohse and Spiller (1998), big online stores were less effective than small stores at converting the site traffic into sales because they did not provide sufficient product information to help consumers to find the products they desired. An online store should provide price and product related information (e.g., price comparison, product testimonials, product demonstrations) to help customers reduce the search cost (Bakos, 1997). Extensive and high quality information available online can also lead to better buying decisions (Alba et al., 1997) and higher consumer satisfaction (Peterson et al., 1997). Satisfaction with subsequent purchases often depends on the degree to which the product and service information can be employed by the consumers. According to Kolesar and Galbraith (2000), the success of the online stores is determined by the ability to tailor their information to meet the consumers' needs, and no one type of information is uniformly valued by all consumers. Wolfenbarger and Gilly (2001) further indicated that companies should consider the availability of information not only as information provision but also as the personalization of online stores for retaining the customers.

## Competitive Price and Price Sensitivity

Researchers have studied the role of the prices at the online stores (West et al., 1999; Haubl & Trifts, 2000). One barrier to finding the lowest price for an item in the physical store has always been the lack of the consumer information and the cost for consumers to acquire this information. The online consumer, however, is armed with information about prices charged by different retailers, particularly for the same product, and therefore will be



able to make the most economical decision. Brynjolfsson and Smith (2000) found that the prices online were 8% to 15% lower than the prices for comparable products in the physical stores. This might be because of lower direct costs to supply the product (i.e., no rent, lower or centralized inventory) and greater price competition online. Given that the same product is being offered from different online stores, it would be easy to envision the customer selecting the lowest cost providers. The visibility of the prices as a comparison variable across the online stores puts greater price pressure on each of the online stores. However, Brynjolfsson and Smith (2000) pointed out that just because a lower price is being charged on the Internet does not mean that there is more price sensitivity. Price may play a lesser role on the Internet because online consumers can easily access and obtain product information on which to base a choice (Lynch & Ariely, 2000). An informed selection often leads to a higher level of post-purchase satisfaction, thereby increasing levels of loyalty. This increased loyalty will be reflected in a lower level of price sensitivity. Alba and Hutchinson (1987) also indicated that price sensitivity is lower online than in the physical stores when the non-price attributes, such as product image or quality attributes, are of a greater importance and when there is more product differences among the choices. When the products are relatively comparable, the price will play a greater role.

### Navigation

Attributes such as online store layout, organization features, and ease of use are considered factors related to navigation. The user interface of an online store influences the experience of the consumer interacting with the retailer's product or service offering (Griffith, Krampf, & Palmer, 2001). Therefore, a well-designed user interface system may reduce consumers' cost of searching and the time required for information processing. A well designed user interface system can minimize the effort needed to perform choice and purchasing tasks (Hoque & Lohse, 1999). Online shopping is considered pleasurable and satisfying to the consumer when the retailer sites are fast, uncluttered, and easy-to-navigate (Szymanski & Hise, 2000). Uncluttered and easy-to-navigate sites economize the shopping time and cognitive effort that consumers spend figuring out how to shop effectively online. General help functions such as a product search engine might assist users in finding a particular topic, a site map in navigating the store, or a shopping cart in purchasing products.

## Customer Service

Customers want careful, continuous, and useful communication across geographic barriers (Lohse & Spiller, 1998). These attributes are frequently identified as the salient dimension to determine store choice behavior in both online and physical stores (Jarvenpaa & Todd, 1997; Kolesar & Galbraith, 2000). Customer service includes salesperson service for merchandise selection, contact information, answers to Frequently Asked Questions (FAQ), information about the shipping and handling costs, credit, return, and payment policies. Cho and Hiltz (2003) found that the major cause of customer complaints, in both online and physical shopping environments, was service failure; however, the incidence was higher in the online shopping environment. The primary issue of the online customer complaints was procedural justice, such as delivery and response time. Rust, Subramanian, and Wells' (1992) suggestion that incorporating a complaint management system is the first step for minimizing the customer defection in an online store because a complaint management system can make filing a complaint easy and hassle free. Swift, Ross, and Omachonu (1998) also suggested that online stores should provide a variety of communication channels, including telephone and email, to allow customers to report service failures.

## Convenience

Consumer behavior scholars have often defined convenience in terms of saving time and effort, including physical and mental effort (Crask & Fox, 1987). In addition, accessibility of the store (i.e., location and hours of availability) has been included in some conceptualizations of convenience (Corby, 1994). Consumers compelled by time poverty often search for time saving products or services (de Kare-Silver, 1998), wish to buy what they want at any time, and desire "travel free" shopping (Chaffey et al., 2000; Wolfingbarger & Gilly, 2001). Thus, attributes of convenience, long considered important to consumers, are now found in new forms in online shopping. Web-based purchasing not only provides time savings and accessibility, but it also reduces overall buying effort because online shoppers do not need to conform to the social conventions of grooming and acceptable behavior (Wolfingbarger & Gilly, 2001). For example, consumers can shop in their underwear in their

bedroom. Shopping online provides buyers an environment that is comfortable and personalized for them such as their own home.

### Security and Risk

Security of online transactions continues to dominate the discussions about electronic commerce (Elliot & Fowell, 2000; Szymanski & Hise, 2000; Liao & Cheung, 2001). Consumers are concerned about disclosing their private and financial information. Much of the risk perceived in online shopping derives from the relative novelty of the Internet as a remote purchasing method, as well as the publicity surrounding potential problems with privacy and security. Several researchers indicated that the experience gained through simple use of the Internet for non-purchase purposes, such as information gathering and noncommercial communication, will lead the consumers to discover that the privacy and the security risks often are exaggerated (Elliot & Fowell, 2000; Liao & Cheung, 2001). For example, concerns over cookies (i.e., a small text file placed on consumer's hard drive by a website server to identify the repeat visitors and personalize the online shopping experience) could dissipate as the consumers learn that the cookies cannot access the data other than those already provided to the website by the consumer (Report to Congress, 2000). Nowadays, most online stores provide a personal information privacy protection policy and guarantee the transaction security; however, they do not offer detailed information on how the transaction and personal data are secured (Elliot & Fowell, 2000).

### **Apparel Online Shopping**

Electronic retailing continues to grow in size and importance as increasing numbers of consumers buy online, and apparel purchases represent a significant portion of online purchasing (Burns, 2006). In early studies, researchers argued that the WWW is neither a mature nor an effective shopping channel for complex products that need to be touched or felt such as apparel (Ainscough & Luckett, 1996; Blair & Shimp, 1992). Wan (2001) indicated that buying apparel products from online stores is inferior in channel attributes (e.g., product evaluation, interaction with salesperson) and transaction risk (e.g., security of credit card information) to buying them in physical stores. However, the perception of

inferiority did not stop the growth in apparel online shopping. In 2000, 60% of the Internet users reported that they shopped online for clothing. Among these apparel online shoppers, 41% purchased clothing at least once a month and 40% expected to purchase more clothing online in the future (Pastore, 2000). In 2001, Seckler (2001) reported that apparel was ranked fourth among product categories frequently purchased through the Internet. According to Handford (2005), consumers spent \$23.2 billion online during the holiday season in 2004, up 25% from a year earlier, and the largest amount spent was on apparel, accounting for 16% of the total online revenue during the period. In 2005, apparel and accessories was one of the fastest-growing categories, with a 36% gain over 2004 totals (Burns, 2006). In 2006, online shoppers spent more money on apparel than on computers for the first time and became the largest sales category in online shopping (Mui, 2007). Consumers spent \$18.3 billion on clothes, accessories and shoes in 2006, up 61% from 2005. During the holiday season in 2007, apparel and accessories ranked the top five fastest growing categories (Brohan, 2008). According to The State of Retailing Online 2008, the 11th annual Shop.org study conducted by Forrester Research, Inc., apparel was expected to be the one of three largest sales categories in 2008 (Sullivan, 2008). Statistics show that shoppers have no problem with buying clothes and other items online, including shoes and bags (Burns, 2006).

### **Characteristics of Apparel Online Shoppers**

Limited studies have investigated the demographics of apparel online shoppers. Kim and Forsythe (2007) used the U.S. national sample of online shopper and found that 52% of apparel online shoppers were male. About 57% of participants purchased apparel products online about one to four times in six months, and 59% of participants spent less than \$300 on apparel products in six months. Smith (2008) reported that for e-retailers, men were more desirable shoppers than women because they made purchases online regularly, spent more money on luxury and apparel products, and returned the ordered items fewer times.

Many researches found that the characteristics of online customers may not be the same as the characteristics of non-online customers (Eastlick & Lotz, 1999; Goldsmith & McGregor, 2000; Kanu, Tang, & Ghose, 2003; Limayem, Khalifa, & Frini, 2000). For example, Kanu et al. (2003) found significant differences among the characteristics of three different types of shoppers: traditional shoppers (i.e., shoppers who purchased products from

brick and mortar store only), on-off shoppers (i.e., shoppers who liked to surf the Internet and collected online information but prefer to shop offline), and online shoppers (i.e., shoppers who liked to surf the Internet, collected online information, and shop online). Traditional shoppers did not surf the Internet for comparative information, neither did they look for bargains over the Internet. Although they may come from all different age groups, a higher proportion of this group of shoppers was around 40 to 49 years old. On-off shoppers enjoyed looking for advertisements, were frequent users of bookmarks, and used the same search engine on a regular basis. They were experienced in surfing and often looked for best deals. Demographically, a person in this segment was likely to be single and in the younger age group of 15 to 24 years old. Online shoppers were also in the age group of 15 to 24 years old; however, compared to on-off shoppers, they were more likely to be married. They loved banner advertisements and clicked on them often. They also looked out for promotional offers and had good navigation expertise and online purchase experience. Seock and Chen-Yu (2007) examined college students ages 18 to 22 and found three different shopping orientation groups in apparel online shopping: hesitant in-home shoppers (i.e., shoppers who had lowest tendency in in-home shopping), practical clothing shoppers (i.e., shoppers who had a fairly high tendency in in-home shopping), and involved clothing shoppers (i.e., shopper who had the highest tendency in in-home shopping). The authors identified significant differences in perceptions of the importance of website attributes among the three different shoppers. Compared to the hesitant in-home shoppers, involved clothing shoppers perceived the customer service and auditory experience/comparison shopping features of websites as being more important. Involved clothing shoppers also put more importance on navigation features of websites compared to practical clothing shoppers and hesitant in-home shoppers.

### **Characteristics of Apparel Online Shopping**

When making purchase decisions for apparel products, consumers consider not only the sensory or aesthetic features (e.g. color, texture) of the product, but also how the product will look on the consumer's body (Eckman, Damhorst, & Kadolph, 1990; Geissler & Zinkhan, 1998) and how the appearance will vary when several products are worn together (McKinney, 2000). To provide such information, an increasing number of apparel websites

(e.g., Guess, Lands' End) have incorporated image interactivity to provide visual sensory information about the interactions of products and products with the body. These websites have developed a user friendly interface where a customer uploads his/her body measurements to construct a three-dimensional model for "virtual wearer trials" (Stylios, Han, & Wan, 2001). This technology allows consumers to see how each product they select would look or how several products would look if worn together on a specified body form. For example, Guess.com offers a "mix and match" image interactivity function that enables online shoppers to coordinate an apparel ensemble on the screen. Lanebryant.com has incorporated the My Virtual Model "dressing room" function that allows the customer to create a model by selecting body features, facial features, and hair features similar to those of the customer. The model's three-dimensional image can be texture mapped in Lane Bryant products and rotated to view front, back, and side images of the product on the body. The products can then be purchased in a few easy steps. This technology has been reported to attract customers, increase sales, and decrease the number of returns (My Virtual Model TM, 2001).

### **Factors Related to Purchase Intention in Apparel Online Shopping**

Although many technologies have been applied to online shopping for apparel products to enhance the sensory or aesthetic features of the product, consumers still have difficulties in buying apparel products online due to the lack of clear and fundamental information such as actual color, fit, and fabric texture of the garment (Ainscough & Luckett, 1996; Blair & Shimp, 1992). Therefore, consumers often find themselves in a situation of decision ambiguity (Muthukrishnan, 1995). Ellsberg (1961) suggested that the degree of ambiguity depends on the amount, type, and reality of information. This proposition is consistent with several studies that described ambiguity as being caused by missing information that is relevant (Camerer & Weber, 1992; Frisch & Baron, 1988; Heath & Tversky, 1991). To reduce ambiguity, consumers often rely on memory of previous experiences (e.g., experiences with various shopping channels, experiences with apparel brands) and product knowledge (e.g., the perception of the congruity between brand image and self image) to fill the gap of missing information when they make a purchase decision

(Blackwell et al., 2001). In addition to previous shopping experiences and brand-self image congruity, perceived risk in buying products of apparel brands online was also a possible factor related to consumers' purchase intention in buying products of apparel brands online. Each factor is addressed in the following sections:

## **Experiences**

Direct experiences are generally considered as an integral part of how consumers learn objective and affective responses to products (Smith, 1993; Smith & Swinyard, 1983). Alba and Hasher (1983) suggested that memory is an active constructive process where information is acquired, stored, and then retrieved for use in decision making. Prior information acts as a memory schema and influences the perception of a current experience. According to Chen and Dubinsky (2003), valence of experience was defined as a consumer's emotional or attitudinal state. Moods, feelings, and emotions from experience are as important as the extent of experience to consumers (Chen & Dubinsky, 2003; Pham, 1998).

The choice of retail formats that is available to today's consumer has become more diverse. The recent evolution in retailing has involved a shift towards in-home shopping. While catalog and TV shopping are fairly established within in-home shopping, shopping via the Internet has now become the growing trend. Characteristics and benefits of the three in-home shopping channels are discussed in the following section.

### Experience with Apparel Catalog Shopping

Catalogs are brochures sent to consumers' homes to present merchandise and solicit orders (Peter & Olsen, 2005). Catalog shopping became popular in 1960s (Naimark, 1965) and retailers in catalog merchandising of apparel products experienced rapid sales growth in late 1980s (Jasper & Lan, 1992). Catalog was the primary mechanism that enabled the point-of-purchase to shift away from the brick-and-mortar store to home and the major catalog retailers made efforts to merit the confidence of consumers by guaranteeing merchandise unconditionally, by providing service facilities, and by detailed, accurate descriptions of products and services (Naimark, 1965).

Advantages of catalog shopping include the convenience of shopping, buying at any time of day, and providing a merchandise assortment broader than what is available locally.

The primary motivation for catalog shopping is to reduce the time costs and hassles associated with information search, travel, and in-store shopping. Catalog shoppers are often viewed as convenience oriented (Gehrt & Carter, 1992; Jasper & Lan, 1992) and seeking speed and ease of shopping through this medium (Settle, Alreck, & McCorkle, 1994). Jasper and Lan (1992) found that the frequent catalog shoppers tended to be older and better educated than infrequent catalog shoppers. They were also more likely to engage in inactive pursuits rather than sports activities and were more likely to perceive convenience as an important factor in their decisions to shop from catalogs than were infrequent catalog shoppers.

### Experience with Apparel TV Shopping

TV shopping includes cable channels dedicated to shopping, infomercials, and direct-response advertising shown on cable and broadcast networks (Peter & Olsen, 2005). TV shopping has become strong during the 1990s, as intelligent telecommunication systems appeared on the market, TV networks were privatized or deregulated, and videotex networks became increasingly available to private users (Linke, 1992). Similar to catalog shopping, TV shopping affords consumers the opportunity to experience convenience through reduced shopping costs and physical effort (Lim & Dubinsky, 2004).

According to Stanforth et al. (2000), even though shoppers were unable to touch, feel, or try on the garment, those who had a positive apparel purchasing experience from TV shopping channels did not perceive it to be as risky as those who had no apparel purchasing experience from the same venue. Their confidence increased with experience. A distinct feature of TV shopping over catalog shopping is the role of the host/hostess. TV shoppers may have seen TV shopping as a form of entertainment and they generally enjoyed listening to the host/hostess and seeing what other consumers were buying. The entertainment aspect of TV shopping appears to be an important factor for senior citizens (USA Today Magazine, 1997). According to Harden (1996), elderly consumers watched more TV shopping programs compared to younger consumers to reduce loneliness. The older people viewed TV shopping as more advantageous than younger people (Harden, 1996). Stanforth et al. (2000) also found that shoppers who purchased apparel from TV shopping programs were likely to be older with an average age of nearly 50, than those who did not.



## Experience with Apparel Online Shopping

In an e-commerce setting, consumers and e-retailers communicate through automated interfaces resulting in no direct contact with the products and personnel. By eliminating the costs of renting store spaces and decreasing the human service provided, e-retailers can lower transaction costs. However, some companies misunderstand or overuse the self-service feature of e-retailing and assume that online customers could help themselves finding product or service they need (Moon & Frei, 2000). This assumption often causes customers frustration. Moon and Frei found that self-service sites were more likely to leave customers frustrated and annoyed than sites that provided assistance, such as information regarding product availability in stock, help functions in product ordering, and product suggestions customized from previous purchases.

Chen and Dubinsky (2003) identified three important factors to incorporate when creating a shopping website that fosters a favorable purchase experience. They are: (a) relevant information, (b) ease of use, and (c) customer service. The Web has become one of the most important tools for an information search (Spink, Bateman, & Jansen, 1999). Consumers can enjoy rapid access to information about products, make price comparisons across competing offerings, and find more unusual products (Vijayasathy & Jones, 2000). Seeking quick access to low-prices, information has become one of the important benefits to online shoppers (Korgaonkar & Wolin, 1999). Consumers, however, perceive only relevant information to be useful and valuable. According to Jacoby (1984), consumers will suffer from information overload if too much irrelevant (or even relevant) information or too many options are provided. The information search will lead to time and energy cost; therefore, the shopping experience will likely be perceived to be unpleasant if such efforts are conceived to be excessive. Likewise, Moon and Frei (2000) argued that although customers like having choices, they do not want too many. Therefore, to create a favorable purchase experience e-retailers need to provide relevant and useful information.

Another important factor in creating a shopping website that fosters a favorable experience is ease of use. Coupey (1994) and Garbarino and Edell (1997) suggested that a task that requires more cognitive effort to evaluate can lead to more negative affect, especially when the information displayed is not readily comprehensible. Analogous to a physical store with a poor layout and store environment, an unfriendly online user interface

may lead consumers to a feeling of confusion, a loss of control in the interaction, and negative feelings about the online shopping experience. These negative feelings could result in their abandoning the purchase process or moving to an alternate website that requires less effort in processing and evaluating. An ideal human and Web interaction, on the other hand, will lead to positive consequences, such as a good mood, longer staying time, and more exploratory behavior (Novak, Hoffman, & Yung, 2000). Nel, Niekerk, Berthon, and Davies (1999) suggested that a successful human interaction with a website should satisfy four dimensions. When surfing the Web, users should have a sense of control over the interaction, focused attention, aroused curiosity, and intrinsic interest in the interaction. Thus, a successful website should allow consumers to have quick access to useful information, which will simplify the purchasing procedure, and thus generate a shopping experience that consumers consider favorable.

The third important factor is customer service. Customers usually expect additional services to support the products or services they buy and use (Clemmer, 1990). However, customer service is significantly different in an e-commerce marketplace relative to its traditional store counterpart. The technology enables consumers to fulfill the purchase process generally without any direct interaction with e-commerce employees (Meater, Ostrom, Roundtree, & Bitner, 2000). Online customer service is received mainly through the means of access offered by the website (Griffith & Krampf, 1998). For example, online customer service is often judged by whether or not there are e-mail addresses linked from the site, the telephone number of a customer service agent is available, and the customer service is offered 24 hours a day. Aberg and Shahmehri (2000) found that online shoppers preferred human interaction with E-commerce. They would shop online more frequently if they received immediate response to their questions.

Eastlick and Lotz (1999) identified TV shopping as one of antecedents of intention to shop online, implying that the earliest online buyers might be users of TV shopping media. More researchers found that a catalog shopper who had a previous experience with shopping from home was a significant predictor of online shopping (Bellman, Lohse, & Johnson, 1999; Goldsmith & Flynn, 2004; Schoenbachler & Gordon, 2002; Ward, 2001). Beaudry (1999) identified two characteristics that online and catalog shopping in common. One is that apparel product was one of the most frequently purchased categories via both catalog and

online and the other is that women did the majority of these purchases. Ward (2001) examined consumer substitution behavior among three distribution channels (i.e., traditional retail, catalog shopping, online shopping) and found consumers considered online shopping and catalog shopping to be closer substitutes than any other pair of channels. According to Ward, both catalog and online shopping help consumers reduce the need for product search. Both shopping channels rely on photographic images or descriptions of the product being sold rather than direct consumers' contact with the product. Both shopping channels require a certain degree of customer familiarity with credit card transaction because online or catalog purchase typically involve payments by credit card. Kloppping and McKinney (2006) also found that the online shopping task was most similar to catalog shopping. Goldsmith and Flynn (2005) examined the effects of experiences with shopping from brick-and-mortar stores, catalogs, and online on the intention to shop online. Results showed that consumers who bought more apparel via one shopping channel also bought more via the other two channels, but this association was higher between catalog and online shopping than for stores. The experience that a consumer gained in the catalog shopping might help him or her to be comfortable in adopting online shopping.

Many researchers found that consumers' previous online shopping experiences had a direct impact on online shopping intentions (Eastlick & Lotz, 1999; Shim, Eastlick, Lotz, & Warrington, 2001; Weber & Roehl, 1999). According to Elliot and Fowell (2000), consumer experience with online shopping is what drives the growth of online shopping. Previous experience with online shopping becomes a knowledge retrieved from the memory that a consumer may use to make a purchase decision online in the future. Researchers found that consumers evaluated their online shopping experiences in terms of perceptions about product information, forms of payment, delivery terms, services offered, risk involved, privacy, security, personalization, visual appeal, navigation, entertainment, and enjoyment (Burke, 2002; Mathwick, Malhotra, & Rigdon, 2001; Parasuraman & Zinkhan, 2002). Shim et al. (2001) examined the role of intention to search and online pre-purchase intentions by using a sample of 2,000 U. S. households with personal computers and found a significant direct relationship between the online shopping experience and online shopping intention. They found that if previous online shopping experiences were judged negatively, consumers were reluctant to engage in online shopping in the future. If these past experiences resulted in

satisfactory outcomes and were evaluated positively, they were more likely to lead consumers to continue to shop on the Internet. This study provided support for the argument suggested by Weber and Roehl (1999), indicating that providing satisfying online shopping experiences to consumers is an important factor for turning existing online shoppers into repeat shoppers. Consumers' previous online shopping experiences also have a significant relationship with apparel online shopping intention. Yoh (1999) found that consumers who had more previous experience with the Internet had more positive beliefs and attitudes about apparel online shopping compared to those who had less previous experience with the internet, and these beliefs and attitudes positively influenced intention to purchase apparel online. Experience with online shopping was found to correlate positively with consumers' likelihood to shop online. The more experienced consumers were with online shopping and the more satisfied they were with past online transaction experiences, the higher their purchase amount, the more likely they were to be repeated purchasers (Pires, Stanton, & Eckford, 2004; Yang & Lester, 2004) and the lower the likelihood of them aborting an intended online transaction (Cho, 2004).

The consumers' ability to examine merchandise before purchasing online is substantially limited. For products such as clothing, jewelry or accessories, which are experienced through many senses (e.g. touch, sight, smell), online shopping is at a significant disadvantage. To overcome the inability to appeal to a wide range of senses, website design (e.g., background colors, fonts, images, logos, shopping procedures) become the apparel e-retailers' emphases (Harrison-Walker, 2002; Srinivasan, Lilien, & Rangaswamy, 2002). Many e-retailers of fashion sites have attempted to capitalize on the advanced unique virtual shopping environment using electronic dressing rooms (e.g., [www.landsend.com](http://www.landsend.com)) and fashion-conscious virtual personal shoppers (e.g., [www.saksfifthavenue.com](http://www.saksfifthavenue.com)) to guide users in searching and purchasing apparel products. Then and DeLong (1999) suggested three important visual aspects for successful apparel websites: (a) images of the online product in its closest representation of end use, (b) displays in conjunction with similar items, and (c) views from various angles such as front and back.

Several apparel researchers examined the relationship between consumers' experiences with apparel online shopping and their future apparel online shopping intention. Seock (2003) examined college students in ages 18 to 22 and found an indirect relationship

between apparel online shopping experiences and intentions to purchase online. The author found that previous apparel online shopping experiences had a significant relationship with attitudes toward favorite apparel websites, and the attitudes were positively related to intentions to purchase from the website. Park and Stoel (2005) also examined college students' apparel online purchase intentions and found that consumers who had an experience in purchasing apparel online had a higher purchase intention in apparel online shopping.

### Experience with Brands

Seetharaman, Nadzir, and Gunalan (2001) defined a brand as “an asset that does not have physical existence and the value of which cannot be determined exactly unless it becomes the subject of a specific business transaction of sale and acquisition” (p. 243). McEnally and de Chernatony (1999) described the concepts of brand in terms of six stages. In the first stage, goods are treated as commodities and most are unbranded. Producers make little effort to distinguish or brand their goods, and therefore, consumers perceive goods as utilitarian. In the second stage, competitive pressures stimulate producers to differentiate their goods from those of other manufacturers. Differentiation is achieved primarily through changes in physical product attributes. Consumers begin to use brand names based on their image of the brand as a device in decision making. By the third stage, differentiation among brands on rational and functional attributes becomes exceedingly difficult as many producers make the same claim. Therefore, marketers begin to give their brands personalities. The marketer injects emotion into the consumer's learning and valuing process to bring the brand closer to the consumer through an emotional bond. In the fourth stage, the brand becomes a symbol for consumers. For example, Banana Republic is a symbol of sophisticated young professionals, while Abercrombie and Fitch is a symbol of casual and sexy youth. In the fifth stage, the brand has a complex identity, and the brand represents the company. The company must be integrated all of their tools to communicate its brand identity. For example, Banana Republic introduced the movie, “Memoirs of a Geisha,” on its online store in 2005. The company promoted limited editions of a photography book showcasing the artistry of the film and hosted a sweepstakes of Banana Republic-Memoirs of a Geisha. In addition, Banana Republic offered a limited edition of a kimono-style apparel collection that was inspired by

the film, and the collection was available online and at selected stores only. In the sixth stage, the brand is aligned with ethical, social or political issues. Consumers commit to the brands that support the issues that are important to the consumer. By purchasing from and committing to the brand, consumers express the same ethical, social, or political point of view as the brand.

An online brand experience encompasses almost all the interactions between the customer and the brand in the virtual space. Dayal, Landesberg, and Zeisser (2000) highlighted the significance of the relationship between an online customer experience and the brand, indicating that “[on] the World Wide Web, the brand is the experience and the experience is the brand” (p.42). Because consumer experiences are crucial in building an online brand, it is important for marketers to become buyer-centric and monitor all facets of brand interactions with consumers. Pine and Gilmore (1999) argued that experiences represent an economic value that had been largely unrecognized. According to these authors, there is a transition from an industrial economy through a service economy to what they call an “experience economy.” Pine and Gilmore provided a model to facilitate the concept of experience, which is from the customers’ participation to the connection that unites the customer with the event or with the performance.

Experiences with a specific brand provide qualitative types of information about the brand, which often lead to unique beliefs about the brand (Wright & Lynch, 1995). Muthukrishnan (1995) indicated that consumers would consider more positive aspects of the brands with which they had previous experience than that of new, un-experienced brands. Smith and Swinyard (1983) found that when the product attributes of different brands were not comparable, consumers would attach higher validity to judgments of the brand with which they had direct experience. These results were consistent with the study conducted by Sen and Johnson (1997) who found that familiarity resulting from the possession of a brand could lead to a positive evaluation of the brand. In addition to creating a positive attitude toward the brand with previous experience, Alba, Marmorstein, and Chattopadhyay (1992) found that memory of previous experiences with a brand would decay less rapidly than the memory of a product claim regarding a new brand. If consumers had a previous experience with a brand, the beliefs about the brand remained longer in their memory than that about a

new brand. Therefore, these studies suggest that creating a good online brand experience for customers is an important prerequisite for brand loyalty.

Although brand presentation and advertisements have the most influence on shaping the brand image of new customers who have had little or no direct experience with the company's product, as consumers experience the company's product these experiences become the primary influence on shaping consumers' perception of the brand image (Berry, 2000). Berry indicated that customers' experience-based beliefs are powerful. If consumers' experiences differ from the advertising message, consumers will believe their experiences and not the advertising. Rowley (2004) also emphasized the importance of brand experience in online shopping, indicating that brand image is formed not just by a product and its attributes, or even values, but by the total experience that consumers associate with the brand. Consistent with these propositions, O'Loughlin, Szmigin, and Turnbull (2004) found that brand experience was a significant factor in shaping and building meaningful and lasting brand image and promoting customer retention.

### **Brand Image and Self-Concept Congruity**

Gardner and Levy (1955) proposed that brands may have an overall character or personality that could be more important to the consumer than the mere technical facts about the product. Keller (1993) suggested that brand personality often serves as a symbolic or self-expressive function. Brand personality has received considerable attention from marketing scholars because it increases consumer preference and usage (Sirgy, 1982) and levels of trust and loyalty (Aaker, 1997). Products, even such everyday items as household appliances, take on personalities of their own in consumers' minds (Triplett, 1994). For example, research found that consumers assigned certain personalities to appliances made by Whirlpool (e., gentle, sensitive, quiet), and others to those made by KitchenAid (e.g., sophisticated, glamorous, wealthy) (Triplett, 1994). Brand image plays an important role in brand personality. According to Herzog (1963), brand image is the sum total of impressions that consumers receive from many sources, all of which combine to form a brand personality. Kotler (1988) defined brand image as "the set of beliefs held about a particular brand" (p. 197). According to Dobni and Zinkhan (1990), brand image is knowledge and beliefs about the brand, the consequences of brand use, appropriate consumption situations, as well as

evaluations, feelings, and emotions associated with the brand. Similarly, Ditcher (1985) regarded brand image as describing not individual traits of the product, but the total impression in the minds of the consumers.

What a consumer buys can be influenced by the image that the consumer has or would like to portray because consumers would use products to demonstrate their self-concepts (Wallendorf & Arnould, 1988; Zinkham & Hong, 1991). Self-concept can be viewed as the sum total of an individual's ideas, thoughts and feelings about themselves in relation to other objects in a socially determined frame of reference (Onkvisit & Shaw, 1994). A person's self-concept is developed over time, and is based on how one thinks of one's self, as well as how other people think of the person and react to them. Grubb and Grathwohl (1967) postulated that self-concept is formed in an interaction process between an individual and others, and that the individual would strive for self-enhancement in the interaction process. It is an individual's perception of one's own abilities, limitations, appearance, and characteristics, including one's own personality. Schouten (1991) suggested that self-concept encompasses a variety of constructs such as role identities, personal attributes, relationships, fantasies, possessions, and other symbols that individuals use for the purpose of self-creation and self-understanding.

Levy (1959) asserted that people do not buy products just for what they do, but also for what the product means; thus, whose meaning can be used to create and define a consumer's self-concept. McCracken's (1988) model of meaning transfer proposed that such meaning originates in the culturally constituted world, moving into goods via the fashion system, word of mouth, reference groups, sub-cultural groups, celebrities, and the media. Meaning also moves from goods to consumers, as consumers construct themselves through their choices based on congruency between product image and self-image. Thus, the meaning and value of a product is not just its ability to express the self, but also its role in helping consumers create and build their self-identities (McCracken, 1989). Products offer a vehicle for self-expression. Consequently, consumers would express themselves in brand choices and prefer products and brands that match their self-concept (Karande, Zinkhan, & Lum, 1997). Through the purchase and use of products, consumers can define, maintain and enhance their self-concept. Therefore, consumers often buy products or brands that are perceived to be similar to their own self-concept (Graeff, 1996). This phenomenon is often described as self-



image and product image congruity or in short "self-image congruity" (Sirgy et al., 1997). Consumers strive to move their real self-concept towards their ideal self by buying certain products because products that consumers consider having ideal image can enhance the attainment of their ideal self, satisfy their real self, and attain a desired role in life (Evans, 1993; Lewis & Hawksley, 1990; Sirgy, Samli, Bahn, & Varvogli, 1989).

Positive relationship between store/product image and self-concept has been demonstrated in research using retail stores and a variety of consumer products. Jamal and Goode (2001) examined the effect of brand-self image congruity on brand preference and satisfaction in the precious jewelry market in the United Kingdom and found that the brand-self image congruity was a very strong predictor of a consumer's brand preference and a good predictor of consumer satisfaction. Han (2006) also investigated the impact of brand-self image congruity and functional congruity on brand preference in ski products. The author also found that brand-self image congruity had a significant impact on brand preference. O'Cass and Lim (2001) investigated the influence of brand associations on brand preference and purchase intention, and they found that a significant relationship not only existed between brand-self image congruity and brand preference, but also between brand-self image congruity and purchase intention. Ericksen (1996) also used the congruity between product image and self-image to predict consumers' purchase intention and found that a relationship existed between self-image congruity and intention to purchase the automobile. Abraham & Najjar (2007) examined the effect of store-self image congruity on shopper's retail store behavior and found that the congruity between store image and self-image influenced purchase intention to purchase products from the retail store.

### **Perceived Risk**

Since Bauer (1960) proposed the concept of consumer perceived risk in 1960, this subject has been widely discussed and has led to numerous extended definitions (Bettman, 1973; Cunningham, 1967; Mitchell, 1999). In most definitions, uncertainty and consequence are the two elements frequently mentioned (Cunningham, 1967; Dowling & Staelin, 1994). For example, Dowling and Staelin defined perceived risk as the consumer's perception of the uncertainty and undesirable consequences of buying a product or service. Uncertainty is related to the identification of buying goals or the process of matching goals with the

purchase decision. Consequences may relate to functional, performance or psychological goals and the money, time and effort invested to achieve those goals (Bauer, 1960).

Researches suggested that perceived risk is an important variable that needs to be examined (Shimp & Bearden, 1982; Teas & Agarwal, 2000). Wood and Scheer (1996) argued that risk is one essential element used by a consumer evaluate a deal. Broydrick (1998) indicated that removing risk is an important means of enhancing perceived value. Some empirical work offered evidence regarding the role that perceived risk plays in value perceptions. Sweeney, Soutar, and Johnson (1999) found that in a retail environment, perceived risk had a direct, negative effect on perceived value and mediated the relationship between product quality and perceived value. Researchers also used perceived risk to explain why consumers are reluctant to use the Internet for a variety of purchasing tasks (Heijden et al., 2001; Pires et al., 2004). Heijden et al. (2001) suggested the role of perceived risk as an indirect influence on consumers' online purchase intention that feeds through consumer attitude, affecting the willingness to purchase. Perceived risk is determined by perceptions of trust in the store, which encompasses the products to be purchased. Results of the study conducted by Park et al., (2005) supported the argument of Heijden et al. (2001), indicating a negative relationship between perceived risk and apparel online purchase intention.

Because apparel products are highly visible, purchasing and wearing apparel products involves in high social risks. According to Blackwell et al. (2001), a person's social image depends on the product that the person buys and consumes. Where we live, what we drive, the clothing we wear, and music we listen to contribute to our social image that perceived by others because these symbolically represent ourselves to others. Companies reinforce that their products enable consumers to communicate their social image, for example, advertisements for cars often emphasize the products ability to convey who we are by what we drive. Social risk revolves around the fact that individuals are concerned with what others (i.e. their reference groups) and their families think (Mitchell & Boustani, 1992). Peer groups exert a large amount of pressure, especially on adolescents, to conform the rest of the group. Therefore, a social risk is one in which a negative outcome would result in embarrassment or disapproval among one's family or reference groups. A negative social outcome can threaten such intangibles as face, identity, or approval; thus, products that are highly visible and that

are consumed publicly carry more social risk than do those that are consumed in private (Kaplan et al., 1974).

Clothing items probably are the most highly visible and are worn in public; thus, carry the highest degree of social risk. Shopping for apparel products can be different from other highly visible goods because consumers examine how clothes will fit well on the body and look on them before purchasing (Dahl et al., 2001). For example, the decision of which outfit to wear to a party is determined by the range of impressions that outfit might denote to others and by the probability of the approval or disapproval of others at the party (Dahl et al., 2001). Purchasing an apparel product, which is not accepted by the group, may cause a certain amount of embarrassment; thus, social risk is an important risk that consumers perceive in buying apparel products. When consumers purchase apparel products in brick-and-mortar stores, they can examine how the products look on them and get immediate opinions from salespeople or their friends to decrease social risk. However, when consumers buy apparel products online, they cannot try on the product before purchasing to see how the products look on them and how others may think if they wear the product in public; thus, the concern of social risk may increase.

### Sources that Consumers Use to Reduce Perceived Risk

Consumers usually need to make a decision with a certain level of uncertainty and perceived risk. Many researchers have investigated how consumers reduce their perceived risk and found that most consumers tended to reduce their uncertainty by seeking information related to their purchase decision (Bansal & Voyer, 2000; Kim, 2001). This information can come from various sources. In this study, the sources of consumers' experiences and brand-self image congruity were focused. How each source may help consumers to reduce their uncertainty is addressed in the following sections:

Experience with Apparel Online Shopping. Seckler (2001) indicated that consumers who have experience with online buying will be likely to develop confidence and skills that facilitate more ambitious buying. Several studies support Seckler's argument. Lee and Tan (2003) found that those with previous online shopping experience perceived less risk in online shopping. Corbitt, Thanasankit, and Yi (2003) found that online shopping experience increased the degree of trust that consumers felt toward e-commerce, thus lessening their

perceived risk. Park and Stoel (2005) found that consumers who had an experience in purchasing apparel online had less perceived risk.

Experience with Brands. Consumers often draw on their knowledge of and beliefs about experiences with brand to make inferences about new products of that brand. They usually expect that the outcomes of next purchase will be consistent with the beliefs that they have historically associated with the brand (Erdem & Swait, 1998; Wernerfelt, 1988). Therefore, extensive experiences with a brand increase the amount of information on product attributes, which can enhance consumer's confidence in beliefs even without increasing accuracy in judgment (Heath & Tversky, 1991; Muthukrishnan, 1995). According to Einhorn and Hogarth (1978), confidence is an increasing monotonic function of feedback. If the positive aspects of experiences are greater than the negative aspects, confidence will increase as the number of trials increases, even when experience is non-diagnostics. That is one possible reason why consumers rely extensively on brands to handle risk (Montgomery & Wernerfelt, 1992).

Brand Image and Self-Concept Congruity. McCracken (1989) indicated that the image of a brand not only has the ability to help an individual express oneself, but it also has a role in helping consumers create and build their self-identities. Most clothing items carry a high degree of social risk because they are highly visible. Social risk revolves around the fact that individuals are concerned with what others think, including their friends and families (Mitchell & Boustani, 1992). Dahl et al., (2001) indicated that the decision of which outfit to wear to a party is determined by the range of impressions that outfit might denote to others and by the probability of the approval or disapproval of others at the party. Therefore, consumers may perceive low social risk if they purchase apparel products of a brand which has an image matches their actual self-concept or ideal self-concept. On the other hand, consumers may perceive high social risk if they purchase apparel products from a brand with an image that does not match their actual self-concept or ideal self-concept.

## **Purchase Intention**

Engel et al. (1995) stated that purchase intention is related to customers' predicted or planned behavior. Therefore, purchase intention can be a predictor of an actual purchase behavior (Fishbein & Ajzen, 1975). Some consumers may have an intention to use a web site for information retrieval or use e-mail for information transfer, but may not have an intention to purchase a product online. Pavlou (2003) defined purchase intention in online shopping as the situation when a consumer is willing to become involved in online transactions.

Researchers have investigated consumers' purchase intention in buying apparel products online from various points of view. Kim and Kim (2004) examined the dimensions of online shopping attributes and predictors of the intention to purchase apparel products and found that the cost/transaction (e.g., cheaper prices, no or low shipping and handling charge, money-back guarantees, fast delivery time, access to a major credit card, credit card security, privacy assurance, information on reliability of the seller) and the incentive programs were important predictors in determining the intention to purchase clothing, jewelry, or accessories via the Internet. Park and Stoel (2005) to examine the effect of three factors (i.e., previous online apparel shopping experience, brand familiarity, the number of pieces of product information presented on a website) on purchase intention and found that previous experience and brand familiarity and influenced purchase intention. Kim and Park (2005) examined the consumer shopping channel extension focusing on attitude shift from offline to online store and found that search intention for product information via the online store was the strongest predictor of consumer's purchase intention via the online store. Kim and Stoel (2005) examined how attitude toward online customer service influenced online purchase intention and found that customer service dimensions of ease in searching, availability of frequently asked questions (FAQs), availability of in-stock status information, and ease of comparison shopping were important predictors of online purchase intention.

## **Summary of Review of Literature**

Literature related to three possible influences on a consumer's purchase intention in apparel online shopping environment was reviewed. In the current study, purchase intention refers to the consumers' predicted behavior while purchasing apparel products of a particular

brand via the Internet. The first variable is consumer's experiences including: (a) experience with apparel online shopping (i.e., consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via the Internet), and (b) experience with apparel brands (i.e., consumers' knowledge of a particular brand obtained from searching, examining, purchasing, and using any apparel product of the brand). The second variable is the brand-self image congruity (i.e., consistency between the image of a particular brand and consumer's self-image). The third variable is the consumer's perceived risk that is the uncertainty and expected negative consequences that consumers perceive during the decision making process of buying apparel of a particular brand via the Internet. In addition, experiences of two in-home shopping channels were briefly reviewed for their relationships with experience with apparel online shopping. Experience with apparel catalog shopping is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via catalog. Experience with apparel TV shopping is consumers' knowledge obtained from searching, examining, purchasing, and using of apparel products via television.

Previous research indicated that before 2000, compared to the other Internet marketing mediums such as e-mails, e-newsletters, and search marketing (e.g., Google, Yahoo!), online shopping or business-to-customer (B2C) electronic commerce (e-commerce) lagged in its development (Peterson et al., 1997). However, since 2000, online retail sales have increased rapidly. Mulpuru (2006) predicted that non-travel online retail revenues would top the quarter-trillion-dollar mark by 2011. Recent studies indicated that online shoppers could be found in all types of consumers segments, including people of younger age, lower education, as well as lower income (Weiss, 2001; Swinyard & Smith, 2003), indicating online shoppers became extremely comfortable with technology and valued convenience in the online retail experience (Mulpuru, 2006). Many researches have studied the characteristics of online shopping (Jarvenpaa & Todd, 1997; Liu & Arnett, 2000; Lohse & Spiller, 1998; Szymanski & Hise, 2000), and the attributes of online shopping can be classified into six categories: merchandising, competitive price and price sensitivity, navigation, customer service, convenience, and security and risk.

Shoppers have no problem with buying clothes and other items online, including shoes and bags (Burns, 2006). An increasing number of apparel websites (e.g., Guess, Lands'

End) have incorporated image interactivity to provide visual sensory information about the interactions of products and products with the body. These websites have developed a user friendly interface where a customer can upload his/her body measurements to construct a three-dimensional model for "virtual wearer trials" (Stylios et al., 2001). Although many technologies have been applied to online shopping for apparel products to enhance the sensory or aesthetic features of the product, consumers still have difficulties in buying apparel products online due to the lack of clear and fundamental information such as actual color, fit, and fabric texture of the garment (Ainscough & Luckett, 1996; Blair & Shimp, 1992). Therefore, consumers often find themselves in a situation of decision ambiguity (Muthukrishnan, 1995). To reduce ambiguity, consumers often rely on knowledge and memory of previous experiences and brand names to fill the gap of missing information when they make a purchase decision (Blackwell et al., 2001).

Direct experiences are generally considered as an integral part of how consumers learn objective and affective responses to products (Smith, 1993; Smith & Swinyard, 1983). Many researchers found that consumers' previous online shopping experiences had a direct impact on online shopping intentions (Eastlick & Lotz, 1999; Shim, et al., 2001; Weber & Roehl, 1999). The more experienced consumers were with online shopping and the more satisfied they were with past online transaction experiences, the higher their purchase amount, the more likely they were to be repeated purchasers (Pires, et al., 2004; Yang & Lester, 2004) and the lower the likelihood of them aborting an intended online transaction (Cho, 2004). Consistently, consumers' previous online shopping experiences also had a significant relationship with the purchase intention in apparel shopping (Park & Stoel, 2005; Seock, 2003; Yoh, 1999).

Experiences with apparel brands provide qualitative types of information about the brand, which often lead to unique beliefs about the brand (Wright & Lynch, 1995). Muthukrishnan (1995) indicated that consumers would consider more positive aspects of the brands with which they had previous experience than that of new, un-experienced brands. Smith and Swinyard (1983) found that when the product attributes of different brands were not comparable, consumers would attach higher validity to judgments of the brand with which they had direct experience. If consumers had a previous experience with a brand, the beliefs about the brand remained longer in their memory than that about a new brand.

Therefore, these studies suggest that creating a good online brand experience for customers is an important prerequisite for brand loyalty and repeat purchase.

Keller (1993) suggested that brand personality often serves as a symbolic or self-expressive function. Because products offer a vehicle for self-expression, consumers would express themselves in brand choices and prefer products that match their self-concept (i.e., self-brand image congruity) (Karande et al., 1997). Han (2006) investigated the impact of the congruity of brand image and consumers' self-image (i.e., brand-self image congruity) on brand preference. The author found that brand-self image congruity had a significant impact on brand preference. O'Cass and Lim (2001) investigated the influence of brand associations on brand preference and purchase intention, and they found that a significant relationship existed between brand-self image congruity and brand purchase intention. No study was found in the area of apparel online shopping regarding the effect of brand-self image congruity on perceived risk and purchase intention.

Dowling and Staelin (1994) defined perceived risk as the consumer's perception of the uncertainty and undesirable consequences of buying a product or service. Uncertainty is related to the identification of buying goals or the process of matching goals with the purchase decision. Researchers used perceived risk to explain why consumers are reluctant to use the Internet for a variety of purchasing tasks (Heijden, et al., 2001; Pires et al., 2004). Heijden et al. (2001) suggested the role of perceived risk as an indirect influence on consumers' online purchase intention that feeds through consumer attitude, affecting the willingness to purchase. Perceived risk is determined by perceptions of trust in the store, which encompasses the products to be purchased. Park et al. (2005) also found a negative relationship between perceived risk and purchase intention in buying apparel products online.

Engel et al. (1995) stated that purchase intention is related to customers' predicted or planned behavior. Therefore, purchase intention can be a predictor of an actual purchase behavior (Fishbein & Ajzen, 1975). Researchers have investigated consumers' purchase intention in buying apparel products online from various points of view and found several factors related to online purchase intention, such as previous online apparel shopping experience, brand familiarity, search intention for product information, lower cost (e.g., cheaper prices, no or low shipping and handling charge), better transaction (e.g., fast delivery time, credit card security), the incentive programs provided by the website store, attitude



toward online customer service, and perceived risk (Kim & Kim, 2004; Kim & Park, 2005; Kim & Stoel, 2005; Park & Stoel, 2005).

## **CHAPTER III**

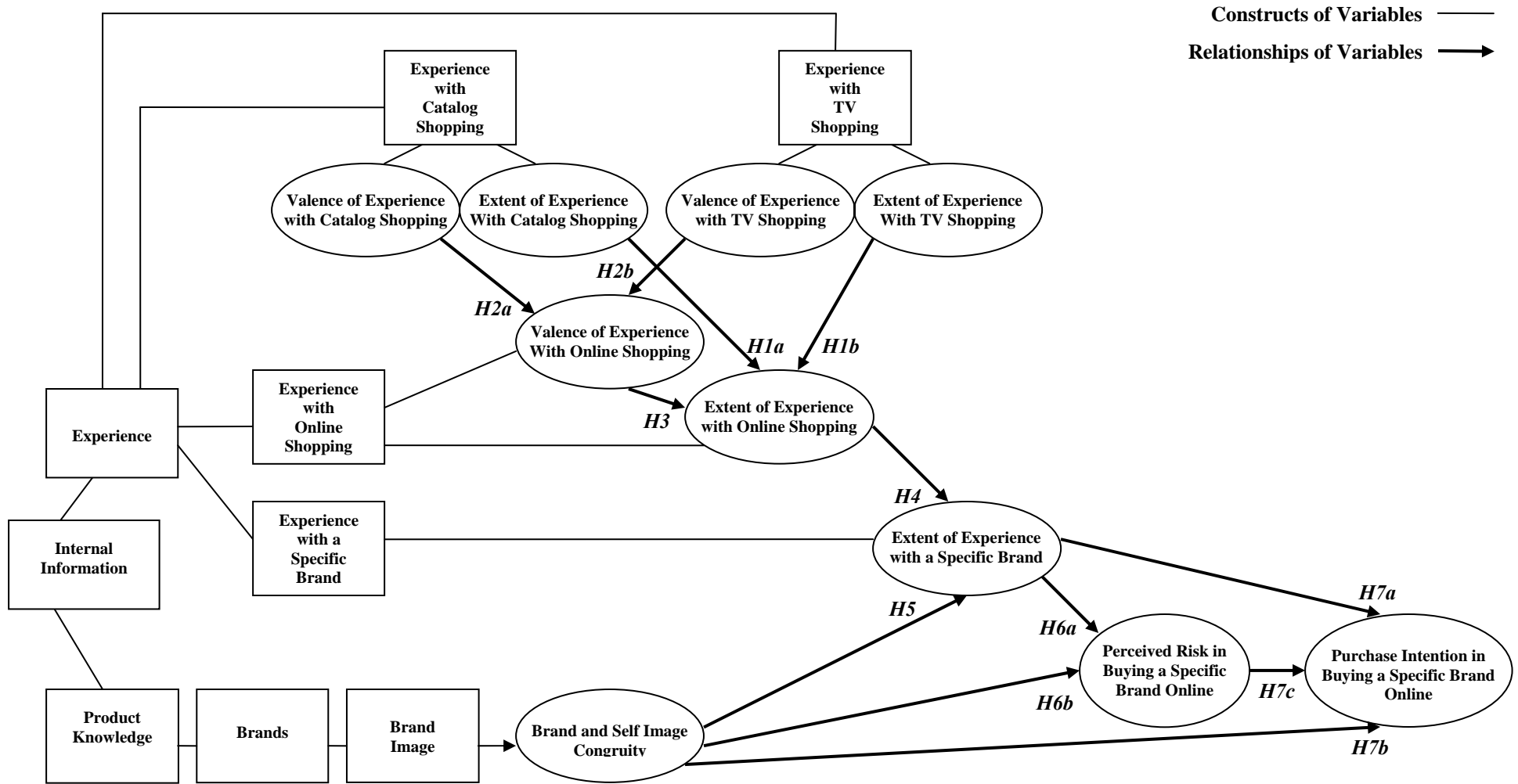
### **CONCEPTUAL FRAMEWORKS AND RESEAERCH HYPOTHESES**

Based on the review of the literature reported in Chapter 2, two conceptual frameworks were developed to examine the roles of consumers' experiences, brand-self image congruity, and perceived risk in consumers' purchase intention in apparel online shopping context. The research hypotheses were generated with respect to the specific relationships in the conceptual frameworks. These relationships between the variables are the focus of the study. Each variable included in the frameworks was discussed in the following sections and hypotheses related to the variables were also presented. The rationales for each hypothesis, stemmed from theories or previous studies, were also addressed.

This chapter includes three sections. The first section, conceptual framework I, discusses the variables included in the first framework of the study and presents hypotheses related to the variables. In the second section, conceptual framework II, describes the variables included in the second framework of the study and presents hypotheses related to the variables. The third section discusses the comparison of four quasi-experimental groups in perceived risk and purchase intention in buying a specific brand online, and hypotheses 14 and 15 are presented.

#### **Conceptual Framework I**

Conceptual framework I was developed for all participants and included 10 variables (see Figure 3.1). Because some participants did not have experience with a specific brand, they could not answer the questions related to the valence (i.e., feelings) of the experience with the brand. Therefore, in the first framework, the valence of experience with a specific brand was excluded. The oval shape indicates the variables or constructs that had been measured in the study, and the rectangle box indicates the variables that had not been



**Figure 3.1 Conceptual Framework I: Roles of Consumers' Experiences, Brand-Self Image Congruity, and Perceived Risk in Consumers' Purchase Intention in Apparel Online Shopping Context**

measured. Three segments were included to introduce this framework. The first segment, internal information, describes two types of internal information (i.e., experience, product knowledge) that consumers search for when making purchase decision. In the experience, four types of experience (experiences with catalog shopping, TV shopping, online shopping and a specific brand) are discussed. In the product knowledge, brand-self image congruity is introduced. The second segment, the effects of experience with a specific brand and brand-self image congruity on perceived risk in buying the brand online, covers the effects of two variables (i.e., experience a specific brand, brand-self image congruity) on perceived risk. The third segment, effects of experience with a specific brand, brand-self image congruity, and perceived risk on purchase intention in buying a specific brand online, discusses the effects of three variables on purchase intention.

### **Internal Information**

The conceptual framework started from “internal information.” According to Bettman (1979) and Conchar et al. (2004), consumers search for risk-related information to help them assess risk and make purchase decision. Information related to risk can be classified into internal and external information. The current study focused on the internal information, which is the information stored in memory about risk learning and previous experiences with risk that pertain to the current situation (Brucks, 1985; Punj & Staelin, 1983). When consumers recognize a problem, relevant information from long-term memory such as experience is usually used first if a satisfactory solution is known (Engel et al., 1995). Consumers’ experience and product knowledge are introduced in the following sections as two aspects of internal information.

### Experiences

Experience may be the most frequently used internal information when consumers make a purchase decision. Consumers generally learn objective and affective responses to products through direct experiences (Smith, 1993; Smith & Swinyard, 1983). Padgett and Allen (1997) suggested that a consumer’s experience includes the thoughts and feelings that occur during the consumption of the product and service. Prior experience acts as a memory schema and influences the perception of a current situation (Alba & Hasher 1983). When

consumers making a purchase decision, they would retrieve knowledge based on previous experience to solve current problems. Therefore, experience is included as the first type of internal information that consumers use in purchase decision process.

Four Types of Experience. Four types of experience (i.e., experiences with catalog shopping, TV shopping, online shopping, and a specific brand) were included in the framework. Catalog, TV, and online shopping are common in-home shopping channels in today's apparel market because catalog, TV and online shopping offer consumers the opportunity to experience convenience through reduced physical efforts and time costs (Klopping & McKinney, 2006; Lim & Dubinsky, 2004; Park & Stoel, 2005). Although the focus of the study was on online shopping, prior experiences with in-home shopping such as catalog and TV may be important variables that help consumers to feel comfortable with adopting online shopping (Bulluck, 1985; Michals, 1997). Therefore, the experiences with these three types of in-home shopping channels (i.e., catalog, TV, online) were included in the framework.

In addition to the experiences with various types of in-home shopping channels, experience with a specific brand is also included in the framework. Experiences with a specific brand provide qualitative types of information about the brand, which often lead to unique beliefs about the brand (Wright & Lynch, 1995). Muthukrishnan (1995) indicated that consumers would consider more positive aspects of the brands with which they had previous experience than that of new, not-experienced brands. Smith and Swinyard (1983) found that consumers would attach higher validity to judgments of the brand with which they had direct experience. Alba et al. (1992) found that memory of previous experiences with a brand would decay less rapidly than the memory of a product claim regarding a new brand. If consumers had a previous experience with a brand, the beliefs about the brand remained longer in their memory than that about a new brand. Based on these studies, experience with a specific brand was included in the framework.

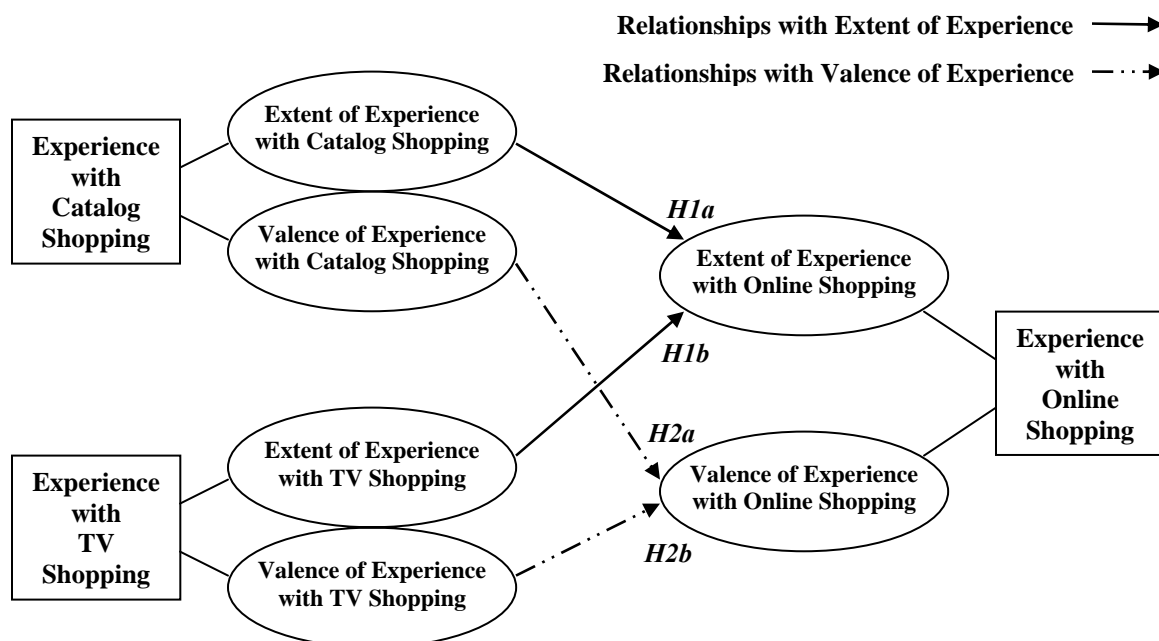
Construct of Experience. Researchers often measure the extent and valence of the experience when measuring experience. The extent of the experience with shopping is about how often consumers buy products, how much they buy in capital, and how many items they buy in general (Klopping & McKinney, 2006; Seock, 2003; Ward, 2001). The feelings experienced are called the valence of the experience, and these feelings are usually described

in the literature as favorable/unfavorable, good/bad, positive/negative, happy/not happy, or satisfied/dissatisfied with the experience (Chen & Dubinsky, 2003; Folkes & Patrick, 2003; Raghurir & Menon, 2005). The valence and extent of experience bare very different aspects of experience; therefore, the valence and extent of the experience were included in the framework as two constructs of all four types of experience (experiences with catalog shopping, TV shopping, online shopping, and a specific brand) in the study.

Relationships between Experiences with Apparel Catalog/TV Shopping and Experience with Apparel Online Shopping (Hypotheses 1 and 2). Experience with catalog shopping has been shown as important determinants of behavior in online shopping (Bellman, Lohse & Johnson, 1999; Ward, 2001). A catalog shopper who has previous experience with shopping from home is a significant predictor of online shopping (Goldsmith & Flynn, 2004). Ward (2001) examined consumer substitution behavior among three distribution channels: online shopping, traditional retail, and catalog shopping and found that consumers considered online shopping and catalog shopping to be closer substitutes than any other pair of channels. Klopington and McKinney (2006) also found that the online shopping task was most similar to catalog shopping. Goldsmith and Flynn (2005) examined the effects of experiences with shopping from brick-and-mortar stores, catalogs, and online on the intention to shop online. Results showed that consumers who bought more apparel products via catalog also bought more via online. These study results showed that consumers' experience with apparel catalog shopping was significantly related to their experience with apparel online shopping. In addition to catalog shopping, Eastlick and Lotz (1999) found that TV shopping was also one of antecedents of intention to shop online, implying that the earliest online buyers might be the users of TV shopping media. The experience that a consumer gained in the TV shopping might influence his or her perception of online shopping. Based on these studies, relationships of consumer's experiences with apparel catalog and TV shopping with consumers' experience with apparel online shopping were included in the framework.

Based on the framework, hypotheses 1 and 2 were formulated to examine if the experience with apparel catalog shopping or TV shopping was significant related with consumers' experience with apparel online shopping. Because the valence and extent of experience are very different aspects of experience, and therefore, the valence and extent of

the experience were examined in separate hypotheses. Hypothesis 1 (H1) examined the relationships of consumers' extent of the experiences with catalog and TV shopping for apparel products and their extent of the experience with apparel online shopping, and H2 examined the relationships of consumers' valence of the experiences with catalog/TV shopping for apparel products and their valence of the experience with apparel online shopping among the participants who had experience with both catalog and TV shopping (see Figure 3.2).



**Figure 3.2 Proposed Research Hypotheses 1 and 2: Experiences with Apparel Catalog/TV Shopping and Experience with Apparel Online Shopping**

Based on the framework, hypothesis 1 and 2 were formulated as below:

*Hypothesis 1:* The extent of the experience with buying apparel products from catalogs and on TV will be positively associated with the extent of the experience with apparel online shopping. Participants who have more experiences with buying apparel products from catalogs and participants who have more experiences with buying apparel products on TV will have more experiences with apparel online shopping.

H1a: Participants who have more experiences with buying apparel products from catalogs will have more experiences with apparel online shopping.

H1b: Participants who have more experiences with buying apparel products on TV will have more experiences with apparel online shopping.

*Hypothesis 2:* The valence of the experience with buying apparel products from catalogs and on TV will be positively associated with the valence of the experience with apparel online shopping. Among the participants who have experiences with both catalog shopping and TV shopping, those who have more positive feelings about their experiences with buying apparel products from catalogs and on TV will have a more positive feeling toward their experience with apparel online shopping.

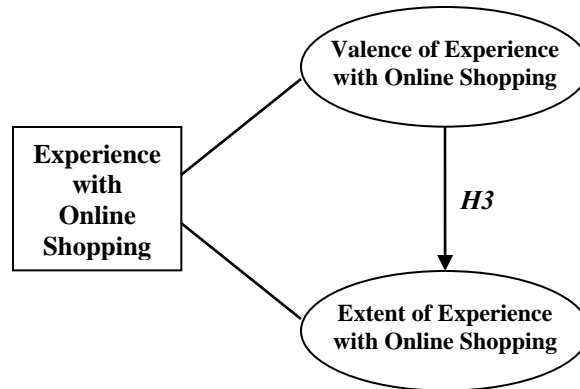
H2a: Participants whose feelings about their experience with buying apparel products from catalogs are more positive will feel more positive about their experience with apparel online shopping.

H2b: Participants whose feelings about their experience with buying apparel products on TV are more positive will feel more positive about their experience with apparel online shopping.

Effect of Valence of Experience with Apparel Online Shopping on the Extent of Experience with Apparel Online Shopping (Hypothesis 3). Researchers often measure the extent and valence of the experience when measuring experience; however, no study investigated the relationship between the valence of the experience and the extent of the experience. Emotion is a set of behavioral tendencies and these tendencies can be thought of as social scripts that consist of expressions, actions, and other behaviors (Morrison & Crane, 2007). In practice, it is useful for the marketer to know what sorts of behavior tendencies will be elicited with various emotions, and the likelihood that the consumer will act on those tendencies (Shaver, Schwartz, Kirson, & O'Connor, 1987). Recent investigations into the impact of affect on reactions to advertising confirm that emotion does play an important role in consumer reactions to marketing messages (Morris, Woo, Greason, & Kim, 2002). Affect generated by an advertisement is a strong predictor of purchase intent, stronger than either cognition or brand interest. According to these findings, we expected that consumers' positive feeling about their experiences (i.e., the valence of the experience) with buying apparel products online would have an impact on consumers' extent of the experience. Consumers would purchase apparel products more often and in greater amounts if they felt



positive about their experience with buying apparel products online. Therefore, the effect of consumers' valence of the experience with apparel online shopping on consumers' extent of the experience with apparel online shopping was included in the conceptual framework (see Figure 3.3).

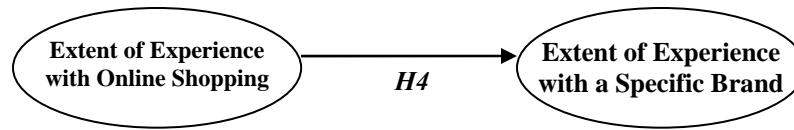


**Figure 3.3 Proposed Research Hypothesis 3: Effect of Valence of Experience with Apparel Online Shopping on the Extent of Experience with Apparel Online Shopping**

Based on the framework, hypothesis 3 was formulated as below:

*Hypothesis 3:* The valence of the experience with apparel online shopping will influence the extent of the experience with apparel online shopping. Participants whose feelings about their experience with buying apparel products online are more positive will have more experiences with apparel online shopping.

Effect of Extent of Experience with Apparel Online Shopping on Extent of Experience with a Specific Brand (Hypothesis 4). No study was found investigating the relationship between consumers' extent of the experiences with apparel online shopping and the extent of experience with a specific brand. We expected that if consumers had more experience with shopping online (i.e., purchase more products, purchase more frequently, and spent greater amounts of money), the chance that they had more experience with a specific brand would be increased, and therefore, the effect of consumers' extent of the experience with apparel online shopping on their extent of the experience with a specific brand was included in the framework (see Figure 3.4).



**Figure 3.4 Proposed Research Hypothesis 4: Effect of Extent of Experience with Apparel Online shopping on Extent of Experience with a Specific Brand**

Based on the framework, hypothesis 4 was formulated as below:

*Hypothesis 4:* The extent of the experience with online shopping will influence the extent of the experience with a specific brand. Participants who have more experience with buying apparel product will have more experiences with the specific brand.

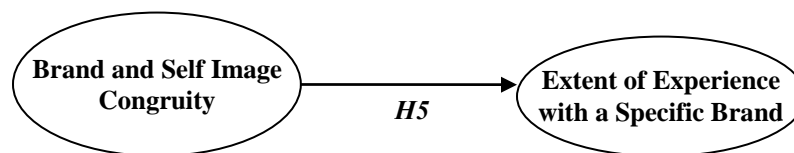
#### Product Knowledge

Product knowledge is another type of internal information. Product knowledge includes awareness of the product category and brands within the product category, product terminology, attributes, and beliefs about the product category and specific brands (Engel et al., 1995). According to Engel et al., brand within the awareness set is likely to have a set of associations in memory. These associations involve the brand's physical properties and attributes as well as the benefits and feelings from product consumption. Brand image is knowledge and beliefs about the brand as well as evaluations, feelings, and emotions associated with the brand (Dobni & Zinkhan, 1990). Timmerman (2001) interpreted brand image as a network of meanings stored in memory, and the core essence of brand image stem from the consumer's memory. Consumers would retrieve brand image that was stored in their memory as product knowledge related to brand when they make a purchase decision. Ataman and Ulengin (2003) indicate that brand image is the key how consumers choose among alternative brands after information-gathering processes. Therefore, brand image, as one form of product knowledge, was included as the second type of internal information that consumers use in purchase decision process.

Brand Image and Brand-Self Image Congruity. According to Bhat and Reedy (1998), consumers' needs can be categorized as functional or symbolic. To fulfill their symbolic needs, consumers often use brands as symbols of their own self-concept, thereby fulfilling needs to show dimensions of personality (Park, Jaworski, & MacInnis, 1986). Zinkham and

Hong (1991) also indicated that consumers would use products to demonstrate their self-concepts. McCracken (1988) proposed the model of meaning transfer, indicating that meaning would move from product to consumer as consumers construct themselves through their choices based on the congruity between product image and self-image, and therefore, consumers often buy products or brands that are perceived to be similar to their own image. This phenomenon is often described as self-image and product image congruity or in short "self-image congruity" (Sirgy et al., 1997). Several study results support McCracken's propositions. Han (2006) examined the impact of brand-self image congruity on brand preference and found that participants preferred the brand that had a similar image with their self-image. O'Cass and Lim (2001) also found that participants had higher purchase intention of buying a brand whose image was consistent with their image. Based on these studies, the relationship between brand image and brand-self image congruity was included in the framework.

Effect of Brand-Self Image Congruity on Extent of Experience with a Specific Brand (Hypothesis 5). According to Han (2006), brand-self image congruity influenced brand preference. Participants preferred the brand that had a similar image with their self-image. According to this finding, it was expected that consumers would have more experiences with a specific brand (i.e., buy more of the product, buy more frequently, and spent greater amounts of money) if they perceived the image of a specific brand was more consistent with their self-image. Therefore, the effect of consumers' brand-self image congruity on their extent of experience with a specific brand was included in the conceptual framework (see Figure 3.5).



**Figure 3.5 Proposed Research Hypothesis 5: Effect of Brand-Self Image Congruity on Extent of Experience with a Specific Brand**

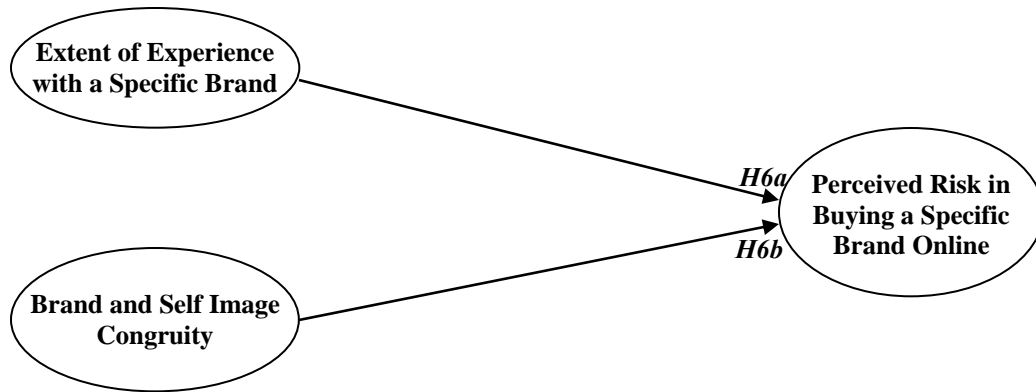
Based on the framework, hypothesis 5 was formulated as below:

*Hypothesis 5:* Brand-self image congruity will influence the extent of the experience with a specific brand. Participants who perceive the image of the specific brand as more consistent with their self-image will have more experiences with the specific brand.

### **Effects of Experience with a Specific Brand and Brand-Self Image Congruity on Perceived Risk in Buying a Specific Brand Online (Hypotheses 6)**

Dowling and Staelin (1994) defined perceived risk as the consumer's perception of the uncertainty and undesirable consequences of buying a product or service. When consumers are shopping for apparel, they like to physically examine the products to assess color, fabric hand, and fit (Eckman et al., 1990; Geissler & Zinkhan, 1998; McKinney, 2000). However, consumers are often placed in the situation of uncertainty when they buy apparel products online due to the inability to physical examination the products, and therefore, they may perceive a high degree of risk in buying apparel products online. Consumers' may use their previous experiences and the congruity between the brand image and self-image to reduce the uncertainty that they feel when they purchase apparel products of a certain brand online (Dahl et al., 2001; Park & Stoel, 2005). Therefore, two factors (i.e., the extent of the experience with a specific brand, brand-self image congruity) that may influence consumers' perceived risk in buying apparel products of a specific brand online were included in the framework.

Extensive experiences with a brand increase the amount of information about a product attributes of that brand. This information can enhance consumers' confidence in the brand even without increasing accuracy in judgment (Heath & Tversky, 1991; Laroche et al. 1996; Muthukrishnan, 1995), which results in, consumers relying extensively on brands to handle risk (Montgomery & Wernerfelt, 1992). Park and Stoel (2005) found that the more consumers had experiences with a website's brand, the less risk they perceived. According to these studies, consumers' experience with brands may reduce their risk in buying apparel products of the experienced brands online, and therefore, the effect of consumer's experience with a specific brand on their perceived risk in buying apparel products of the brand online was proposed in the conceptual framework (see Figure 3.6).



**Figure 3.6 Proposed Research Hypothesis 6: Effect of Experience with a Specific and Brand Brand-self Image Congruity on Perceived Risk in Buying a Specific Brand Online**

McCracken (1989) indicated that the image of a brand not only has the ability to help an individual express oneself, but also has a role in helping consumers create and build their self-identities. Most clothing items are highly visible, and because they are worn in public, individuals are concerned with others' perception of them in certain types of clothing, and thus, carry a high degree of social risk (Mitchell & Boustani, 1992). Apparel products contribute to our social image that perceived by others because these products symbolically represent ourselves to others (Blackwell et al., 2001). Dahl et al. (2001) indicated that the decision of which outfit to wear to a party is determined by the range of impressions that the outfit may reflect the person to others and by the probability of the approval or disapproval of others at the party. Therefore, consumers would express themselves in brand choices and prefer brands that match their self-concept (Karande et al., 1997). According to these propositions, we expected that consumers might perceive low risk if they purchased apparel products of a brand which had an image matched their own image. On the other hand, consumers might perceive high risk if they purchased apparel products from a brand with an image that did not match their self-image. Therefore, the effect of consumers' brand-self image congruity on their perceived risk in buying apparel products of the brand online was included in the conceptual framework (see Figure 3.6).

Based on the framework, H6 and two sub-hypotheses, H6a and H6b, were formulated as below:

*Hypothesis 6:* The extent of the experience with a specific brand and brand-self image congruity will influence the perception of risk in buying apparel products of a specific brand online.

H6a: Participants who have more experiences with a specific brand will perceive less risk in buying apparel products of the brand online.

H6b: Participants who perceive the image of a specific brand as more consistent with their self-image will perceive less risk in buying apparel products of the brand online.

### **Effects of Experience with a Specific Brand, Brand-Self Image Congruity, and Perceived Risk on Purchase Intention in Buying a Specific Brand Online (Hypotheses 7)**

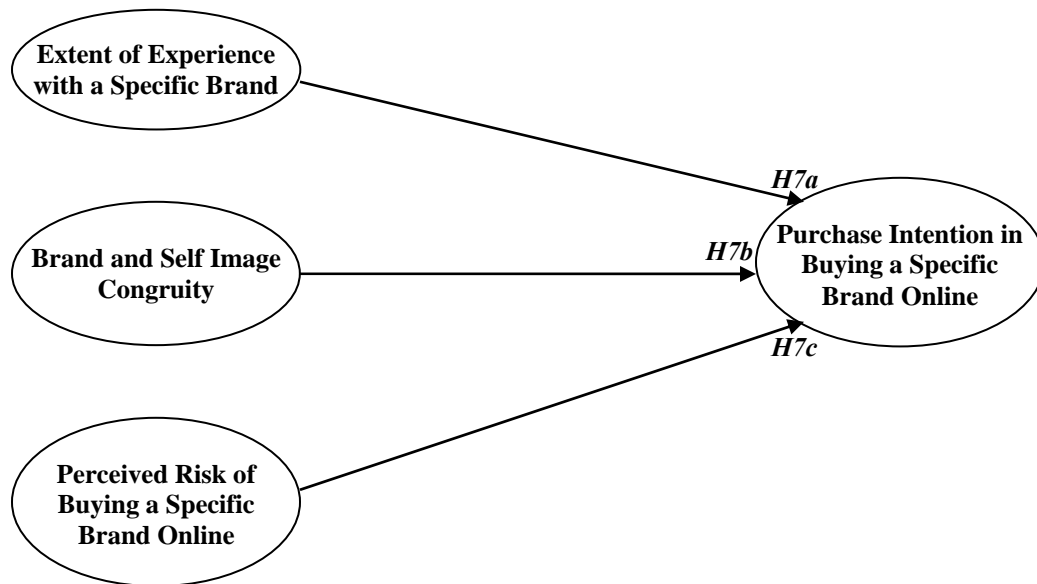
Peter and Olsen (2005) defined purchase intention as a decision plan or intention to buy a particular product or brand. Three factors which may influence purchase intention in buying apparel products of a specific brand online were included in the framework. These factors were: the extent of the experience with a specific brand, brand-self image congruity, and perceived risk.

Alba et al. (1992) found that memory of the beliefs about the brand with previous experience would decay less rapidly than the memory of a product claim regarding a new brand. If consumers had a previous experience with a brand, the beliefs about that brand remained longer in their memory than those about a new brand. O'Loughlin et al. (2004) found that brand experience promoted consumers' future purchase intention, thus, plays an important role in customer retention. Based on these studies, the effect of consumers' extent of the experience with a specific brand on their purchase intention in buying apparel products of the brand online was included in the conceptual framework (see Figure 3.7).

Because products offer a vehicle for self-expression, consumers would express themselves through brand choices and prefer products that match their self-image (Karande et al., 1997). Ericksen (1996) used the congruity between product image and self-image to predict consumers' purchase intention and found that a relationship existed between self-image congruity and intention to purchase the automobile. Abraham & Najjar (2007)

examined the effect of store-self image congruity on shopper's retail store behavior and found that the congruity between store image and self-image influenced purchase intention. These studies suggest that it is possible that when consumers buy apparel products online, they may buy from a brand that has a similar image of their self-images, and therefore, the effect of consumers' brand-self image congruity on their purchase intention in buying apparel products of the brand online were included in the framework (see Figure 3.7).

Perceived risk has been used to explain why consumers are reluctant to use the Internet for a variety of purchasing tasks (Heijden et al., 2000). Park et al. (2005) found that a negative relationship existed between perceived risk and the apparel online purchase intention. Park and Stoel (2005) also found that consumers had increased purchase intention when they perceived less risk in apparel online shopping. Based on these studies, the effect of consumers' perceived risk on their purchase intention in apparel online shopping was included in the conceptual framework (see Figure 3.7).



**Figure 3.7 Proposed Research Hypothesis 7: Effects of Experience with a Specific Brand, Brand-Self Image Congruity, and Perceived Risk on Purchase Intention in Buying a Specific Brand Online**

Based on the framework, H7 and three sub-hypotheses, H7a, H7b, and H7c were formulated as below:

*Hypothesis 7:* The extent of the experience with a specific brand, brand-self image congruity, and perceived risk of buying a specific brand online will influence the purchase intention in buying apparel products of a specific brand online.

H7a: Participants who have more experiences with a specific brand will have higher purchase intention in buying apparel products of the brand online.

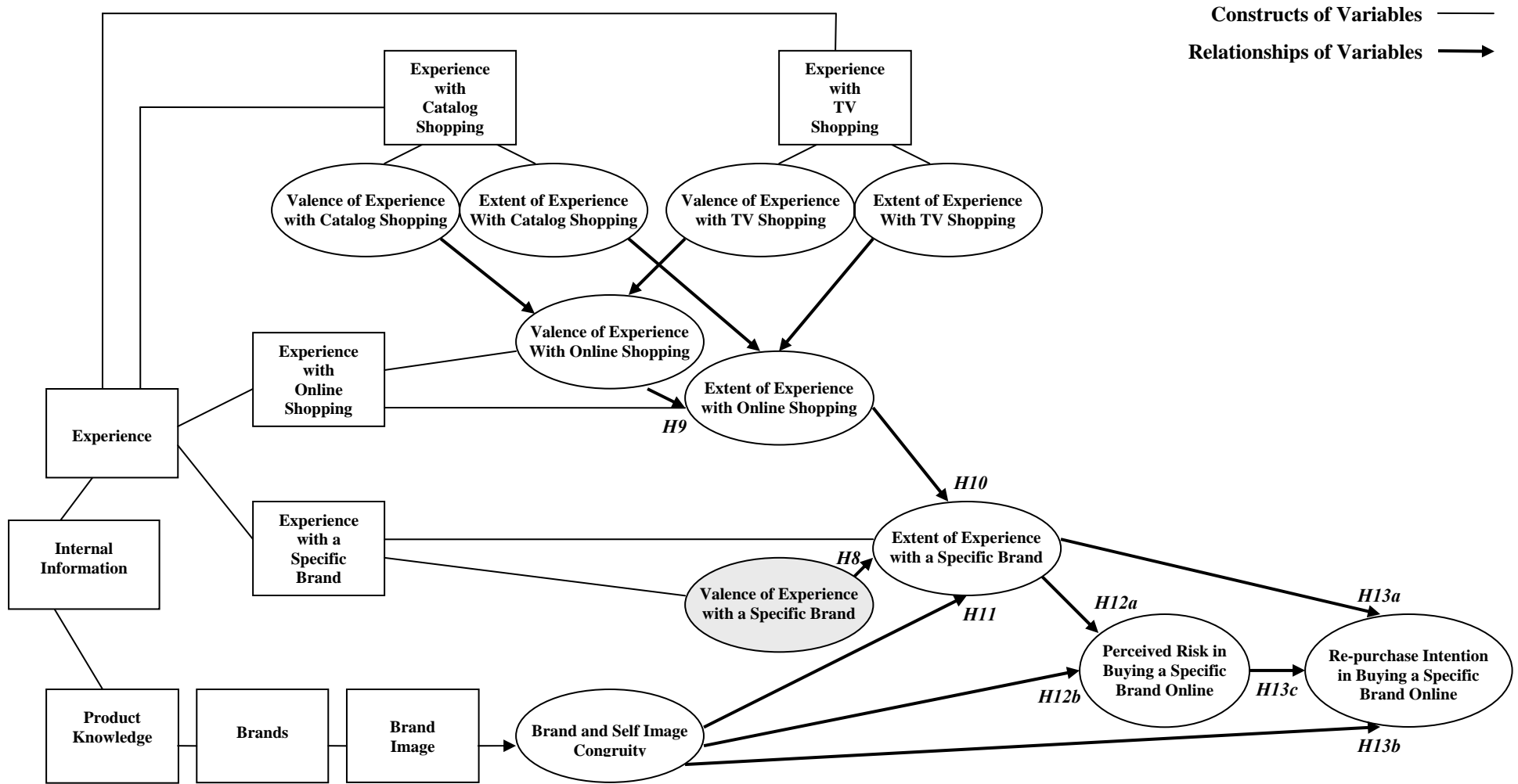
H7b: Participants who perceive the image of a specific brand as more consistent with their self-image will have higher intention in buying apparel products of the brand online.

H7c: Participants who perceive less risk in buying apparel products of a specific brand online will have higher purchase intention in buying apparel products of the brand online.

### **Conceptual Framework II**

The second framework was developed for the participants who had experience with a specific brand and included 11 variables. The difference between the first and the second frameworks was the inclusion of the valence of the experience with a specific brand (See Figure 3.8). Conceptual framework I was developed for all participants. For the participants who did not have experience with a specific brand, they could not answer the questions related to the valence of the experience with the brand, and therefore, the valence of experience with a specific brand was excluded in the first framework. The second framework was developed for the participants who had experiences with a specific brand, and therefore, they were able to answer the questions related to the valence of the experience with the brand. Because these participants previously purchased the products of the brand, the term “Purchase Intention” was changed to “Re-purchase Intention” in the second framework.

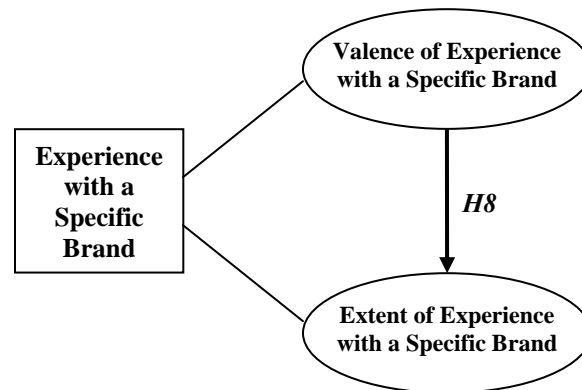




**Figure 3.8 Conceptual Framework II: Roles of Consumers' Experiences, Brand-Self Image Congruity, and Perceived Risk in Consumers' Re-purchase Intention in Apparel Online Shopping Context**

### **Effect of the Valence of Experience with a Specific Brand on the Extent of Experience with a Specific Brand (Hypothesis 8)**

Based on the previous studies mentioned in H3, feelings and affects predict consumers' behavior (Morris et al., 2002; Morrison & Crane, 2007; Shaver et al., 1987). According to these studies, we expected that consumers would have more experience with a specific brand (i.e., purchase more of a specific brand, purchase the brand more frequently, and spent greater amounts of money on the brand) if they felt positive about their experience with buying apparel products of the brand. Therefore, the effect of consumers' valence of the experience with a specific brand on their extent of the experience with the brand was included in the second conceptual framework (see Figure 3.9).



**Figure 3.9 Proposed Research Hypothesis 8: Effect of Valence of Experience with a Specific Brand on Extent of Experiences with the Specific Brand**

Based on the framework, hypothesis 8 was formulated as below:

*Hypothesis 8:* The valence of the experience with a specific brand will influence the extent of the experience with the brand. Among the participants who have experience with a specific brand, participants whose feelings about their experience with a specific brand are more positive will have more experiences with the brand.

### **Other Effects among Variables (Hypotheses 9 to 13)**

Except of the additional relationship between the valence and the extent of the experience with a specific brand, the first and the second frameworks were identical. All the relationships proposed in the first framework were also included in the second framework.

The proposed hypotheses 9 to 13 were exactly the same with hypotheses 3 to 7, except that these hypotheses examined the participants who had experience with a specific brand, instead of all participants.

Hypotheses 9 to 13 were stated as below:

*Hypothesis 9:* The valence of the experience with apparel online shopping will influence the extent of the experience with apparel online shopping. Among the participants who have experience with a specific brand, those participants whose feelings about their experience with buying apparel products online are more positive will have more experiences with apparel online shopping.

*Hypothesis 10:* The extent of the experience with online shopping will influence the extent of the experience with a specific brand. Among the participants who have experience with a specific brand, those who have more experience with buying apparel products online will have more experiences with the specific brand.

*Hypothesis 11:* Brand-self image congruity will influence the extent of the experience with a specific brand. Among the participants who have experience with a specific brand, those who perceive the image of the specific brand as more consistent with their self-image will have more experiences with the specific brand.

*Hypothesis 12:* The extent of the experience with a specific brand and brand-self image congruity will influence the perception of risk in buying apparel products of a specific brand online.

H12a: Among the participants who have experience with a specific brand, those who have more experiences with a specific brand will perceive less risk in buying apparel products of the brand online.

H12b: Among the participants who have experience with a specific brand, those who perceive the image of a specific brand as more consistent with their self-image will perceive less risk in buying apparel products of the brand online.

*Hypothesis 13:* The extent of the experience with a specific brand, brand-self image congruity, and perceived risk of buying a specific brand online will influence the re-purchase intention in buying apparel products of a specific brand online.

H13a: Among the participants who have experience with a specific brand, those who have more experiences with a specific brand will have higher re-purchase intention in buying apparel products of the brand online.

H13b: Among the participants who have experience with a specific brand, those who perceive the image of a specific brand as more consistent with their self-image will have higher re-purchase intention in buying apparel products of the brand online.

H13c: Among the participants who have experience with a specific brand, those who perceive less risk in buying apparel products of a specific brand online will have higher re-purchase intention in buying apparel products of the brand online.

#### **Comparison of Four Quasi-Experimental Groups (Hypotheses 14 and 15)**

In the current study, a 2 x 2 quasi-experimental design consisting of two levels of experience with a specific brand (i.e., experience, no experience) and two levels of brand-self image congruity (i.e., consistent image, inconsistent image) was developed. This research design resulted in four experimental groups. They were: Group 1 (i.e., participants had an experience with a specific brand and perceived that the brand image and self image were consistent), Group 2 (i.e., participants had an experience with a specific brand and perceived that the brand image and self image were inconsistent), Group 3 (i.e., participants had no experience with a specific brand and perceived that the brand image and self image were consistent), and Group 4 (i.e., participants had no experience with a specific brand and perceived that the brand image and self image were inconsistent). Hypothesis 14 was formulated to examine the differences among the quasi-experimental groups in perceived risk. Hypothesis 15 was formulated to examine the differences among the quasi-experimental groups in purchase intention.

Based on the framework, hypotheses 14 and 15 were formulated as below:

*Hypothesis 14:* There will be a significant difference in perceived risk in buying apparel products of a specific brand online among the four experimental groups.

H14a: Participants who have experience with a specific brand will perceive less risk in buying apparel products of the brand online.

H14b: Participants who perceive the image of the brand as consistent with their self-image will perceive less risk in buying apparel products of the brand online.

*Hypothesis 15:* There will be a significant difference in purchase intention in buying apparel products of a specific brand online among the four experimental groups.

H15a: Participants who have experience with a specific brand will have higher purchase intention in buying apparel products of the brand online.

H15b: Participants who perceive the image of the brand as consistent with their self-image will have higher purchase intention in buying apparel products of the brand online.

## **CHAPTER IV**

### **RESEARCH METHODS**

This chapter describes the research method used for the current study in the following four sections. The first section on research design describes the development of the quasi-experimental design. The second section presents instrument development which describes each measure included in the questionnaire and the efforts in increasing the validity and reliability of the instrument. The third section covers subject selection and the fourth section addresses the procedure for conducting the data collection. The data analysis discussing of the statistical methods used to analyze the data is located in the last section of this chapter.

#### **Research Design**

The research design of this study combined a quasi-experimental design and a survey research design. In quasi-experimental designs, control and experimental groups are used in the study, but subjects are not randomly assigned to the groups (Creswell, 1994). A quasi-experimental design compares the groups of people to determine if the behavior of people in a control group is different from the behavior of people in an experimental group. If there is a significant difference, the results will indicate which treatments or characteristics of people may have an effect on that difference (Bawden & Sonenstein, n. d.). In social science, a quasi-experimental design for comparing groups is often used when random assignments of subjects are difficult to employ. For example, it is impossible to assign randomly individuals when a specific characteristic is desired in each group. However, quasi-experimental design is considered as one type of experimental design that can determine causal relationships because quasi-experimental research design incorporates the essential attributes of traditional experimental designs such as the identification of a control group (Lawler, 1977).

A 2 x 2 quasi-experimental between subjects design was used in this study to examine if experience with a specific brand and brand-self image congruity were the antecedents of perceived risk and purchase intention in the apparel online shopping context. The independent variables of this quasi-experimental design were experiences with a specific brand (i.e., experience, no experience) and brand-self image congruity (i.e., consistent image, inconsistent image). The dependent variables were perceived risk and purchase intention. This design results in four experimental groups. Table 4.1 shows the four combinations of the conditions. Participants in each group selected one particular brand that fulfilled the condition assigned to each group and then answered the questionnaire based on the selected brand. For example, participants in Group 1 selected one apparel brand that fulfilled two conditions: (a) they had purchased and worn the brand before and (b) the image of the brand was consistent with their own image. Participants in Group 4 selected one apparel brand that (a) they had heard about the brand, but never purchased or worn it before and (b) the image of the brand was not consistent with their own image.

**Table 4.1 Quasi-Experimental Design**

Experience with a Specific Brand	Brand-Self Image Congruity	
	Consistent Image	Inconsistent Image
Experience with a Specific Brand	<p><u>Group 1</u></p> <ul style="list-style-type: none"> <li>• Brand Experience</li> <li>• Consistent Image</li> </ul>	<p><u>Group 2</u></p> <ul style="list-style-type: none"> <li>• Brand Experience</li> <li>• Inconsistent Image</li> </ul>
No Experience with a Specific Brand	<p><u>Group 3</u></p> <ul style="list-style-type: none"> <li>• No Brand Experience</li> <li>• Consistent Image</li> </ul>	<p><u>Group 4</u></p> <ul style="list-style-type: none"> <li>• No Brand Experience</li> <li>• Inconsistent Image</li> </ul>

In addition to the quasi-experimental design to examine the effects of experience with a specific brand and brand-self image congruity on perceived risk and purchase intention, a survey design was used to examine the relationships among experiences with catalog, TV, and online shopping for apparel products and the relationships among experience with apparel online shopping, perceived risk and purchase intention.

## Instrument Development

The development of the measurement for this study followed the procedures recommended by Churchill (1979) and DeVellis (1991). The questionnaires used in the four experimental groups were identical in general, but the conditions for selecting a specific brand were different for each experimental group. Table 4.2 shows the four conditions given to each group. A list of brands that carried both men and women's apparel products and that were sold online was given to Groups 3 and 4 as a reference because it would be possible that some participants might not be able to recall the brand names that they had heard about, but never purchased or worn it before. Participants were allowed to select another brand that was not included in the list.

**Table 4.2 Condition for Each Experimental Group**

<b>Group Number</b>	<b>Condition</b>
Group 1	I have purchased and worn this brand before. The image of the brand is consistent with my own image.
Group 2	I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.
Group 3	I have heard about this brand. The image of the brand is consistent with my own image. However, I have never purchased or worn this brand before.
Group 4	I have heard about this brand, but I have never purchased or worn it before. The image of the brand is not consistent with my own image.

In the questionnaires used for Groups 1 and 2, six questions were used to measure the valence and the extent of the experience with the brand that the participants selected based on the conditions given in each experimental group. These questions were removed from the questionnaires for Group 3 and Group 4 because participants in these groups were asked to select an apparel brand that they did not previously purchase or wear. Therefore, the questions about the experience with the selected brand were not applicable for the participants to answer. The final copy of the questionnaire for all groups is presented in Appendix A.



## Measures of Variables

Table 4.3 shows the questions used to measure each variable, including consumer's experiences with in-home shopping channels (i.e., catalog, TV, online), experience with a specific brand, brand-self image congruity, perceived risk, and purchase intention. Measurement of each variable is discussed in the following sections. The scores used in the hypothesis tests were the average of the multiple items used to measure each variable.

**Table 4.3 Measures of Variables**

Variable	Construct	Question Number
Experience with Apparel Catalog Shopping	Extent of Experience	43-45
	Valence of Experience	46-48
Experience with Apparel TV Shopping	Extent of Experience	49-51
	Valence of Experience	52-54
Experience with Apparel Online Shopping	Extent of Experience	55-57
	Valence of Experience	58-60
Experience with Brands	Extent of Experience	3-5
	Valence of Experience	6-8
Brand-Self Image Congruity	Actual Self	15-17
	Ideal Self	18-20
Perceived Risk		21-39
Purchase Intention		40-42

### Measures of Experiences with In-Home Shopping Channels

Participants' previous experiences with three in-home shopping channels (i.e., catalog, TV, online shopping) were measured. Researchers measure the valence (i.e., feelings) and extent (e.g., frequency of purchase, number of item purchased, amount of money spent) of the experience when measuring experience, and therefore, for the experience with each channel, three questions were used to measure the extent of the experiences and three questions were used to measure the valence of the experience. The three questions measured the extent of the experience were adapted from Klopping and McKinney (2003) and Seock (2003) (see Table 4.4). Questions included the measures of the frequency of purchasing apparel products via catalog, TV or online, the amount of money spent in apparel

via catalog, TV or online shopping, and the number of items bought through apparel catalog, TV or online shopping. “None” or “Never” (0) was included in the range of scales related to catalog shopping and TV shopping so that participants who did not have any experience with catalog or TV shopping could also answer each question. The three questions that measured the valence of experiences were adapted from Mano and Oliver (1993) (see Table 4.4). Questions included the measures of feeling of experience such as good/bad experience, enjoyable/unenjoyable experience, and satisfied/dissatisfied experience via catalog, TV and online shopping. For example, “Purchasing apparel products from (catalogs, TV retailers, or online) has been a good experience” was asked to measure the valence of the experience. The response format for the questions was a six-point scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (6). “Not Applicable” was included in the range of scales related to catalog shopping and TV shopping so that participants who did not have any experience with catalog or TV shopping could also answer each question.

**Table 4.4 Measures of Experiences with In-Home Shopping**

<b>Variable Measured</b>	<b>Questions</b>	<b>Source of Measure</b>
Extent of the Experience with Catalog/TV/Online Shopping	<ul style="list-style-type: none"> <li>• How often do (did) you purchase apparel products from (catalogs/TV retailers/online)?</li> </ul>	Klopping & McKinney (2003)
	<ul style="list-style-type: none"> <li>• How much have you spent on apparel products that you bought from (catalogs/TV retailers/online) in the last six months?</li> <li>• How many apparel products have you purchased from (catalogs/TV retailers/online) in the last six months?</li> </ul>	Seock (2003)
Valence of the Experience with Catalog/TV/Online Shopping	<ul style="list-style-type: none"> <li>• I have enjoyed shopping for apparel products from (catalogs/TV retailers/online).</li> <li>• Purchasing apparel products from (catalogs/TV retailers/online) has been a good experience.</li> <li>• I am satisfied with my experiences with buying and apparel products from (catalogs/TV retailers/online).</li> </ul>	Mano & Oliver (1993)

### Measures of Experience with a Specific Brand

In the questionnaires used in Groups 1 and 2, six questions were used to measure the valence and the extent of the experience with the brand that the participants selected based on the conditions given in each experimental group (see Table 4.5). These six questions were identical to the questions for measuring experience with apparel online shopping, but “experience with apparel online shopping” was changed to “experience with the brand you selected.” These questions were removed from the questionnaires for Group 3 and Group 4 because participants in these groups were asked to select an apparel brand that they did not purchase or wear. Therefore, the questions about the experience with the selected brand were not applicable, hence omitted. The extent of experience for participants in Groups 3 and 4 was coded as “0”, implying “None” or “Never.”

**Table 4.5 Measures of Experience with a Specific Brand**

<b>Variable Measured</b>	<b>Questions</b>	<b>Source of Measure</b>
Extent of the Experience with a Specific Brand	<ul style="list-style-type: none"><li>• How often do (did) you purchase apparel products of the selected brand?</li></ul>	Klopping & McKinney (2003)
	<ul style="list-style-type: none"><li>• How much have you spent on apparel products of the selected brand in the last six months?</li><li>• How many apparel products of the selected brand have you purchased in the last six months?</li></ul>	Seock (2003)
Valence of the Experience with a Specific Brand	<ul style="list-style-type: none"><li>• I have enjoyed purchasing and wearing apparel products of the selected brand</li><li>• Purchasing and wearing apparel products of the selected brand has been a good experience</li><li>• I am satisfied with my experiences with buying and wearing apparel products of the selected brand</li></ul>	Mano & Oliver (1993)

### Measures of Brand-Self Image Congruity

Two types of self-concept (i.e., actual self, ideal self) were included in the measure of brand-self image congruity. Three questions were included to measure the actual brand-self image congruity (e.g., “The image of the selected brand is consistent with how I see myself.”

and three questions were used to measure the ideal brand-self image congruity (e.g., “The image of the selected brand is consistent with how I would like to be.”) (see Table 4.6). These six questions were adapted from Han (2006) and were measured by using a six-point scale that ranged from “Strongly Disagree” (1) to “Strongly Agree” (6). Han reported that the reliabilities of congruity with actual self-image and with ideal self-image were 0.90 and 0.91, respectively.

**Table 4.6 Measures of Brand-Self Image Congruity**

Variable Measured	Question	Source of Measure
Brand-Actual Self Image Congruity	<ul style="list-style-type: none"> <li>• The image of the selected brand is consistent with how I see myself.</li> <li>• The overall image of the people who wear the selected brand is consistent with my own image.</li> <li>• Wearing selected brand reflects who I am.</li> </ul>	Han (2006)
Brand-Ideal Self Image Congruity	<ul style="list-style-type: none"> <li>• The image of the selected brand is consistent with how I would like to be.</li> <li>• The image I would like to be is consistent with the overall image of people who wear the selected brand.</li> <li>• Wearing selected brand reflects who I would like to be.</li> </ul>	

Measures of Perceived Risk in Buying a Specific Brand Online

To measure perceived risk, participants were asked the perceived risk of purchasing apparel products online of the brand that they selected based on the condition given in each group. A total of 18 questions were adapted from Park and Stoel (2005); for example, “I am confident that the apparel product that I purchase online of the selected brand will be durable after washing.”; “I can be certain that I will save money and time in purchasing apparel products online of the selected brand.”; “I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand.”; and “I can be certain that my friends will think that I look great when I wear the apparel products that I purchase online of the selected brand.” These questions were measured by a six-point scale, ranging from “Very Unlikely” (1) to “Very Likely” (6). Because the questions were stated in a positive way (i.e., a high score indicated more confidence and less perceived risk), the scales were reverse-coded (e.g., “1” was coded as “6”; “2” was coded as “5”) to reduce errors in

interpretation so that higher numbers on the scale would refer to higher degrees of perceived risk.

#### Measures of Purchase Intention in Buying a Specific Brand Online

To measure purchase intention, three questions, adapted from Park and Stoel (2005), were included to measure how likely participants would purchase apparel products online of the brand that they selected. A six-point scale ranging from “Very Unlikely” (1) to “Very Likely” were used for the two likelihood questions of purchase intention: “How likely is it that you will purchase the selected brand online the next time when you need an apparel product?” and “How likely is it that you will purchase the selected brand online the next time when you need an apparel product?” A six-point scale ranging from “Very Low” (1) to “Very High” (6) was used for the probability question of purchase intention, “The probability of buying the selected brand in the future when you shop for apparel products online is \_\_\_\_.”

#### Measures of Demographics

The last section of the instrument consisted of eight questions about demographic characteristics: gender, age, education, occupation, race, marital status, yearly household income, and monthly apparel product expenditure. Questions were adapted from several previous studies (Park, 2002; Shim et al., 2001; Seock, 2003). All response categories were developed based on U.S. Census categories in order to compare the study results with U.S. Census data. For example, occupations are categorized into five different areas. They were: (a) Management, professional, and related occupations, (b) Service occupations, (c) Sales and office occupations, (d) Construction, extraction, and maintenance occupations, and (e) Production, transportation, and material moving occupations. However, based on the responses from the pilot test, retired, homemaker, and student categories were added to the occupation scale for those participants who did not work in industries for living.

#### **Efforts in Increasing Validity and Reliability of Instrument**

Measure of variables should have validity and reliability in order to draw valid inferences from the research (Cronbach, 1971; Nunnally, 1978). Following sections discuss the efforts in increasing the validity and reliability of the instrument used in the current study.

### Validity of Instrument

The validity of an instrument refers to how well it captures what it is designed to measure (Rosenthal & Rosnow, 1984). To increase the validity of the instrument, the operational definition of each variable in the study was specified based on theories and previous literature. A conceptual framework was developed, and each relationship in the framework was supported by theories or previous literature. To measure the variables included in the study, previously used questions were collected for each variable to capture various constructs that compose the concept of each variable. The collected questions were reviewed to examine if the question represented the same definition of the variable used in the current study. The validity of the instrument was first assessed by asking experts to examine and provide feedback for revision. The expert panel included four university faculties who have extensive experiences in marketing research and research design. These researchers were asked to provide feedback regarding the content, layout, wording and ease of understanding the measurement items. Based on faculty members' feedback, changes were made to clarify and eliminate ambiguous statements in instructions and questions. The revised questionnaire then was pilot tested three times using convenience samples to examine the clarity of the questionnaire. There were 34 participants in the first pilot test, 54 in the second test, and 21 in the third test. In each pilot test, every experimental group consisted of at least 12 subjects in three age categories: the age group of 20-39 years old, 40-59 years old, and 60 and above. Based on the feedback of each pilot test, the order of the questions and the wording in some instructions and questions were revised to increase the ease of understanding.

### Reliability of Instrument

Reliability deals with how consistently similar measures produce similar results (Rosenthal & Rosnow, 1984) and it contains two dimensions: repeatability and internal consistency (Zigmond, 1995). Repeatability is the degree to which an instrument shows the same results each time it is used under the same condition with the same subjects. In the development of an instrument, the concern is focused on the internal consistency in the questionnaire. Internal consistency refers to the ability of a scale item to correlate with other items in the scale that are intended to measure the same construct. Items measuring the same

construct are expected to be positively correlated with each other. To increase the internal consistency, multiple questions were used to measure the same construct. A common measure of the internal consistency of an instrument is Cronbach's alpha. If the reliability is not acceptably high, the scale can be revised by altering or deleting items that have scores lower than a pre-determined cut-off point. Nunnally and Bernstein (1994) indicated that an instrument is considered to have good reliability if it has an overall alpha value greater than .70. Hair, Tatham, Anderson, and Black (1998) and Leedy (1997) suggested that if a scale used to measure a construct has an alpha value greater than .70, the scale is considered reliable in measuring the construct. According to the pilot test data, the overall Cronbach's alpha of the instrument was .85. Cronbach's alpha of each construct was listed in Table 4.7. All alpha values were equal to or greater than .82, indicating that the internal reliability of the measure instrument for each construct was also acceptable.

**Table 4.7 Cronbach's Alpha Coefficients of the Scale of Each Variable in Pilot Test**

<b>Scale of Each Variable</b>	<b>Cronbach's Alpha</b>
Extent of the Experience with Catalog Shopping (3 items)	.89
Valence of the Experience with Catalog Shopping (3 items)	.99
Extent of the Experience with TV Shopping (3 items)	.89
Valence of the Experience with TV Shopping (3 items)	.93
Extent of the Experience with Online Shopping (3 items)	.82
Valence of the Experience with Online Shopping (3 items)	.84
Extent of the Experience with a Specific Brand (3 items)	.91
Valence of the Experience with a Specific Brand (3 items)	.99
Brand-Self Congruity (6 items)	.95
Perceived Risk (18 items)	.88
Purchase Intention (3 items)	.96

## **Subject Selection**

The subjects of the current study were residents in the United States, age 20 and older who had experience with buying apparel products online within the last six months. Participants age 20 and older were selected based on the age categories used in the U.S. Census, which are in five-year interval (e.g., 15 - 19, 20 - 24, 25 - 29). Because subjects younger than 18 require parental consent before they can participate in the study, subjects younger than 20 years old will not be included in the study. Because the focus of this study was apparel online shopping, participants who did not have experience with buying apparel products online were excluded. To increase the accuracy of retrieving the memory of shopping experience, many researchers have used a six months period when measuring purchase frequency of online shopping (Martinez-Lopez, Luna, & Martinez, 2005; McCloskey, 2006; Zhang, Prybutok, & Strutton, 2007); therefore, “participants who had an experience with buying apparel products online within the last six months” was set as the criterion for the subject selection. A national sample was recruited by a survey company and a total of 455 subjects completed surveys in the study. The survey company provides a proprietary marketing research panel that contains more than two million subjects. The demographic distribution of the panel is similar to U.S. Census data to ensure population representation. Appendix B includes the graphs that compared the U.S. Census 2000 data and the survey company populations in age, gender, and income. The profiles of the members of the survey company are different from the participants in the current study. The comparison of the profiles between the members of the survey company and the participants in the current study is given in the findings in Chapter V.

## **Data Collection Procedure**

Data was collected by using an online survey method. Four questionnaires, based on the quasi-experimental design, were developed and uploaded on the survey company’s website. The online survey company recruited its members as the participants of the current study who joined the company to participate in various surveys. When they completed in answering the questionnaire, participants received points as a credit that could be redeemable for gift cards, charitable donations and merchandise such as electronics, books, magazine



subscriptions, and music downloads. Participants gave consent through the signed terms of use agreement and a privacy policy when they acquired a membership. For the current study, the company collected the members who were residents in the United States, age 20 and older, and had an experience of shopping for an apparel product online within the last six months. They were randomly assigned into one of the four experimental groups, and invited via email to participate in the survey. The members who received an invitation entered the designated survey by clicking the link provided; therefore, they were prohibited from seeing the other three surveys. In the questionnaire, participants were asked to select an apparel brand that fulfilled the given conditions and write down the brand name that they selected. If the participants could not select a brand of the given condition, he or she was eliminated from the survey. The data collection for the four groups started at the same time and closed as each group had a minimum of 100 subjects who completed all the questions in the survey.

### **Data Analysis**

The data gathered from the online survey was recorded and then analyzed by using the Statistical Package for the Social Sciences (SPSS) 15.0 and Analysis of Moment Structure (AMOS) 7.0. Descriptive statistics such as frequency, percentage, distribution, mean, and standard deviation were used to examine the demographic characteristics of participants. Confirmatory factor analysis was used to examine the construct of each variable and Cronbach's alpha was calculated to examine the reliability of the construct. A significant level of .05 was used as the standard for the determination of supporting or not supporting the hypotheses.

For hypothesis testing, multiple regression analyses were used to examine hypotheses 1 and 2. Hypothesis 1 was examined for all participants, and hypothesis 2 was examined for participants who had experience with buying apparel products from catalogs and TV retailers.

Two structural models (SEM) were developed. The first SEM was developed to examine the proposed Hypotheses 3 to 7 for all participants, and the second SEM was developed to examine the proposed Hypotheses 8 to 13 for the participants who had experience with a specific brand. SEM provides a method to identify multiple relationships

and high statistical efficiency (Hair et al., 1998). Chi-square value greater than 4.00 was used to remove any restriction or include new path between variables in the model. The reason of setting the criterion at 4.00 was that the critical value in chi-square distribution with one degree of freedom is 3.84. If the drop in chi-square is less than 3.84, the change will not be significant. For convenience, the value 4.00 is used instead of the exact value of 3.84 (*Structural Equation Modeling with AMOS*, 2005). To examine the model fit, chi-square value divided by degrees of freedom (CMIN/DF) (i.e., relative chi-square) was reported as an alternative for the chi-square test because chi-square test is sensitive to sample size. In larger samples, the chi-square test almost always leads to rejection of the model, indicating that the model under study is valid, but the model will be difficult to reject in small samples (*Structural Equation Modeling with AMOS*, 2005). In CMIN/DF, degree of freedom is put into consideration, and thus, it is less dependent on sample size (Garson, n. d.). Carmines and McIver (1981) claimed that a  $CMIN/DF \leq 3$  indicated an acceptable fit. Both absolute indexes and comparative indexes of fit were used. Goodness of fit index (GFI) and adjusted goodness of fit model (AGFI) are classified as absolute indexes of fit because they compare the hypothesized model with no model (Hu & Bentler, 1995). An index value of equal or greater than .90 was used as the indicator of acceptable fit (Byrne, 2001; *Structural Equation Modeling with AMOS*, 2005). Comparative indexes of fit are based on a comparison of the hypothesized model and standard models (e.g., the independence model), which represents a baseline model. Among the comparative indexes of fit, Incremental-fit-index (IFI), Comparative-fit-index (CFI) and Bentler-Bonett Normed-fit-index (NFI) were used because these indexes take sample size and degree of freedom into account, which are considered as better indexes. An index value closer to 0.95 was used as the indicator of good fit based on the suggestion of Hu and Bentler (1995). In addition to the six absolute and comparative indexes of fit, the root mean square error of approximation (RMSEA), one of the most informative criteria in covariance structure modeling, was also used to examine the model fit (Byrne, 2001). It takes into account the error of approximation in the population and the index value less than .80 was used as the indicator of acceptable fit based on the suggestion of Browne and Cudeck (1993). The standardized regression weight ( $\beta$ ) was reported to identify the critical factors that contribute the most to dependent variables. The squared

multiple regression ( $R^2$ ) for each endogenous variable was reported to indicate the percentage of variance explained by the predictors of endogenous variable.

Two-way Analysis of Variances (ANOVA) were used to examine Hypotheses 14 and 15, to examine the differences among the experimental groups in perceived risk and in purchase intention in buying apparel products of a specific brand online. Group means were compared to determine if there was a significant difference among groups. If a significant difference existed, Tukey's Honestly Significantly Different Test (THSDT), one of the *post hoc* analyses, was used to compare the differences among groups.

## **CHAPTER V**

### **RESULTS**

This chapter presents and discusses the results of the data analysis and hypothesis testing in five sections. The first section describes the profiles of participants including participation rate and demographic characteristics. The second section discusses the preliminary analysis of measured variables including normalization and confirmation of the measures and the reliability of instrument used in the study. The third section presents the results of the hypothesis testing. The fourth section reports the additional findings from the open-ended questions. Summary of the results are provided at the end of this chapter.

#### **Profiles of Participants**

Participants' profiles are described in the following two sections. The first section discusses the participation rate in the survey between the four quasi-experimental groups. The second section describes participants' demographic characteristics, including gender, age, education, occupation, ethnic background, and income.

#### **Participation Rate in Each Group**

In the current study, a 2 x 2 quasi-experimental design consisting of two levels of experience with a specific brand (i.e., experience, no experience) and two levels of brand-self image congruity (i.e., consistent image, inconsistent image) was developed. This research design resulted in four experimental groups (see Table 5.1). Table 5.1 shows the number of subjects who participated in each group. A total of 624 persons participated in the study. In the survey, participants were first asked if they could select one apparel brand that fulfilled the given condition. If participants could not select one brand, they were eliminated from the

**Table 5.1 Number of Participants in Surveys**

<b>Group Number</b>	<b>Eliminated % (N)</b>	<b>Incomplete % (N)</b>	<b>Data Used % (N)</b>	<b>Total % (N)</b>
<i>Group 1</i> Experience/ Consistent Image	22.7% (35)	2.6% (4)	74.7% (115)	100% (154)
<i>Group 2</i> Experience/ Inconsistent Image	29.0% (51)	9.6% (17)	61.4% (108)	100% (176)
<i>Group 3</i> No experience/ Consistent Image	18.0% (26)	2.7% (4)	79.3% (115)	100% (145)
<i>Group 4</i> No Experience/ Inconsistent Image	11.4% (17)	10.1% (15)	78.5% (117)	100% (149)
Total	20.7% (129)	6.4% (40)	72.9% (455)	100% (624)

surveys, and only participants who selected a brand could continue. Table 5.1 shows that participants in Group 2 were generally less able to select a brand for apparel products that fulfilled the condition given to the group (i.e., I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image) than those in the other three groups. More participants in Group 4 were able to select a brand to fulfill the condition (i.e., participants had no experience with a specific brand and perceived that the brand image and self image were inconsistent) compared to the rest of the groups.

### **Demographic Characteristics**

Table 5.2 shows the participants' demographic information in gender, age, and income, and the comparison of this profile to those of the survey company and the U.S. Census. The source of the demographic data of U.S. Census was retrieved from the 2008 Statistical Abstract: The National Data Book (n. d.), Census 2000 Briefs and Special Reports (n. d.), and American Community Survey (n. d.). Due to the information availability, most data was based on U.S. Census 2006, but age data was based on 2000, education based on 2007, and income data based on 2005. The chi-square test was used to compare the percentage of population distribution in each category between the current study and the survey company data, and between the current study and the U.S. Census data.

**Table 5.2 Comparison of the Current Study, Survey Company, and U.S. Census in Gender, Age, and Income**

Demographic Variable	Category	Current Study % (N)	Survey Company (%)	U.S. Census (%)	Comparison of Current Study and Survey Company	Comparison of Current Study and the U.S. Census
Gender	Male	52.7% (240)	33%	48.5%	$X^2(1, 455) = 41.80^*$	$X^2(1, 455) = 3.29$
	Female	47.3% (215)	67%	51.5%		
	Total	100.0% (455)	100%	100%		
Age	20 - 24 years old	8.4% ( 38)	15% <sup>a</sup>	9.8%	$X^2(3, 417) = 47.53^*{}^a$	$X^2(5, 455) = 39.10^*$
	25 - 34 years old	28.8% (131)	25%	18.7%		
	35 - 44 years old	22.6% (103)	23%	20.4%		
	45 - 54 years old	16.5% ( 75)	20%	19.8%		
	55 - 64 years old	9.2% ( 42)	17% <sup>b</sup>	14.2%		
	65 years and older	14.5% ( 66)		17.1%		
	Total	100.0% (455)	100%	100%		
Income	Under \$15,000	5.1% ( 22)	44% <sup>c</sup>	14.7%	$X^2(4, 455) = 263.24^*$	$X^2(6, 433) = 70.64^*$
	\$15,000 - \$24,999	5.8% ( 25)		12.4%		
	\$25,000 - \$34,999	11.8% ( 51)		11.4%		
	\$35,000 - \$49,999	15.9% ( 69)	17%	14.9%		
	\$50,000 - \$74,999	20.1% ( 87)	19%	18.4%		
	\$75,000 - \$99,999	15.2% ( 66)	10%	11.0%		
	\$100,000 and over	26.1% (113)	10%	17.2%		
	Total	100.0% (433)	100%	100%		

<sup>a</sup> The youngest age group of the survey company was 18 to 24 years old, and thus, the age group 20 - 24 years old was not included in the comparison.

<sup>b</sup> The oldest age group of the survey company was 55 and older.

<sup>c</sup> The lowest income group of the survey company was less than \$35,000.

\*  $p < .001$

Results showed that the percentage of male participants was slightly more than that of female participants in the study (see Table 5.2). Compared to the survey company, the gender distribution in the study was different from that of the survey company [ $X^2(1, 455) = 41.80, p < .001$ ]. The percentage of females was higher, and the percentage of males was lower in the survey company than those in the current study. However, compared to the U.S. Census data, the gender distribution in the study was not significantly different.

In the study, most participants were in the age brackets from 25 - 54 years old (67.9%). Because the youngest age group of the survey company was 18 to 24 years old, different from the category of the current study (i.e., 20 - 24), the data of this category was excluded in the comparison. Because the oldest age group of the survey company was 55 and older, different from the category of the current study (i.e., 55 - 64, 65 and older), the participants in the category of 55 - 64 and in the category of 65 and older were merged into one group for the comparison between the participants in the current study and the members of the survey company. The result showed that the age distribution in the study was significantly different from that of the survey company and the U.S. Census data [ $X^2(3, 417) = 47.53, p < .001, X^2(5, 455) = 39.10, p < .001$ , respectively]. A higher percentage of participants in the current study than that of the members of the survey company was in the category of 55 and older (23.7% vs. 17%). However, the percentage in the category of 55 - 64 years old was lower (9.2% vs. 14.2%), but the percentage in the category of 25 - 34 years old was higher than that in the U.S. Census (28.8% vs. 18.7%).

In the income category, the income groups of \$100,000 and over (26.1%) and \$50,000 - \$74,999 (20.1%) had the highest percentages of participants in the study. Because the lowest income group of the survey company was less than \$35,000, different from the category of the current study (i.e., under \$15,000, \$15,000 - 24,999, \$25,000 - 34,999), the participants in the categories of under \$15,000, \$15,000 - 24,999, and \$25,000 - 34,999 were merged into one group for the comparison between the participants in the current study and the members of the survey company. The results showed that the income distribution in the study was significantly different from that of the survey company and the U.S. Census data [ $X^2(4, 433) = 263.24, p < .001; X^2(6, 433) = 70.64, p < .001$ , respectively]. The percentage in the category of \$100,000 and over was larger than those in the survey company and the U.S. Census (26.1%; 10%; 17.2%, respectively). The percentage under \$35,000 was smaller than

that in the survey company (22.7% vs. 44%). The percentage under \$25,000 was smaller than that in the U.S. Census data (10.9% vs. 27.1%). These results of income comparison showed that the participants in the currently study were in significantly higher income brackets compared to the survey company and the U.S. population.

Table 5.3 showed the participants' demographics information and the comparison of the current study and U.S. Census in occupation, ethnic background and education. Regarding occupation, the majority of the participants were in the category of "management, professional, and related occupations" (56.5%). Compared to the U.S. Census, a significant difference was found [ $\chi^2(5, 307) = 77.66, p < .001$ ]. The percentage of participants in the study was greater in "management, professional, and related occupations" than the percentage shown in the U.S. Census data, while it showed smaller percentages in the occupations of Service, Construction/maintenance, and Production/transportation. Regarding ethnic background, the majority of the participants in the study were White (82.4%). There was a significant difference between the study and U.S. Census in ethnic background [ $\chi^2(4, 445) = 73.45, p < .001$ ]. The percentages in Black/African American and Other groups were smaller than those in the U.S. Census data, while the percentages of White and Asian groups were larger than those in the U.S. Census data. Regarding education, Bachelor's degree (33.0%) and some college (23.1%) were the education levels with the highest percentage of participants in the study. Compared to the U.S. Census data, a significant difference was found in the distribution of participants' education levels [ $\chi^2(7, 455) = 253.36, p < .001$ ]. The percentages of participants in elementary school and high school categories were smaller in the study than in the U.S. Census data, while the percentages of the participants in bachelor's degree, master's degree, profession degree, and doctoral degree were larger than those in the U.S. Census data. More participants in the currently study had achieved significantly higher education levels compared to the U.S. population.



**Table 5.3 Comparison of the Current Study and U.S. Census in Occupation, Ethnic Background, and Education**

Demographic Variable	Category	Current Study % (N)	U.S. Census (%)	Comparison of Current Study and the U.S. Census
Occupation <sup>a</sup>	Management, professional, and related occupations	56.5% (174)	34.0%	$X^2(5, 307) = 77.66^*$
	Service occupations	9.7% (30)	16.5%	
	Sales and office occupations	22.1% (68)	25.9%	
	Farming, fishing, and forestry occupations	0.6% (2)	0.6%	
	Construction, extraction, and maintenance occupations	3.3% (10)	10.0%	
	Production, transportation, and material moving occupations	7.8% (24)	13.0%	
	Total	100% (308)	100%	
Ethnic Background	American Indian or Alaska Native	1.8% (8)	0.9%	$X^2(4, 455) = 73.45^*$
	Asian	9.0% (41)	3.7%	
	Black or African American	4.4% (20)	12.7%	
	White	82.4% (375)	77.0%	
	Other	2.4% (11)	5.7%	
	Total	100% (455)	100%	
Education <sup>b</sup>	Elementary School Graduate	0.2% (1)	14.8%	$X^2(7, 455) = 253.36^*$
	High School Graduate	13.0% (59)	31.6%	
	Some College	23.1% (105)	19.1%	
	Associate's Degree (Occupational/Academic)	11.6% (53)	8.2%	
	Bachelor's Degree	33.0% (150)	17.5%	
	Master's Degree	11.4% (52)	6.2%	
	Professional Degree	4.2% (19)	1.4%	
	Doctoral Degree	3.5% (16)	1.2%	
Total	100% (455)	100%		

<sup>a</sup> The occupation of the U.S. Census data includes civilian employed population 16 years and over.

<sup>b</sup> The education of the U.S. Census data includes 18 years and over.

\*  $p < .001$

## **Preliminary Analysis of Measured Variables**

Preliminary analysis of measured variables in the study was discussed in three sections. The first section describes the normalization of the measures of the extent of experience. The second section discusses the validity and reliability of instrument. The third section presents the results of the descriptive statistics of each variable.

### **Normalization of the Measures of the Extent of Experience**

The extent of the experience in this study was measured by three questions asking the frequency of shopping, amount spent, and the quantity of apparel items purchased within the last six months. The three questions had different scale lengths; the question of the frequency of shopping had nine categories, the question of the amount spent had 10 categories, and the question for the quantity of apparel items purchased had six. Therefore, these items were normalized before averaging. Statistical normalization converts data derived from any normal distribution ( $\mu, \sigma^2$ ) into a standard normal distribution (0, 1) (Casella & Berger, 2002). The formula of statistical normalization is

$$Z \approx (X - X \text{ bar}) / S_X$$

Statistical normalization entails taking each response to the item (vector  $X$ ), subtracting the mean value for the item ( $X \text{ bar}$ ) from that response, and dividing the result by the item's standard deviation ( $S_X$ ). The result provides another vector  $Z$  that has standard normal distribution with zero mean and variance 1. This normalization process transformed various items in the questionnaire into an equal base.

### **Validity and Reliability of the Instrument**

In the current study, 11 variables were measured with multi-items. Factor analyses were used to examine the validity of this portion of the instrument. Factor analysis can determine whether multiple items used to measure each variable are related to one factor, indicating that these items measured the same construct. Factors with eigenvalues greater than 1.0 and factor loading of .50 suggested by Hair et al. (1998) were used as the criteria for retaining items. Principal Component Analyses with Quatrimax rotation was used for brand-

self image congruity and Varimax rotation was used for all other variables to obtain a clear pattern of loadings; that is, factors that were clearly marked by high loadings for some variables and low loadings for others (Horel, 1981; Nayak, Miohanty, Sahoo, & Sahoo, 1995). The number of participants in each factor analysis might be different because only the participants who had experience with a specific shopping channel or brand were selected. For example, when conducting the factor analysis for the experience with apparel catalog shopping, only the participants who had experience with apparel catalog shopping were selected. Discriminant validity (i.e., degree to which the construct does not correlate with other constructs) is frequently established using correlations (Ping, 1998). Ping suggested that correlations 0.6 or below in absolute value are generally accepted as evidence of measure distinctness, indicating that among the constructs, each construct has more unique (extracted) variance than shared variance.

Questions for the extent of experience and the valence of experience were analyzed together to verify if the items clearly belonged to two distinct constructs. The results showed that the valence and extent of the experiences with catalog shopping, with TV shopping, with online shopping, and with a specific brand were each extracted into two factors (see Tables 5.4, 5.6, 5.8 and 5.10). One factor contained the three items designed for the valence of the experience, and the other factor contained the three items designed for the extent of the experiences. The item correlations between the two constructs were analyzed, and the results showed that they were all below 0.6 in absolute value, indicating the discriminant validity is acceptable (see Tables 5.5, 5.7, 5.9, and 5.11). These results confirmed that the extent and valence of the experience were separate constructs.

The valence and extent of the experience with catalog shopping accounted for 49.7% and 29.5% of the variance, respectively (see Table 5.4). In total, the two factors accounted for 79.2% of the variance of experience with catalog. For the six items used to measure the experience with apparel TV shopping, the valence and extent of the experience accounted for 54.9% and 31.8% of the variance, respectively (see Table 5.6). Thus, the two factors accounted for 86.7% of the variance of experience with TV shopping. For the six questions used to examine the experience with online shopping, the valence and extent of the experience with online shopping accounted for 61.9% and 23.9% of the variance, and 85.8% of the total variance of experience with online shopping (see Table 5.8). The six items used

**Table 5.4 Results of Factor Analysis: Valence and Extent of Experiences with Apparel Catalog Shopping (N = 258)**

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Experience with Apparel Catalog Shopping	<i>Valence of Experience</i>		2.98	49.7%	.92
	1. Purchasing apparel products from catalogs has been a good experience.	.95			
	2. I am satisfied with my experiences with buying and apparel products from catalogs.	.93			
	3. I have enjoyed shopping for apparel products from catalogs.	.87			
	<i>Extent of Experience</i>		1.77	29.5%	.80
	1. How much have you spent on apparel products that you bought from catalogs in the last six months?	.88			
2. How many apparel products have you purchased from catalogs in the last six months?	.86				
3. How often do (did) you purchase apparel products from catalogs?	.78				
				Total 79.2%	

**Table 5.5 Correlation Matrix of Valence and Extent of Experiences with Apparel Catalog Shopping**

Construct	Valence 1	Valence 2	Valence 3
<b>Extent 1</b>	.10	.16	.15
<b>Extent 2</b>	.10	.17	.18
<b>Extent 3</b>	.25	.34	.31

NOTE: The item numbers in Table 5.5 is identical with that in Table 5.4.

**Table 5.6 Results of Factor Analysis: Valence and Extent of Experiences with Apparel TV Shopping (N = 93)**

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Experience with Apparel TV Shopping	<i>Valence of Experience</i>		3.29	54.9%	.95
	1. Purchasing apparel products from TV retailers has been a good experience.	.92			
	2. I am satisfied with my experiences with buying and apparel products from TV retailers.	.95			
	3. I have enjoyed shopping for apparel products from TV retailers.	.95	1.19	31.8%	.88
	<i>Extent of Experience</i>				
	1. How much have you spent on apparel products that you bought from TV retailers in the last six months?	.92			
2. How many apparel products have you purchased from TV retailers in the last six months?	.90				
3. How often do (did) you purchase apparel products from TV retailers?	.87	Total 86.7%			

**Table 5.7 Correlation Matrix of Valence and Extent of Experiences with Apparel TV Shopping**

Construct	Valence 1	Valence 2	Valence 3
<b>Extent 1</b>	.15	.06	.15
<b>Extent 2</b>	.24	.17	.24
<b>Extent 3</b>	.42	.13	.35

NOTE: The item numbers in Table 5.7 is identical with that in Table 5.6.

**Table 5.8 Results of Factor Analysis: Valence and Extent of Experiences with Apparel Online Shopping (N = 455)**

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Experience with Apparel Online Shopping	<i>Valence of Experience</i>		1.43	61.9%	.96
	1. Purchasing apparel products online has been a good experience.	.95			
	2. I am satisfied with my experiences with buying and apparel products online.	.95			
	3. I have enjoyed shopping for apparel products online.	.92	3.72	23.9%	.86
	<i>Extent of Experience</i>				
	1. How much have you spent on apparel products that you bought online in the last six months?	.89			
2. How many apparel products have you purchased online in the last six months?	.88	Total 85.8%			
3. How often do (did) you purchase apparel products online?	.80				

**Table 5.9 Correlation Matrix of Valence and Extent of Experiences with Apparel Online Shopping**

Construct	Valence 1	Valence 2	Valence 3
<b>Extent 1</b>	.36	.35	.36
<b>Extent 2</b>	.32	.30	.35
<b>Extent 3</b>	.44	.44	.50

NOTE: The item numbers in Table 5.9 is identical with that in Table 5.8.

**Table 5.10 Results of Factor Analysis: Valence and Extent of Experiences with a Specific Brand (N = 223)**

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Experience with a Specific Brand	<i>Valence of Experience</i>		3.53	58.9%	.97
	1. Purchasing apparel products of the selected brand has been a good experience.	.96			
	2. I am satisfied with my experiences with buying and apparel products of the selected brand.	.96			
	3. I have enjoyed shopping for apparel products of the selected brand.	.93			
	<i>Extent of Experience</i>		1.58	26.3%	.85
	1. How much have you spent on apparel products of the selected brand you bought in the last six months?	.90			
	2. How many apparel products of the selected brand have you purchased in the last six months?	.84			
	3. How often do (did) you purchase apparel products of the selected brand?	.84			
				Total 85.2%	

**Table 5.11 Correlation Matrix of Valence and Extent of Experiences with a Specific Brand**

Construct	Valence 1	Valence 2	Valence 3
<b>Extent 1</b>	.34	.33	.37
<b>Extent 2</b>	.27	.28	.29
<b>Extent 3</b>	.29	.29	.35

NOTE: The item numbers in Table 5.11 is identical with that in Table 5.10.

to measure the valence and extent of the experience with a specific brand accounted for 58.9% and 26.3% of the variance (see Table 5.10). The two factors accounted for 85.2% of the total variance of experience with a specific brand.

To measure brand-self image congruity, three questions were used to measure the congruity between the perceived brand image and participants' actual self-concept and three questions were used to measure the congruity between the perceived brand image and participants' ideal self-concept. However, the ratings of the six items were comprised one factor, indicating that these items all measured the same construct (see Appendix C). The six measures accounted for 89.0% of the variable variance. Eighteen items were used to measure perceived risk, and the factor analysis revealed two factors. Seventeen questions were in the first factor and only one question was in the second factor, indicating that only this question might have measured a different construct of perceived risk compared to the rest of questions (see Appendix D). Therefore, the question "I can be certain that I will lose money if I purchase apparel products online of the selected brand" was omitted. The seventeen items accounted for 67.2% of the variable variance. Three questions were used to measure purchase intention and comprised one factor, indicating that these items measured the same construct (see Appendix E). The three measures accounted for 94.9% of the variable variance.

Cronbach's alpha values were computed to test the internal consistency aspect of reliability of the multi-item scales measuring the 11 above variables. According to Nunnally and Bernstein (1994), a scale is considered to have good reliability if it has an alpha value greater than 0.70. Hair et al, (1998) suggest that reliability estimates between 0.60 and 0.70 represent the lower limit of acceptability for reliability estimates. In the current study, an alpha value greater than 0.70 was used for the criterion to determine the acceptance of reliability of the instrument. The alpha coefficients of the extent and valence of the experiences with catalog shopping, TV shopping, online shopping, and a specific brand were shown in Tables 5.4, 5.6, 5.8, and 5.10. The alpha coefficients for brand-self image congruity, perceived risk, and purchase intention were .98, .96, and .97, respectively. The reliability results showed that all constructs had an alpha coefficient equal to or greater than .83, indicating that all measures had acceptable reliability.



## Results of Descriptive Statistics

The means and standard deviations for the extent and valence of experience with apparel catalog shopping and with apparel TV shopping, with apparel online shopping, and with a specific brand were shown in Tables 5.12, 5.13 and 5.14. The extent of the experiences was measured by three questions on various scales. The range of scale of each question was indicated in the tables. “0” indicated no experience and a greater rating indicated the participant had more experience. The comparison of the three questions measuring each extent of experience showed that participants tended to have most extent of experience with apparel online shopping (How often,  $M = 3.31$ ; How much,  $M = 4.17$ ; How many,  $M = 2.23$ ) while they had the least extent of the experience with apparel TV shopping (How often,  $M = .56$ ; How much,  $M = .54$ ; How many,  $M = 1.34$ ). The average of each extent of experience was calculated after the scales were normalized, which resulted in all .00, and thus, could not be used for comparison.

The three questions for the valence of experience were measured on a six-point scale, ranging from “Strongly Disagree” (1) to “Strongly Agree” (6). A greater rating indicated the participant had more positive feeling about their experience. To calculate the average of the valence of experience, only the participants who had the experience, and thus, could evaluate their valence of the experience were selected for the calculation. The comparison between all three questions measuring each valence of experience showed that the participants tended to have the most positive feeling about their experience with apparel online shopping ( $M = 4.65$ ), followed by apparel catalog shopping ( $M = 3.30$ ). The participants tended to have the least positive feeling with apparel TV shopping experience ( $M = .95$ ) (see Tables 5.12, 5.13 and 5.14).

**Table 5.12 Means and Standard Deviations: Extent and Valence of Experiences with Apparel Catalog Shopping and Apparel TV Shopping**

Item in Each Variable	Mean	Range of the Scale	SD
<b>Extent of Experience with Apparel Catalog Shopping</b>			
How often do (did) you purchase apparel products from catalogs?	2.07	0 - 9	1.90
How much have you spent on apparel products that you bought from catalogs in the last six months?	2.77	0 - 10	2.87
How many apparel products have you purchased from catalogs in the last six months?	1.28	0 - 10	1.54
<b>Average of the normalized above three items</b>	<b>.00*</b>		<b>.92*</b>
<b>Valence of Experience with Apparel Catalog Shopping</b>			
I have enjoyed shopping for apparel products from catalogs.	3.28	1 - 6	2.42
Purchasing apparel products from catalogs has been a good experience.	3.31	1 - 6	2.35
I am satisfied with my experiences with buying and apparel products from catalogs.	3.31	1 - 6	2.35
<b>Average of the above three items</b>	<b>3.30</b>		<b>2.32</b>
<b>Extent of Experience with Apparel TV Shopping</b>			
How often do (did) you purchase apparel products from TV retailers?	.56	0 - 9	1.40
How much have you spent on apparel products that you bought from TV retailers in the last six months?	.54	0 - 10	1.61
How many apparel products have you purchased from TV retailers in the last six months?	1.34	0 - 10	1.02
<b>Average of the normalized above three items</b>	<b>.00*</b>		<b>.95*</b>
<b>Valence of Experience with Apparel TV Shopping</b>			
I have enjoyed shopping for apparel products from TV retailers.	.94	1 - 6	1.92
Purchasing apparel products from TV retailers has been a good experience.	.96	1 - 6	1.94
I am satisfied with my experiences with buying and apparel products from TV retailers.	.95	1 - 6	1.91
<b>Average of the above three items</b>	<b>.95</b>		<b>1.90</b>

**Table 5.13 Means and Standard Deviations: Extent and Valence of Experiences with Apparel Online Shopping**

Item in Each Variable	Mean	Range of the Scale	SD
<b>Extent of Experience with Apparel Online Shopping</b>			
How often do (did) you purchase apparel products online?	3.31	1 - 9	1.60
How much have you spent on apparel products that you bought online in the last six months?	4.17	1 - 10	2.43
How many apparel products have you purchased online in the last six months?	2.23	1 - 10	1.43
<b>Average of the normalized above three items</b>	<b>.00*</b>		<b>.88*</b>
<b>Valence of Experience with Apparel Online Shopping</b>			
I have enjoyed shopping for apparel products online.	4.61	1 - 6	1.31
Purchasing apparel products online has been a good experience.	4.63	1 - 6	1.30
I am satisfied with my experiences with buying and apparel products online.	4.65	1 - 6	1.25
<b>Average of the above three items</b>	<b>4.65</b>		<b>1.23</b>

**Table 5.14 Means and Standard Deviations: Extent and Valence of Experiences with a Specific Brand**

Item in Each Variable	Mean	Range of the Scale	SD
<b>Extent of Experience with a Specific Brand</b>			
How often do (did) you purchase apparel products of the selected brand?	1.46	0 - 9	1.90
How much have you spent on apparel products of the selected brand that you bought in the last six months?	1.82	0 - 10	2.44
How many apparel products of the selected brand have you purchased in the last six months?	.87	0 - 10	1.20
<b>Average of the normalized above three items</b>	<b>.00*</b>		<b>.95*</b>
<b>Valence of Experience with a Specific Brand</b>			
I have enjoyed shopping for apparel products of the selected brand.	2.34	1 - 6	2.58
Purchasing apparel products of the selected brand has been a good experience.	2.32	1 - 6	2.56
I am satisfied with my experiences with buying and apparel products of the selected brand.	2.34	1 - 6	2.58
<b>Average of the above three items</b>	<b>2.33</b>		<b>2.56</b>

Table 5.15 shows the means and standard deviations for brand-self image congruity. A total of six questions were included to measure brand-self image congruity with a six-point scale ranging from “Strongly Disagree” (1, indicating inconsistent image) to “Strongly Agree” (6, indicating consistent image). The means for all items were ranged between 3 and 4 in the middle of the given scale. The possible reason may be that participants in the Consistent Image Group were asked to select a brand that the brand image was consistent with their own image, and participants in the Inconsistent Image Group were asked to select a brand that the brand image was inconsistent with their image. After averaging the ratings from all participants, the mean scores all fell in the middle of the scale.

**Table 5.15 Means and Standard Deviations: Brand-Self Image Congruity**

<b>Item in Brand-Self Image Congruity</b>	<b>Mean</b>	<b>SD</b>
The image of the selected brand is consistent with how I see myself.	3.97	1.73
The overall image of the people who wear the selected brand is consistent with my own image.	3.73	1.46
Wearing selected brand reflects who I am.	3.78	1.71
The image of the selected brand is consistent with how I would like to be.	3.95	1.67
The image I would like to be is consistent with the overall image of people who wear the selected brand.	3.89	1.63
Wearing selected brand reflects who I would like to be.	3.78	1.76
<b>Average of the above six items</b>	<b>3.85</b>	<b>1.61</b>

Table 5.16 shows the means and standard deviations for perceived risk in buying a specific brand online. A total of 18 questions were measured by a six-point scale, ranging from “Very Unlikely” (1) to “Very Likely” (6). To reduce errors in interpretation, the scales were reverse-coded (e.g., “1” was coded as “6”; “2” was coded as “5”) so that higher numbers on the scale would refer to higher degrees of perceived risk. The means of the items in perceived risk were ranged from 2.31 to 3.18, indicating that participants tended to have low perceived risk in buying apparel products of a specific brand online.

**Table 5.16 Means and Standard Deviations: Perceived Risk in Buying a Specific Brand Online**

<b>Item in Perceived Risk in Buying a Specific Brand</b>	<b>Mean</b>	<b>SD</b>
I can be certain that when I buy the selected brand online, it will be the same as what I have expected.	2.45	1.27
I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.	2.90	1.42
I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.	2.46	1.19
I can be assured that the apparel product that I purchase online of the selected brand will look good on me.	2.80	1.44
I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.	2.79	1.41
I can be certain that I will save time by shopping apparel products online of the selected brand.	2.60	1.36
I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.	2.40	1.27
I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).	2.40	1.20
I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).	3.18	1.52
I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.	2.31	1.18
I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof).	2.79	1.46
I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.	2.86	1.44
I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.	2.94	1.46
I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand.	2.58	1.35
I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.	2.77	1.40
I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand.	2.57	1.28
I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).	2.74	1.32
<b>Average of the above 17 items</b>	<b>2.68</b>	<b>1.10</b>

Table 5.17 shows the means and standard deviations for purchase intention in buying a specific brand online. A six-point scale ranging from “Very Unlikely” (1) to “Very Likely” were used for the two likelihood questions of purchase intention, and a six-point scale ranging from “Very Low” (1) to “Very High” (6) was used for the probability question of purchase intention. The means for all items were ranged between 3 and 4, indicating that all means fell in the middle of the given scale.

**Table 5.17 Means and Standard Deviations: Purchase Intention in Buying a Specific Brand Online**

<b>Item in Purchase Intention in Buying a Specific Brand</b>	<b>Mean</b>	<b>SD</b>
How likely is it that you will purchase apparel products online of the selected brand?	3.55	1.84
How likely is it that you will purchase the selected brand online the next time when you need an apparel product?	3.34	1.79
The probability of buying the selected brand in the future when you shop for apparel products online is _____.	3.49	1.77
<b>Average of the three above items</b>	<b>3.46</b>	<b>1.75</b>

### **Results of Hypothesis Testing**

This section presents the results from testing each of the 15 research hypotheses proposed in Chapter III. Multiple regression analyses were used to examine Hypotheses 1 and 2 for participants who had experience with buying apparel products from catalogs and TV retailers. Two structural models (SEM) were used to examine Hypotheses 3 to 13. The first SEM examined Hypotheses 3 to 7 for all participants, and the second SEM examined Hypotheses 8 to 13 for the participants who had experience with a specific brand. Two-way ANOVAS were used to examine Hypotheses 14 and 15. THSDT was used to examine the differences between the experimental groups. The average score of the multi-items for each construct was calculated and used in the data analysis.

### **Relationship between Extent of Experience with Apparel Catalog/TV Shopping and Extent of Experience with Apparel Online Shopping (Hypothesis 1)**

Multiple regression analysis was used to examine H1 for all participants including the participants who did not have experience with a specific brand and the participants who had experience with the brand (N = 455). The predictor variables (i.e., independent variables) were (a) the extent of the experience with apparel catalog shopping and (b) the extent of the experience with apparel TV shopping. The dependent variable was the extent of the experience with apparel online shopping. The results showed that the squared multiple regression ( $R^2$ ) was .206, indicating that 20.6% of the variance in the extent of the experience with apparel online shopping was explained by the linear combination of the two predictor variables considered in the regression model. The test of the relative contributions of the independent variables explaining the extent of the experience with apparel online shopping only showed a significant  $t$ -value in the extent of the experience with apparel catalog shopping ( $t = 8.91, p < .001$ ) (see Table 5.18). These results indicated that participants who had more experiences with buying apparel products from catalogs had significantly more experiences with apparel online shopping; however, participants who had more experiences with buying apparel products on TV did not have significantly more experiences with apparel online shopping at the significance level of .05. Based on these results, H1a was supported. Participants who had more experiences with buying apparel products from catalogs had more experiences with apparel online shopping. However, H1b was not supported. Participants who had more experiences with buying apparel products on TV did not have significantly more experiences with apparel online shopping. Because H1a was supported but H1b was not, main H1 was partially supported. The extent of the experience with buying apparel products from catalogs was positively associated with the extent of the experience with apparel online shopping.

### **Relationship between Valence of Experience with Apparel Catalog/TV Shopping and Valence of Experience with Apparel Online Shopping (Hypothesis 2)**

Multiple regression analysis was also used to examine H2 for the participants who had the experiences with both catalog shopping and TV shopping for apparel products because the valence of the experience can be measured only when participants actually had the experience

**Table 5.18 Multiple Regression Analysis for H1: Relationships between Extent of Experience with Apparel Catalog/TV Shopping and Extent of Experience with Apparel Online Shopping**

Variable	Unstandardized Coefficient	Standardized Coefficient	t-value
Constant	.00		
Extent of Experience with Catalog Shopping	.41	.42	8.91*
Extent of Experience with TV Shopping	.06	.06	1.30

$R^2 = .206$ ,  $F(2, 452) = 58.56$ ,  $p < .001$ .

\*  $p < .001$

( $N = 93$ ). The predictor variables were (a) the valence of the experience with apparel catalog shopping and (b) the valence of the experience with apparel TV shopping. The dependent variable was the valence of the experience with apparel online shopping. The results showed that the squared multiple regression ( $R^2$ ) was .227, indicating that 22.7% of the variance in the valence of the experience with apparel online shopping was explained by the linear combination of the two predictor variables considered in the regression model. The test of the relative contributions of the independent variables explaining the valence of the experience with apparel online shopping showed a significant  $t$ -value only in the valence of the valence of the experience with apparel catalog shopping ( $t = 4.97$ ,  $p < .001$ ) (see Table 5.19). The results indicated that among the participants who had experience with both catalog and TV shopping, those who felt more positive about their experience with catalog shopping also felt more positive about their experience with apparel online shopping [ $F(2, 90) = 13.20$ ,  $p < .001$ ]; however, those who felt more positive about their experience with TV shopping did not feel significantly more positive about their experience with apparel online shopping at the significance level of .05. Based on the results, H2a was supported. Among the participants who had experience with both catalog and TV shopping, those who felt more positive about their experience with catalog shopping felt more positive about their experience with apparel online shopping. However, H2b was not supported. Participants who felt more positive about their experience with TV shopping did not feel significantly more positive about their experience with apparel online shopping. Because H2a was supported but H1b was not, the main H2 was partially supported. The valence



**Table 5.19 Multiple Regression Analysis for H2: Relationships between Valence of Experience with Apparel Catalog/TV Shopping and Valence of Experience with Apparel Online Shopping**

Variable	Unstandardized Coefficient	Standardized Coefficient	t-value
Constant	.40		
Valence of Experience with Catalog Shopping	.08	.47	4.97*
Valence of Experience with TV Shopping	.05	.05	.54

$R^2 = .227$ ,  $F(2, 90) = 13.20$ ,  $p < .001$ .

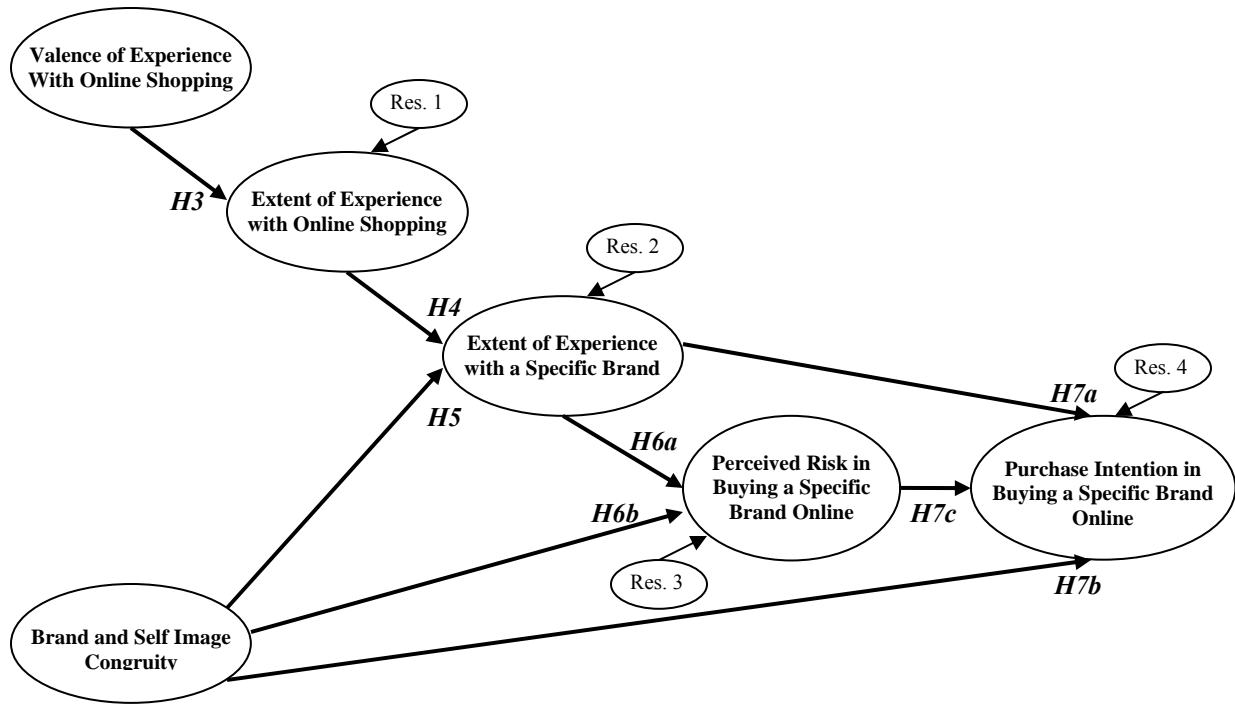
\*  $p < .001$

of the experience with buying apparel products from catalogs was positively associated with the valence of the experience with apparel online shopping.

### **First Structural Equation Model Development (Hypotheses 3 to 7)**

The first SEM was developed to examine the proposed Hypotheses 3 to 7 for all participants including participants who had experience with a specific brand and those did not have experience with the brand ( $N = 455$ ). Chi-square value divided by degrees of freedom (CMIN/DF) that was equal to or less than 3, Goodness-of-fit index (GFI) and Adjusted-goodness-of-fit (AGFI), Incremental-fit-index (IFI), Competitive-fit-index (CFI) and Bentler-Bonett Normed-fit-index (NFI) close to .95 were used as indicators of good fit (Hu & Bentler, 1999; *Structural Equation Modeling*, 2005). The root mean square error of approximation (RMSEA) less than .08 was also used as an indicator of acceptable fit based on the suggestion of Browne and Cudeck (1993).

To examine Hypotheses 3 to 7, a hypothesized model was developed and shown in Figure 5.1. The valence of the experience with online shopping and brand-self image congruity were the exogenous constructs, and the endogenous constructs were the extent of the experience with online shopping, the extent of the experience with a specific brand, perceived risk in buying a specific brand online, and purchase intention in buying a specific brand online. Each endogenous construct included a structural residual term.



**Figure 5.1 Hypothesized Model for H3 to H7**

Correlations between the six constructs for the model are presented in Table 5.20. The correlation matrix showed that the correlations among constructs were all positive, except of perceived risk. The correlations of perceived risk with other variables were negative because perceived risk conveyed negative meaning. For example, if participants perceived a high degree of risk, they should have a low degree of purchase intention. Correlations between variables were examined to assess multicollinearity, detecting if a high level of association between variables existed. Tsui, Ashford, St. Clair, and Xin (1995) suggested that the correlation should not exceed .75. The results of multiple correlation showed that the correlations between constructs were all equal to or smaller than .75, indicating no high multicollinearity, and thus, no variables represented the same underlying construct.

The fit indexes indicated that the fit of the hypothesized SEM was unacceptable (CMIN/DF = 19.14, GFI = .92, AGFI = .76, IFI = .88, CFI = .88, NFI = .88, RMSEA = .20). A poor fit model can be improved by examining modification indices or the standard residuals (Hair et al., 1998). When using AMOS, a set of modification indices is generated and these indices provide an estimation of the change in chi-square if a correlation between factors or an

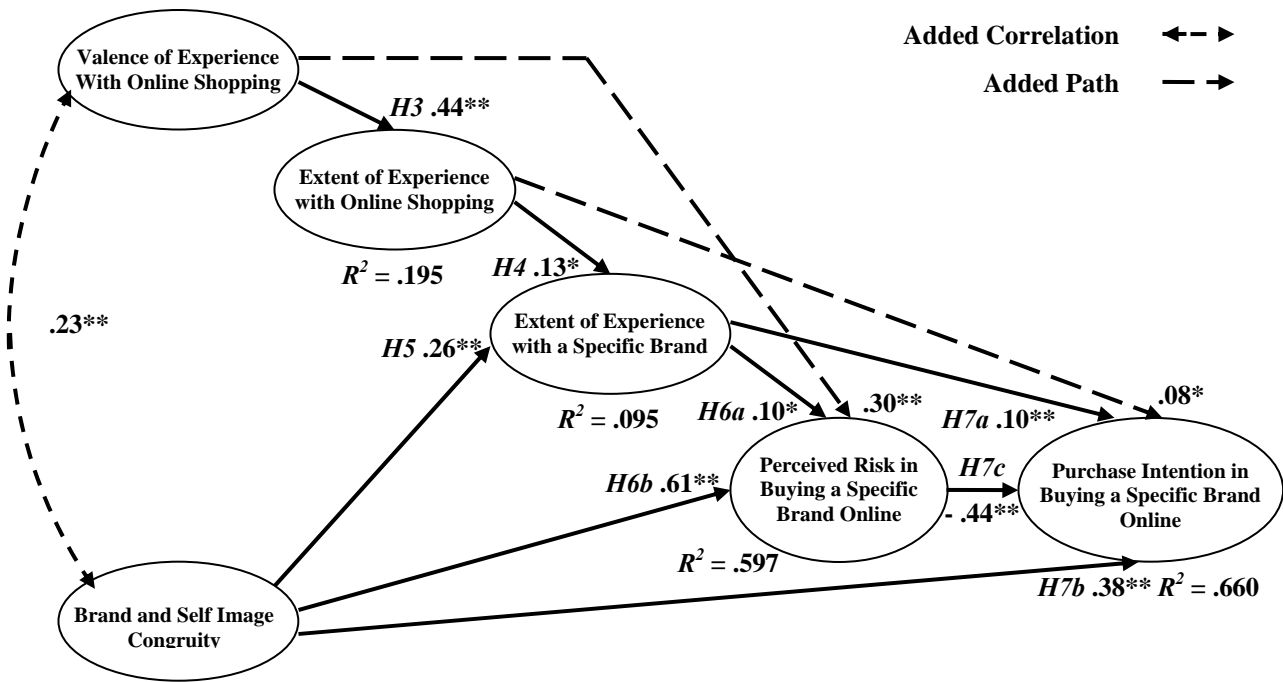
**Table 5.20 Correlation Matrix of Hypothesized Model for H3 to H7**

	Constructs Included in the Original Hypothesized Model					
	1	2	3	4	5	6
1. Valence of Experience with Online Shopping	1.00					
2. Extent of Experience with Online Shopping	.44	1.00				
3. Extent of Experience with a Specific Brand	.06	.14	1.00			
4. Brand and Self Image Congruity	.00	.00	.27	1.00		
5. Perceived Risk	- .01	- .01	- .29	- .71	- 1.00	
6. Purchase Intention	.01	.02	.34	.73	.75	1.00

additional structural path is added to improve model fit (Byrne, 2001). Based on the modification indices, correlations between factors and path between variables, which were related to larger reductions of chi-square, were identified and added one by one. Consequently, one correlation and two paths were added to improve the model fit to the data. The added correlation was between the valence of the experience with online shopping and brand-self image congruity. The direction of this correlation was positive, indicating that the valence of the experience with online shopping and brand-self image congruity are co-variances, or these variables changed together. When one variable was above its expected value, the other variable also tended to be above its expected value. The two added paths were: (a) from the valence of the experience with online shopping to perceived risk in buying a specific brand online and (b) from the extent of the experience with online shopping to purchase intention in buying a specific brand online. For the path from the valence of the experience with online shopping to perceived risk in buying a specific brand online, no previous study was found that investigated the effect of valence of the experience with online shopping on perceived risk in buying a specific brand online. However, Wu and Wu (1998) indicated that consumer experience provided a fundamental basis for perceptions of risk, and thus, positive experiences could reduce perceptions of high risk. Therefore, we infer that if participants felt positive about their experience with buying apparel products online, they would perceive less risk in buying apparel products of a specific brand online. The path from the extent of the experience with online shopping to purchase intention in

buying a specific brand online can be justified based on Park and Stoel's (2005) studies. The authors found a direct relationship between experiences with apparel online shopping and purchase intention in future apparel online shopping. Consumers who had more experience with purchasing online had a higher purchase intention in apparel online shopping than those with less experience in purchasing online.

The *p*-values of all parameters were calculated to examine if all parameters in the model were significantly different from 0 at a level of significance of .05. The results showed that the *p*-values of all parameters were significantly different at a level of significance of .05. After adding the correlation and paths, a *post hoc* analysis was conducted, and the results in the revised SEM for H3 to H7 are presented in Figure 5.2. All fit indexes showed the fit of the first SEM became acceptable (CMIN/DF = 3.01, GFI = .99, AGFI = .96, IFI = .99, CFI = .99, NFI = .99, RMSEA = .07). The results of squared multiple regression ( $R^2$ ) for each endogenous construct indicated that the exogenous construct, the valence of the experience with apparel online shopping, explained 19.5% of the variance in the extent of the experience with apparel online shopping. The two exogenous constructs, the extent of the experience with apparel online shopping and brand-self image congruity explained 9.5% of the variance in the extent of the experience with a specific brand. The three exogenous constructs (i.e., the valence of the experience with apparel online shopping, the extent of the experience with a specific brand, brand-self image congruity) explained 59.7% of the variance in perceived risk in buying a specific brand online. The four exogenous constructs (i.e., the extent of the experience with apparel online shopping, the extent of the experience with a specific brand, brand-self image congruity, perceived risk) explained 66.0% in the variance in purchase intention in buying a specific brand online.



\*  $p < .01$ , \*\*  $p < .001$

**Figure 5.2 Revised SEM Model for H3 to H7**

Effect of Valence of Experience with Apparel Online Shopping on Extent of Experience with Apparel Online Shopping (Hypothesis 3)

The results of the first SEM showed that the valence of the experience with apparel online shopping positively influenced the extent of the experience with apparel online shopping ( $\beta = .44, p < .001$ ). Participants who had more positive feelings about their experience with buying apparel products online had more experiences with apparel online shopping. Based on these results, Hypothesis 3 was supported.

Effect of Extent of Experience with Apparel Online Shopping on Extent of Experience with a Specific Brand (Hypothesis 4)

The results showed that the extent of the experience with a specific brand was significantly influenced by the extent of the experience with apparel online shopping. Participants who had more experiences with buying apparel products online had more

experiences with a specific brand ( $\beta = .13, p < .01$ ). Based on these results, Hypothesis 4 was supported.

#### Effect of Brand-Self Image Congruity on Extent of Experience with a Specific Brand (Hypothesis 5)

The results showed that the extent of the experience with a specific brand was significantly influenced by brand-self image congruity. Participants who perceived the image of a specific brand as more consistent with their self-image had more experiences with a specific brand ( $\beta = .26, p < .001$ ). Based on these results, the H5 was supported.

#### Effects of Extent of Experience with a Specific and Brand-self Image Congruity on Perceived Risk in Buying a Specific Brand Online (Hypotheses 6)

The results showed that perceived risk in buying a specific brand online was significantly influenced by the extent of the experience with a specific brand and brand-self image congruity. Participants who had more experiences with a specific brand perceived less risk in buying apparel products of the brand online ( $\beta = .10, p < .01$ ). Participants who perceived the image of a specific brand as more consistent with their self-image perceived less risk in buying apparel products of the brand online ( $\beta = .61, p < .001$ ). The standardized weight showed that brand-self image influenced perceived risk more than the extent of the brand did. Based on these results, both H6a and H6b were supported. Consequently, the main H6 was also supported.

#### Effects of Extent of Experience with a Specific Brand, Brand-Self Image Congruity, and Perceived Risk on Purchase Intention in Buying a Specific Brand Online (Hypotheses 7)

The results showed that purchase intention in buying a specific brand online was significantly influenced by three proposed factors, the extent of the experience with a specific brand, brand-self image congruity, and perceived risk. Participants who had more experiences with a specific brand had higher purchase intention in buying apparel products of the brand online ( $\beta = .10, p < .001$ ). Participants who perceived the image of a specific brand as more consistent with their self-image had higher intention in buying apparel products of the brand online ( $\beta = .38, p < .001$ ). Participants who perceived less risk in buying apparel products of a

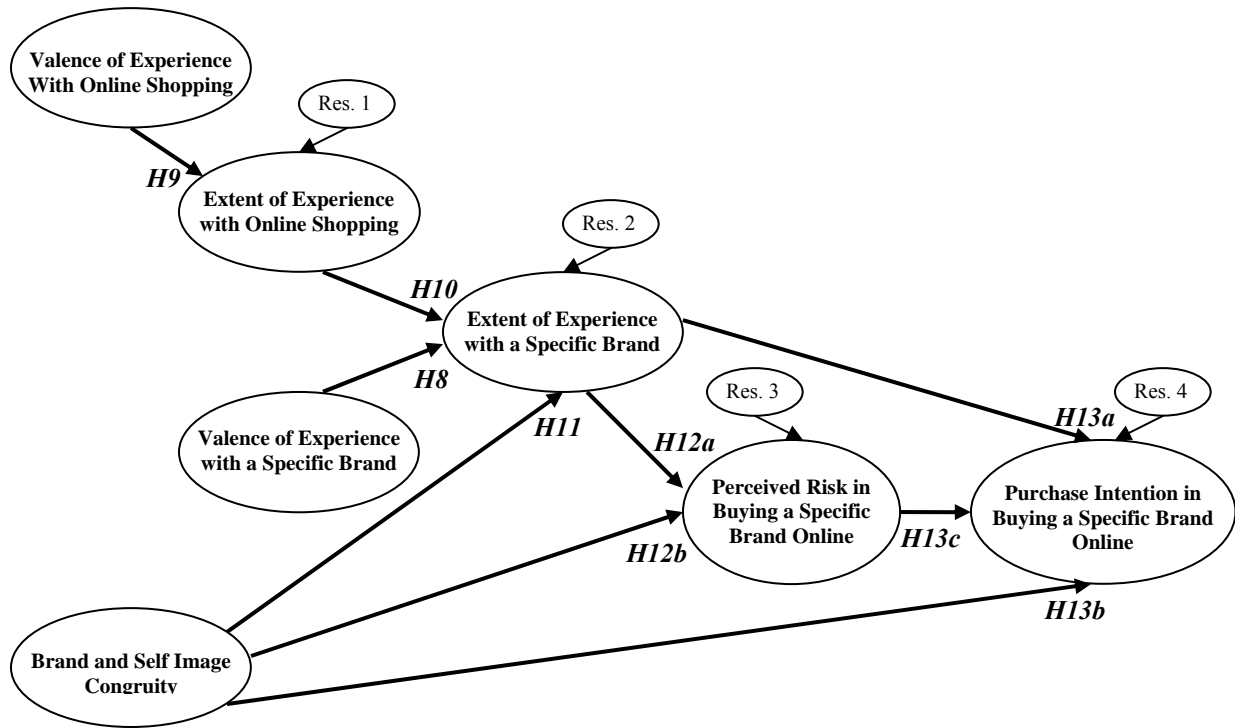
specific brand online had higher purchase intention in buying apparel products of the brand online ( $\beta = -.44, p < .001$ ). The standardized weight showed that perceived risk had the most influence on purchase intention, followed by brand-self image, and then, the extent of the brand. Based on these results, H7a, H7b, and H7c were supported. Consequently, the main H7 was also supported.

### **Second Structural Equation Model Development (Hypotheses 8 to 13)**

The second SEM was developed to examine the proposed Hypotheses 8 to 13 for the participants who had experience with a specific brand ( $N = 223$ ). The reason for the development of the second framework was because some participants did not have experience with a specific brand and could not answer the questions related to the valence of the experience with the brand. Therefore, the valence of the experience with the brand could not be examined in the first SEM. In the second SEM, the valence of the experience with a specific brand was included, and the other relationships proposed between variables were the same as the first SEM.

The second hypothesized model was shown in Figure 5.3. Three exogenous constructs were included in the second hypothesized model. Same as the first hypothesized model shown in Figure 5.1, the valence of the experience with online shopping and brand-self image congruity were included. In addition to these two, one more exogenous construct, the valence of the experience with a specific brand, was included. Four endogenous constructs (i.e., the extent of the experience with a specific brand, brand-self image congruity, perceived risk, purchase intention) in the second hypothesized model were exactly the same as the ones in the first hypothesized model. Each endogenous construct included a structural residual term.

Correlations between the six constructs for the model are presented in Table 5.21. Same as in the first hypothesized model, the correlation matrix showed that the correlations among constructs were all positive, except of perceived risk. The correlations of perceived risk with other variables were negative because perceived risk conveyed negative meaning. The correlations between constructs were all equal to or smaller than .75, indicating no high multicollinearity, and thus, no variables represented the same underlying construct.



**Figure 5.3 Hypothesized Model for H8 to H13**

**Table 5.21 Correlation Matrix of Hypothesized Model for H8 to H13**

	Constructs Included in the Original Hypothesized Model						
	1	2	3	4	5	6	7
1. Valence of Experience with Online Shopping	1.00						
2. Extent of Experience with Online Shopping	.41	1.00					
3. Valence of Experience with a Specific Brand	.00	.00	1.00				
4. Extent of Experience with a Specific Brand	.16	.40	.13	1.00			
5. Brand and Self Image Congruity	.00	.00	.00	.33	1.00		
6. Perceived Risk	.00	.00	.00	-.25	-.73	-1.00	
7. Purchase Intention	.03	.08	.02	.38	.63	.68	1.00

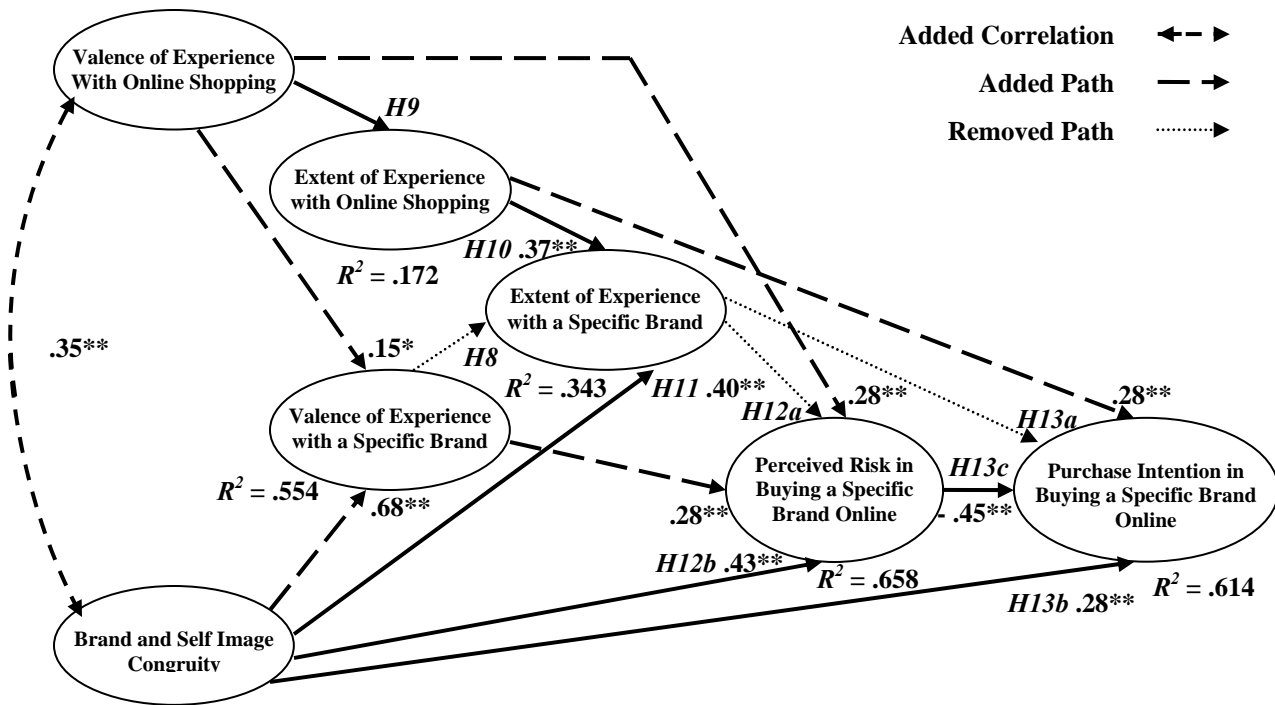


The fit indexes indicated that the fit of the second hypothesized model was unacceptable (CMIN/DF = 26.82, GFI = .74, AGFI = .40, IFI = .61, CFI = .60, NFI = .60, RMSEA = .34). A poor fit model can be improved by examining modification indices and these indices provide an estimation of the change in chi-square if a correlation between factors or an additional structural path is added (Hair et al., 1998). Based on the modification indices, one correlation and five paths were added to improve the model fit to the data. The added correlation was between the valence of the experience with online shopping and brand-self image congruity. The five paths that were added in the second SEM were: (a) from the valence of the experience with online shopping to perceived risk in buying a specific brand online, (b) from the extent of the experience with online shopping to purchase intention in buying a specific brand online, (c) from the valence of the experience with online shopping to the valence of the experience with a specific brand, (d) from brand-self image congruity to the valence of the experience with a specific brand, and (e) from the valence of the experiences with a specific brand to perceived risk in buying a specific brand online. Therefore, the same correlation and two paths added in the first SEM were also added in the second SEM. The correlation and the paths (a) and (b) were included in both SEM models and the paths (c), (d), and (e) were included in the second SEM. For the path from the valence of the experience with online shopping to the valence of the experience with a specific brand, no previous study was found investigating the relationship. However, Chen and Dubinsky (2003) found that the valence of the experience with online shopping was related to attributes in the purchase process of online shopping such as relevant information, ease of use, and customer service. It is possible that participants who had positive feeling about their experience with online shopping had learned how to access to relevant information, use various functions provided by the store website, and contact customer service to require further information before or after completing the purchase process. Therefore, these participants could easily obtain positive experience with a specific brand, which provides a justification for the added path between the valence of the experience with online shopping and the valence of the experience with a specific brand. The path from brand-self image congruity to the valence of the experience with a specific brand can be supported by the findings of Han (2006), indicating that brand-self image congruity influenced on brand preference. If participants perceived the image of a specific brand as more consistent with their self-image, they would feel

more positive about their experience with the brand. For the path from the valence of the experience with a specific brand to perceived risk in buying a specific brand online, no previous study was found that investigated the relationships. However, studies regarding the relationship between brand attitude and perceived risk showed that consumers perceived less risk when they made choices of favorable brands (Batra & Stayman, 1990; Erdem, Zhao, & Valenzuela, 2004). These studies support that if participants felt positive about their experience with a specific brand, they would be more confident about the brand and would perceive less risk in buying a specific brand online.

The  $p$ -values of all parameters were calculated to examine if all parameters in the model were significantly different from 0 at a level of significance of .05. The parameter that had a  $p$ -value greater than .05 was first identified and then, the parameter with the highest  $p$ -value was removed one by one to achieve an acceptable model fit (Byrne, 2001). According to this process, three paths were removed. They are: (a) from the valence of the experience with a specific brand to the extent of the experience with a specific brand, purchase intention in buying a specific brand online, (b) from the extent of the experience with a specific brand to perceived risk, and (c) from the extent of the experience with a specific brand to purchase intention.

After adding and removing the correlation and paths, a *post hoc* analysis was conducted, and the results in the revised SEM for H8 to H13 are presented in Figure 5.4. All fit indexes showed that the fit of the revised SEM was acceptable (CMIN/DF = 2.14, GFI = .98, AGFI = .93, IFI = .99, CFI = .99, NFI = .98, RMSEA = .07). The results of squared multiple regression ( $R^2$ ) indicated that the exogenous construct, the valence of the experience with apparel online shopping explained 17.2% of the variance in the extent of the experience with apparel online shopping. The two exogenous constructs, the valence of the experience with apparel online shopping and brand-self image congruity explained 55.4% of the variance in the valence of the experience with a specific brand. The two exogenous constructs, the extent of the experience with apparel online shopping and brand-self image congruity explained 34.3% of the variance in the extent of the experience with a specific brand. The three exogenous constructs (i.e., the valence of the experience with apparel online shopping, the valence of the experience with a specific brand, brand-self image congruity) explained 65.8% of the variance in perceived risk in buying a specific brand online. The three exogenous constructs (i.e., the valence of the



\*  $p < .01$ , \*\*  $p < .001$

**Figure 5.4 Revised SEM Model for H8 to H13**

experience with apparel online shopping, brand-self image congruity, perceived risk) explained 61.4% of the variance in purchase intention in buying a specific brand online by the predictors.

Effect of Valence of Experience with a Specific Brand on Extent of Experience with Specific Brand (Hypothesis 8)

The results of the second SEM showed that the valence of the experience with a specific brand did not influence the extent of the experience with the brand. Among the participants who had experience with a specific brand, participants who had more positive feelings about their experience with a specific brand did not have more experiences with the brand. Based on these results, the H8 was not supported.

### Effect of Valence of Experience with Apparel Online Shopping on Extent of Experience with Apparel Online Shopping (Hypothesis 9)

The results showed that the valence of the experience with apparel online shopping positively influenced the extent of the experience with apparel online shopping ( $\beta = .41, p < .001$ ). Among the participants who had experience with a specific brand, participants who had more positive feelings about their experience with buying apparel products online also had more experiences with apparel online shopping. Based on these results, the H9 was supported.

### Effect of Extent of Experience with Apparel Online Shopping on Extent of Experience with a Specific Brand (Hypothesis 10)

The results showed that the extent of the experience with apparel online shopping positively influenced the extent of the experience with a specific brand. Among the participants who had experience with a specific brand, participants who had more experiences with buying apparel products online had more experiences with a specific brand ( $\beta = .37, p < .001$ ). Based on these results, the H10 was supported.

### Effect of Brand-Self Image Congruity on Extent of Experience with a Specific Brand (Hypothesis 11)

The results showed that the brand-self image congruity positively influenced the extent of the experience with a specific brand ( $\beta = .40, p < .001$ ). Among the participants who had experience with a specific brand, participants who perceived the image of a specific brand as more consistent with their self-image had more experiences with a specific brand. Based on these results, the H11 was supported.

### Effects of Extent of Experience with a Specific and Brand-self Image Congruity on Perceived Risk in Buying a Specific Brand Online (Hypotheses 12)

The results showed that perceived risk in buying a specific brand online was significantly influenced by brand-self image congruity ( $\beta = .43, p < .001$ ); however, it was not influenced by the extent of the experience with a specific brand at the significance level of .05. The results indicated that among the participants who had experience with a specific brand, participants who

perceived the image of a specific brand as more consistent with their self-image perceived less risk in buying apparel products of the brand online; however, participants who had more experience with a specific brand did not perceived significantly less risk in buying the brand online. Based on these results, H12b was supported, but H12a was not; thus, main H12 was partially supported. Among the participants who had experience with a specific brand, the brand-self image congruity positively influenced perceived risk in buying a specific brand online but the extent of the experience with the brand did not.

#### Effects of Extent of Experience with a Specific Brand, Brand-Self Image Congruity, and Perceived Risk on Re-purchase Intention in Buying a Specific Brand Online (Hypotheses 13)

The results showed that re-purchase intention in buying a specific brand online was significantly influenced by brand-self image congruity ( $\beta = .28, p < .001$ ) and perceived risk ( $\beta = -.45, p < .001$ ); however, it was not significantly influenced by the extent of the experience with a specific brand. The standardized weights of brand-self image congruity and perceived risk showed that perceived risk influenced purchase intention more than brand-self image did. These results indicated that among the participants who have experience with a specific brand, participants who perceived less risk in buying apparel products of a specific brand online and those who perceived the image of a specific brand as more consistent with their self-image had higher re-purchase intention in buying apparel products of the brand online; however, participants who had experience with the brand did not have significantly higher re-purchase intention in buying apparel products of the brand online. Based on these results, H13b and H13c were supported, but H13a was not; thus, main H13 was partially supported. Among the participants who had experience with a specific brand, the brand-self image congruity and perceived risk positively and significantly influenced re-purchase intention in buying a specific brand online, but the extent of the experience with the brand did not.

### Comparison of Four Quasi-Experimental Groups (Hypotheses 14 and 15)

The response check in the quasi-experimental groups is reported in the first part of this segment. The second part presents the results of Hypotheses 14 and 15 examining the differences among the experimental groups in perceived risk and in purchase intention in buying apparel products of a specific brand online.

#### Response Check

Before testing Hypotheses 14 and 15, a response check in the quasi-experimental groups was performed to ensure if participants truly followed the condition given for each experimental group. A 2 x 2 quasi-experimental design, two levels of experience (experienced vs. no experience) and two levels of congruity (consistent image vs. inconsistent image) were developed and used in the study, which resulted in four experimental groups (see Table 5.22). Instruction was given to ask participants in each group to select a brand based on the specific condition of the group.

**Table 5.22 Quasi-Experimental Groups and Given Conditions**

Group	Condition	
	Brand Experience	Brand-Self Image Congruity
Group 1	Had Brand Experience	Consistent Image
Group 2	Had Brand Experience	Inconsistent Image
Group 3	No Brand Experience	Consistent Image
Group 4	No Brand Experience	Inconsistent Image

Participants in Groups 1 and 2 (i.e., experienced group) were asked to select a brand that they had purchased and worn before. All participants (100%) in Groups 1 and 2 answered “Yes” to a screening question, “Can you choose one apparel brand that fulfills the above condition?” The results regarding their extent of experience with the selected brand indicated that most participants in Group 1 and 2 (64.5%) purchased apparel products of the selected brand as often as every three months to once a year. The majority of participants purchased one to two items of the selected brand (56%) and spent at least \$75 on apparel products of the brand within the last

six months (55.6%). These results confirmed that participants in Groups 1 and 2 truly selected a brand with which they had an experience.

Participants in Groups 3 and 4 (i.e., no experience group) were asked to select a brand about which they had heard, but had never previously purchased or worn. In the pilot tests, when the experienced group (i.e., Quasi-Experimental Groups 1 and 2) and no experience group (i.e., Quasi-Experimental Groups 3 and 4) were compared, the results showed significant differences in the frequency of buying the brand [ $t(63) = 15.23, p < .001$ ], the number of the purchased item of the brand [ $t(63) = 11.34, p < .001$ ], and the amount of money spent on the brand [ $t(63) = 12.17, p < .001$ ]. These results confirmed that the given instructions successfully created significantly different levels of experience with a specific brand in Group 3 and 4. However, participants in the pilot tests commented that the questions regarding the extent of experience with the selected brand made them confused because they were asked to select a brand with no experience, but were asked to answer questions such as how often and how many they purchased the product of the selected brand. To reduce the confusion, the questions measuring the experience with a specific brand were removed in the main data collection. Instead, one question, “Can you choose one apparel brand that fulfills the above condition?” was used to screen participants who could not select a brand that fulfilled the given condition. Participants who answered “No” or skipped the screen question were excluded from the actual survey. No warning was given in advanced that participants could be screened out from the survey to reduce the possibility that participants might answer the screening question untruthfully.

Participants in Groups 1 and 3 (i.e., consistent image group) were asked to select a brand that the image of the brand was consistent with their own image, and participants in Groups 2 and 4 (i.e., inconsistent image group) were asked to select a brand that the image of the brand was not consistent with their own image. Then, participants’ perception of the consistency between the image of the selected brand and their own image was measured. The  $t$ -test results were used to compare the consistent image and inconsistent image groups, and the results showed a significant difference between the two groups [ $t(454) = 63.69, p < .001$ ]. The means of the Consistent Image group and the Inconsistent Image group were 4.68 and 3.00, respectively. Participants in the Consistent Image group answered that the image of the brand was more consistent with their own image than did participants in the Inconsistent Image group. These

results confirmed that the given instructions successfully created significantly different levels of brand-self image congruity in the quasi-experimental groups.

Comparison of Four Quasi-Experimental Groups in Perceived Risk in Buying a Specific Brand Online (Hypothesis 14)

The results of the two-way ANOVA showed that there was a significant difference in perceived risk in buying apparel products of a specific brand online between the No Experience and the Experience groups or between the Inconsistent Image and the Consistent Image groups [ $F(3, 451) = 27.10, p < .001$ ] (see Table 5.23). Both experience with a specific brand and brand-self image congruity significantly influenced perceived risk [ $F(1, 451) = 21.16, p < .001$ ;  $F(1, 451) = 58.66, p < .001$ , respectively]. The one-way ANOVA examined if the mean scores of perceived risk in the four quasi-experimental groups were significantly different. The results showed that there was a significant difference between the four experimental groups in perceived risk in buying apparel products of a specific brand online [ $F(3, 451) = 27.10, p < .001$ ]. THSDT showed that Group 1 and 4 were significantly different from other groups ( $p < .001$ ); however, Group 2 and 3 were not significantly different at the .05 level (see Table 5.24). Participants who had the extent of the experience with a specific brand perceived significantly less risk in buying apparel products of the brand online than those with no experience (Group 1 and 2,  $M = 2.45$ ;

**Table 5.23 Two-Way ANOVA Test for H14: Effects of Extent of Experience with a Specific Brand and Brand-Self Image Congruity on Perceived Risk**

Variable	Perceived Risk in Buying Apparel Products of a Specific Brand Online			
	S.S.	D.F	M.S.	F
Main effects	84.36	3	28.12	27.10*
Extent of Experience with a Specific Brand	21.96	1	21.96	21.16*
Brand-Self Image Congruity	60.88	1	60.88	58.66*
Extent of Experience with a Specific Brand x Brand-Self Image Congruity	.04	1	.04	.04
Residual	468.01	451	1.04	
Total	552.37	454		

\*  $p < .001$



**Table 5.24 THSDT Test: Mean Scores of Perceived Risk in Buying Apparel Products of a Specific Brand Online between Four Quasi-Experimental Groups**

Group Number	Mean
Group 1: Experience with a Specific Brand / Consistent Image	2.08 <sup>a</sup>
Group 2: Experience with a Specific Brand / Inconsistent Image	2.84 <sup>b</sup>
Group 3: No experience with a Specific Brand / Consistent Image	2.54 <sup>b</sup>
Group 4: No Experience with a Specific Brand / Inconsistent Image	3.26 <sup>c</sup>

<sup>a, b, c</sup> means with different superscript letters are significantly different at the .05 level. 6 was the highest possible score.

Group 3 and 4,  $M = 2.91$ ). Participants who perceived the image of the brand as consistent with their self-image also perceived significantly less risk in buying apparel products of the brand online (Group 1 and 3,  $M = 2.32$ ; Group 2 and 4,  $M = 3.06$ ). Based on the results, H14a and H14b were supported. Consequently, the main H14 was also supported. The extent of the experience with a specific brand and brand-self image congruity significantly influenced perceived risk in buying the brand online.

Comparison of Four Quasi-Experimental Groups in Purchase Intention in Buying Specific Brand Online (Hypothesis 15)

The results of the two-way ANOVA showed that there was a significant difference in purchase intention in buying apparel products of a specific brand online between the No Experience and the Experience groups or between the Inconsistent Image and the Consistent Image groups [ $F(3, 451) = 32.58, p < .001$ ] (see Table 5.25). Both experience with a specific brand and brand-self image congruity significantly influenced purchase intention [ $F(1, 451) = 26.66, p < .001$ ;  $F(1, 451) = 69.27, p < .001$ , respectively]. The one-way ANOVA examined if the mean scores of purchase intention between the four quasi-experimental groups were significantly different. The results showed that there was a significant difference between the four experimental groups in purchase intention in buying apparel products of a specific brand online [ $F(3, 454) = 32.54, p < .001$ ]. THSDT results showed that Group 1 and 4 were

**Table 5.25 Two-Way ANOVA Test for H15: Effects of Extent of Experience with a Specific Brand and Brand-Self Image Congruity on Purchase Intention**

Variable	Purchase Intention in Buying Apparel Products of a Specific Brand Online			
	S.S.	D.F	M.S.	F
Main effects	249.04	3	83.01	32.58*
Extent of Experience with a Specific Brand	67.93	1	67.93	26.66*
Brand-Self Image Congruity	477.10	1	176.48	69.27*
Extent of Experience with a Specific Brand x Brand-Self Image Congruity	.02	1	.02	.01
Residual	1148.99	451	2.55	
Total	1398.03	454		

\*  $p < .001$

significantly different from the other groups ( $p < .001$ ); however, Group 2 and 3 were not significantly different at the .05 level (see Table 5.26). The results showed that participants who had experience with a specific brand had significantly higher purchase intention in buying apparel products of the brand online than those with no experience (Group 1 and 2,  $M = 3.90$ ; Group 3 and 4,  $M = 3.07$ ). Participants who perceived the image of the brand as consistent with their self-image also had significantly higher purchase intention in buying apparel products of the brand online (Group 1 and 3,  $M = 4.08$ ; Group 2 and 4,  $M = 2.82$ ). Based on the results, H15a

**Table 5.26 THSDT Test: Mean Scores of Purchase Intention in Buying a Specific Brand Online between Four Quasi-Experimental Groups**

Group Number	Mean
Group 1: Extent of Experience with a Specific Brand / Consistent Image	4.46 <sup>a</sup>
Group 2: Extent of Experience with a Specific Brand / Inconsistent Image	3.22 <sup>b</sup>
Group 3: No Extent of experience with a Specific Brand / Consistent Image	3.70 <sup>b</sup>
Group 4: No Extent of Experience with a Specific Brand / Inconsistent Image	2.44 <sup>c</sup>

<sup>a, b, c</sup> means with different superscript letters are significantly different at the .05 level. 6 was the highest possible score.

and H15b were supported. Consequently, the main H15 was also supported. Experience with a specific brand and brand-self image congruity significantly influenced purchase intention in buying the brand online.

### **Findings from Open-Ended Question**

Participants in Group 2 were asked to select an apparel brand that they had purchased and worn, but its image was not consistent with their own image. Participants were asked an additional open-ended question to explain why they purchased the brand although the brand image was not consistent with their image. The reasons participants provided, by the order of frequency, were: price, design, fit/size/comfort, product selection, recommendation/peer group, positive attitude toward the brand, quality, special occasion, and store location (see Table 5.27). In their answers, some participants mentioned that the reason the brand image was not consistent with their image was because their self-image had changed or the brand image had changed (see Table 5.28). The reasons their self image had changed over time included changes in age, occasion, and occupation.

**Table 5.27 Reason for Purchasing Brands with Inconsistent Image**

<b>Reason</b>	<b>Percentage (N)</b>
Price	19.7% (26)
Design	18.2% (24)
Fit/Size/Comfort	12.9% (17)
Product Selection	8.3% (11)
Recommendation/Peer Group	7.6% (10)
Positive Attitude toward the Brand	6.8% (9)
Quality	3.8% (5)
Special Occasion	3.0% (4)
Store Location	1.5% (2)
Other or N/A	18.2% (24)
Total	100% (132)

**Table 5.28 Reason for Inconsistent Image**

<b>Inconsistent Image</b>	<b>Reason</b>
Changes in Self Image	<ul style="list-style-type: none"><li>• I used to try to fit that image but don't any longer.</li><li>• I like and enjoy the clothes that are sold by the brand, however I am becoming older than the brand supports.</li><li>• I am slowly looking for a more mature and professional image offered by other brands.</li></ul>
Changes in Brand Image	<ul style="list-style-type: none"><li>• The brand wants to make stylish rather than practical jeans.</li><li>• The brand markets overly sexy image now.</li><li>• The image of the brand is somewhat “old-fashion” now.</li></ul>

### **Summary of the Study**

The purposes of the study were to examine (a) the relationships between consumers' experience with apparel catalog/TV shopping and their experience with apparel online shopping, (b) the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand, and (c) the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention in apparel online shopping context. Two conceptual frameworks were developed and 15 research hypotheses were generated with respect to the specific relationships in the conceptual frameworks. A quasi-experimental design with 2 x 2 between subjects factorial design was used in this research. In addition to the quasi-experimental design to examine the effects of experience with a specific brand and brand-self image congruity on perceived risk and purchase intention, the survey design was also used to examine the relationships among experiences with catalog, TV, and online shopping for apparel products and the relationships among experience with apparel online shopping, perceived risk and purchase intention. Four questionnaires, one for each quasi-experimental group, were developed based on previous studies. The subjects of the study were recruited by a survey company. Participants were residents in the U.S. age 20 and older who had experience with buying apparel products online within the last six months. Data was collected by online surveys using a national sample, and 455 apparel online shoppers living in the United States participated.

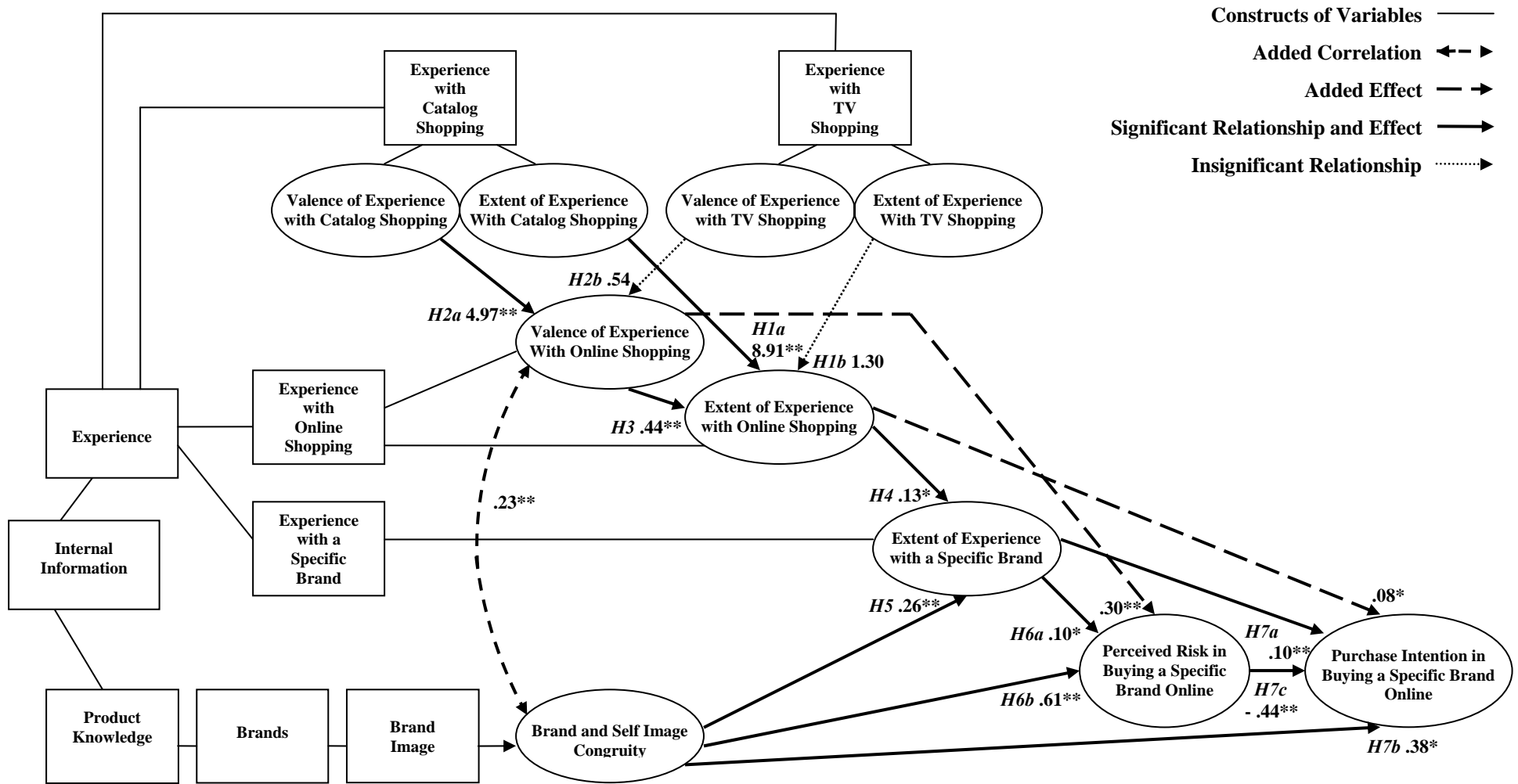
Multiple regression analyses were used to examine Hypotheses 1 and 2 if experiences with catalog shopping or TV shopping for apparel products were significantly related to experience with apparel online shopping. Two SEM were developed. The first SEM examined hypotheses 3 and 7 for all participants, and the second SEM examined hypotheses 8 to 13 for the participants who had experience with the selected brand. Two-way ANOVAS were used to examine Hypotheses 14 and 15 to compare the differences among the experimental groups in perceived risk and in purchase intention in buying apparel products of a specific brand online. Table 5.29 presents the results of hypotheses testing, and Figure 5.5 and 5.6 present the revised models I and II with the results of hypothesis testing.

**Table 5.29 Hypothesized Relationships and Summary of Results**

Hypothesized Relationships	Result
H1: The extent of the experience with buying apparel products from catalogs and on TV will be positively associated with the extent of the experience with apparel online shopping. Participants who have more experiences with buying apparel products from catalogs and participants who have more experiences with buying apparel products on TV will have more experiences with apparel online shopping. H1a: Participants who have more experiences with buying apparel products from catalogs will have more experiences with apparel online shopping. H1b: Participants who have more experiences with buying apparel products on TV will have more experiences with apparel online shopping.	Partially Supported  Supported  Not Supported
H2: The valence of the experience with buying apparel products from catalogs and on TV will be positively associated with the valence of the experience with apparel online shopping. Among the participants who have experiences with both catalog shopping and TV shopping, those who have more positive feelings about their experiences with buying apparel products from catalogs and on TV will have a more positive feeling toward their experience with apparel online shopping. H2a: Participants whose feelings about their experience with buying apparel products from catalogs are more positive will feel more positive about their experience with apparel online shopping. H2b: Participants whose feelings about their experience with buying apparel products on TV are more positive will feel more positive about their experience with apparel online shopping.	Partially Supported  Supported  Not Supported
H3: The valence of the experience with apparel online shopping will influence the extent of the experience with apparel online shopping. Participants whose feelings about their experience with buying apparel products online are more positive will have more experiences with apparel online shopping.	Supported
H4: The extent of the experience with online shopping will influence the extent of the experience with a specific brand. Participants who have more experience with buying apparel products online will have more experiences with the specific brand.	Supported
H5: Brand-self image congruity will influence the extent of the experience with a specific brand. Participants who perceive the image of the specific brand as more consistent with their self-image will have more experiences with the specific brand	Supported

H6: The extent of the experience with a specific brand and brand-self image congruity will influence the perception of risk in buying apparel products of a specific brand online. H6a: Participants who have more experiences with a specific brand will perceive less risk in buying apparel products of the brand online. H6b: Participants who perceive the image of a specific brand as more consistent with their self-image will perceive less risk in buying apparel products of the brand online.	Supported  Supported  Supported
H7: The extent of the experience with a specific brand, brand-self image congruity, and perceived risk of buying a specific brand online will influence the purchase intention in buying apparel products of a specific brand online. H7a: Participants who have more experiences with a specific brand will have higher purchase intention in buying apparel products of the brand online. H7b: Participants who perceive the image of a specific brand as more consistent with their self-image will have higher intention in buying apparel products of the brand online. H7c: Participants who perceive less risk in buying apparel products of a specific brand online will have higher purchase intention in buying apparel products of the brand online.	Supported  Supported  Supported  Supported
H8: The valence of the experience with a specific brand will influence the extent of the experience with the brand. Among the participants who have experience with a specific brand, participants whose feelings about their experience with a specific brand are more positive will have more experiences with the brand	Not Supported
H9: The valence of the experience with apparel online shopping will influence the extent of the experience with apparel online shopping. Among the participants who have experience with a specific brand, those participants whose feelings about their experience with buying apparel products online are more positive will have more experiences with apparel online shopping.	Supported
H10: The extent of the experience with online shopping will influence the extent of the experience with a specific brand. Among the participants who have experience with a specific brand, those who have more experience with buying apparel products online will have more experiences with the specific brand.	Supported
H11: Brand-self image congruity will influence the extent of the experience with a specific brand. Among the participants who have experience with a specific brand, those who perceive the image of the specific brand as more consistent with their self-image will have more experiences with the specific brand.	Supported
H12: The extent of the experience with a specific brand and brand-self image congruity will influence the perception of risk in buying apparel products of a specific brand online. H12a: Among the participants who have experience with a specific brand, those who have more experiences with a specific brand will perceive less risk in buying apparel products of the brand online. H12b: Among the participants who have experience with a specific brand, those who perceive the image of a specific brand is more consistent with their self-image will perceive less risk in buying apparel products of the brand online.	Partially Supported  Not Supported  Supported

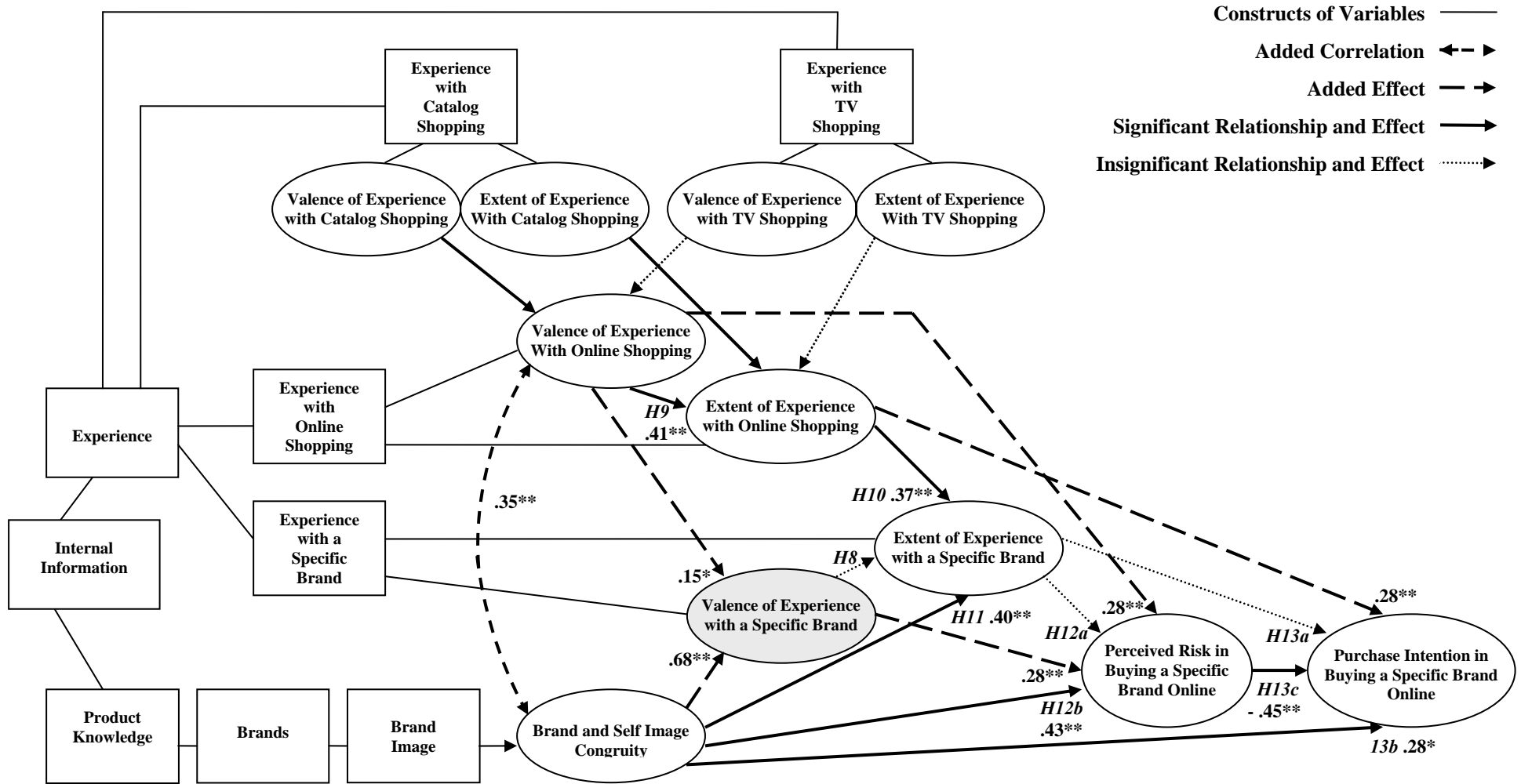
<p>H13: The extent of the experience with a specific brand, brand-self image congruity, and perceived risk of buying a specific brand online will influence the purchase intention in buying apparel products of a specific brand online.</p> <p>H13a: Among the participants who have experience with a specific brand, those who have more experiences with a specific brand will have higher purchase intention in buying apparel products of the brand online.</p> <p>H13b: Among the participants who have experience with a specific brand, those who perceive the image of a specific brand as more consistent with their self-image will have higher intention in buying apparel products of the brand online.</p> <p>H13c: Among the participants who have experience with a specific brand, those who perceive less risk in buying apparel products of a specific brand online will have higher purchase intention in buying apparel products of the brand online.</p>	<p>Partially Supported</p> <p>Not Supported</p> <p>Supported</p> <p>Supported</p>
<p>H14: There will be a significant difference in perceived risk in buying apparel products of a specific brand online among the four experimental groups.</p> <p>H14a: Participants who have experience with a specific brand will perceive less risk in buying apparel products of the brand online.</p> <p>H14b: Participants who perceive the image of the brand as consistent with their self-image will perceive less risk in buying apparel products of the brand online.</p>	<p>Supported</p> <p>Supported</p> <p>Supported</p>
<p>H15: There will be a significant difference in purchase intention in buying apparel products of a specific brand online among the four experimental groups.</p> <p>H15a: Participants who have experience with a specific brand will have higher purchase intention in buying apparel products of the brand online.</p> <p>H15b: Participants who perceive the image of the brand as consistent with their self-image will have higher purchase intention in buying apparel products of the brand online.</p>	<p>Supported</p> <p>Supported</p> <p>Supported</p>



\*  $p < .01$ , \*\*  $p < .001$

**Figure 5.5 Revised Model I: Roles of Consumers' Experiences, Brand-Self Image Congruity, and Perceived Risk in Consumers' Purchase Intention in Apparel Online Shopping Context**





\*  $p < .01$ , \*\*  $p < .001$

**Figure 5.6 Revised Model II: Roles of Consumers' Experiences, Brand-Self Image Congruity, and Perceived Risk in Consumers' Re-purchase Intention in Apparel Online Shopping Context**

**CHAPTER VI**  
**DISCUSSION, IMPLICATION, CONCLUSION,**  
**LIMITATION AND RECOMMENDATION FOR FUTURE RESEARCH**

This chapter includes four sections. The first section discusses the results of the study. The second section presents the implications of the findings. The third section provides a conclusion of the study. Limitation of the study and recommendations for future research are addressed in the last section.

**Discussions of the Results**

In this section, the discussion of the results is addressed in 10 sections. The first section compares the characteristics of online shoppers between the participants of current study and previous research. The second section discusses the effects of the valence of the experience on the extent of experience. The third section discusses the relationships and effects among experiences with apparel catalog/TV shopping and apparel online shopping. The fourth section includes the discussion of the effect of experience with apparel online shopping and brand-self image congruity on experience with a specific brand. The fifth section contains the discussion of the effect of experience with a specific brand on perceived risk and purchase intention. The sixth section discusses the effect of brand-self image congruity on perceived risk and purchase intention. The seventh section contains the discussion of the effect of perceived risk on purchase intention. The eighth section includes the discussion of the comparison of two proposed framework. The ninth section discusses findings from the open-ended question. The last section discusses the comparison of the results from the structural equation model and quasi-experimental design.

## **Characteristics of Online Shoppers: A Comparison between Participants in Current Study and Previous Research**

In previous studies of online shopping, older males were the majority of online shoppers (Donthu & Garcia, 1999; Korgaonkar & Wolin, 1999). According to the survey by Ernst and Young (Internet shopping, 1998), 64% of online shoppers were between 40 and 64 years of age. Online shoppers in the U.S. were typically well educated with higher income status that 41% of these shoppers held a college degree or higher with an average household income of \$59,000 (Global online retailing, 2000). For apparel online shoppers, Kim and Forsythe (2007) used the U.S. national sample of online shopper and found that the 52% of apparel online shoppers were male. About 57% of participants purchased apparel products online about one to four times in six months, and 59% of participants spent less than \$300 on apparel products in six months. The results of these previous studies are consistent with the findings of the current study, which also found that the percentage of male participants were slightly higher than female participants; they had higher levels of education than female participants; and they purchased apparel products about once every three months and spent less than \$600 on apparel products per year. However, the findings regarding age were different from the previous studies. Compared to the U.S. Census data, more participants in the current study were in the age category of 25 - 34 years old, and the majority of participants were younger than 44 years old. Consistent with previous studies, much less percentage of participants with low income (\$24,999 and lower) purchased online. The ratios of participants in the other income levels (\$35,000 to \$99,999) were similar to the general population according to the U.S. Census data. However, much higher percentage of participants than the general population earned a yearly income of \$100,000 and over. In fact, the highest percentage of participants in the current study was in this group. These results show the changes in online shoppers' demographics, indicating that today's online shoppers are getting younger, and much more middle income consumers are shopping online. However, the high income consumers are still the most crucial segment in the apparel online market. Apparel category has been known as a woman dominant area. Traditionally, women in a household make the buying decisions for women's and children's clothing, and men and women jointly decide for men's clothing (Engle et al., 1995). However, slightly more men than women are now purchasing apparel products online. Smith (2008) reported that for e-

retailers, men were more desirable shoppers than women because they made purchases online regularly, spent more money on luxury and apparel products, and returned the ordered items fewer times.

### **Effect of Valence of Experience on Extent of Experience**

The results showed that the valence of the experience with apparel online shopping influenced the extent of the experience with apparel online shopping. The positive feelings of participants' experience with apparel online may have encouraged them to purchase more apparel products online. This result is consistent with previous studies, showing that positive feeling had a significant impact on consumers' behavior (Homer 1990; MacKenzie & Lutz 1989; Morris et al., 2002; Morrison & Crane, 2007; Shaver et al., 1987). However, the result was different when the relationship between the valence and extent of the experience was studied with a specific brand. Participants who felt more positive about their experience with a specific brand did not buy more of the products of the brand than those who felt less positive about their experience with the brand. A possible reason may be caused by consumers' variety seeking behavior. According to Hirschman and Wallendorf (1980), one type of variety seeking is stimulus variation seeking. In stimulus variation seeking, consumers may rotate their choice among a variety of previously purchased products or brands to relieve boredom. Consumers are simply varying the types of stimulation they receive by rotating product purchases among known brands or types within a product category (e.g., varying brands of jeans). The lack of significant effect for the valence of the experience with a specific brand on the extent of the experience with the brand could be due to stimulus variation seeking. Although participants felt positive about their experience with the brand, they did not necessarily purchase the brand again because they might have several brands about they had positive feelings. Consumers rotate their choice among the brands in the consideration set to relieve boredom; therefore, consumers' valence of the experience with a specific brand may not increase their extent of the experience with the brand.

## **Relationships between Experiences with Apparel Catalog/TV Shopping and Experience with Apparel Online Shopping**

The results indicated that participants who had more experiences with buying apparel products from catalogs had more experiences with apparel online shopping, and participants who had a positive feeling about their experiences with buying apparel products from catalogs also had a positive feeling about their experiences with apparel online shopping. This finding may indicate that participants' experiences with apparel catalog shopping were related to their experience with apparel online shopping. These results are consistent with those of previous studies (Bellman, Lohse, & Johnson, 1999; Goldsmith & Flynn, 2005; Klopping & McKinney, 2006; Ward, 2001), which also found a significant relationship between apparel catalog shopping and apparel online shopping. The possible reason for this positive relationship may be explained by the similar characteristics in the distribution process. According to Ward (2001), both catalog and online shopping help consumers reduce the need for product search. Both shopping channels rely on photographic images or descriptions of the product being sold rather than direct consumers' contact with the product. Both shopping channels require a certain degree of customer familiarity with credit card transaction because online or catalog purchase typically involve payments by credit card. In addition to these similar characteristics of catalog and online shopping, the experience with catalog shopping could help consumers to overcome the greatest hindrance to buying apparel products online, and that is, the inability in examining and trying on the product before purchase. With the positive experience that they had with the catalog shopping, participants could feel comfortable with purchasing apparel products online without inspection.

Participants who had more experiences with buying apparel products on TV did not have significantly more experiences with apparel online shopping. Consistently, participants who felt more positive about their experience with TV shopping did not feel significantly more positive about their experience with apparel online shopping. These results are not consistent with that of Eastlick and Lotz (1999), which indicated that experience with TV shopping was one of the factors influencing participants' intention to adopt online shopping. A possible reason for the inconsistent result may be the unique characteristic of the participants in the study of Eastlick and Lotz. The participants in their study were cable TV subscribers. The researchers found that the TV shoppers were the consumers who were more

innovative. It is possible that there was a direct relationship between the participants' innovativeness and the intention to adopt online shopping, instead of the experience with TV shopping and online shopping intention.

### **Effects of Experience with Apparel Online Shopping and Brand-Self Image Congruity on Experience with a Specific Brand**

The results indicated that participants who had more experience with buying apparel products online and who perceived the image of a specific brand as more consistent with their self-image were more likely to have more experience with a specific brand. No study has investigated the relationship between experience with apparel online shopping and experience with a specific brand, and therefore, no previous result can be used to compare with the result of the current study. However, the result is logical. If consumers buy more products and more frequently, and spent more amounts of money in buying apparel products online, they would have chances to have more experience with a specific brand. The result of the relationship between brand-self image congruity and experience with a specific brand is consistent with the finding of Han (2006), showing that brand-self image congruity influenced brand preference.

### **Effect of Experience with a Specific Brand on Perceived Risk and Purchase Intention in Buying a Specific Brand Online**

The results indicated that among all participants in the study, including participants with and without experience with the specific brand, participants' extent of the experience with a specific brand influenced their perceived risk and purchase intention in buying the brand online. These results are consistent with that of Park and Stoel (2005) and O'Loughlin et al. (2004). However, among the participants who had experience with a specific brand, their perceived risk in buying the specific brand online was not influenced by their extent of the experience with the brand. Instead, the valence of the experience with the specific brand influenced their perceived risk. Participants who already had experience with a specific brand perceived less risk in buying the brand online if they had positive feeling about their experience with the brand despite of the frequency of purchase. This result indicates the importance of creating positive feelings about an experience with a brand in reducing

customers' perceived risk. When consumers have at least one positive valence of the experience with the brand, they would perceive lower risk in buying the brand online despite of their extent of the experience with the brand. The results also indicated that among the participants who had experience with the specific brand, either extent or valence of the experience with the brand did not directly influence their purchase intention in buying the brand online. Instead, participants' valence of the experience with a specific brand indirectly influenced their purchase intention through perceived risk.

### **Effect of Brand-Self Image Congruity on Perceived Risk and Purchase Intention in Buying a Specific Brand Online**

Participants who perceived the image of a specific brand as more consistent with their self-image also had more experiences with the brand, perceived less risk, and had higher purchase intention in buying apparel products of the brand online. Brand-self image congruity had the highest standard regression weights on its path to extent of experience with the brand and to perceived risk in buying a specific brand online, indicating that, among the variables in the model, brand-self image congruity was the variable that influenced the extent of the experience and perceived risk the most. Brand-self image congruity, next to perceived risk, was the second most influential variable affecting purchase intention. These results are consistent with those of previous studies (Abraham & Najjar, 2007; Dahl et al., 2001; Ericksen, 1996; Han, 2006; McCracken, 1989; Mitchell & Boustani, 1992; O'Cass & Lim, 2001). These results suggest that brand-self image congruity plays an important role in apparel online shopping.

### **Effect of Perceived Risk on Purchase Intention in Buying a Specific Brand Online**

Participants who perceived less risk in buying apparel products of a specific brand online had higher purchase intention in buying apparel products of the brand online. According to the standard regression weights, among the variables in the model, perceived risk was the most prominent variable that influenced purchase intention in buying the brand. This result suggests the importance of developing marketing strategies to minimize customers' risk in order to increase their purchase intention in buying their brand online. This result is consistent with those of previous studies (Park et al., 2005; Park & Stoel, 2005;

Torkzadeh & Dhillon, 2002). Torkzadeh and Dhillon found that trust in e-retailers was one of the major factors influencing the success of the Internet commerce, and therefore, e-retailers should build trustworthiness with customers (Zhou, Dai, & Zhang, 2007). According to Park and Stoel (2005), shoppers may use a brand as a core internal source of information for judging and evaluating the quality of apparel sold on the Internet, indicating the brand rather than the amount of information reduces consumers' perception of risk.

### **Comparison of Two Revised Models**

The first revised model showed the relationships between measured variables for all participants, including the participants who had experience with a specific brand and those who did not have experience with a specific brand. The second revised model showed the relationships between measured variables for only the participants who had experience with a specific brand. The difference between the two revised models was the inclusion of the valence of the experience with a specific brand. The comparison of the results of the two revised models showed that in both revised models, perceived risk was influenced by the valence of the experience with apparel online shopping and brand-self image congruity. However, instead of the extent of the experience with a specific brand, which was found to influence perceived risk in the first revised model, the valence of the experience with a specific brand influenced perceived risk when participants had previous experience with that specific brand. In both revised models, purchase intention was influenced by three variables (i.e., the extent of the experience with apparel online shopping, brand-self image congruity, perceived risk). However, the difference was that purchase intention was influenced by the extent of the experience with a specific brand in the first revised model, but the extent of the experience with a specific brand did not influence purchase intention in the second revised model, when participants had previous experience with that specific brand. These comparison results showed that the extent of experience with a specific brand played a different role in perceived risk and purchase intention in apparel online shopping between consumers in general and the consumers who had previous experience with a specific brand.



### **Change of Self-Image: Findings from the Open-Ended Question**

In the open-ended question, some participants indicated that they had purchased the products of a certain brand; however, they stopped purchasing products of the brand. One main reason was that their self-image had changed because of age. According to Markus and Nurius (1986), self-concept development is a process of acquiring and achieving or resisting certain possible selves, and then, that the nature of individuals' possible selves will differ depending on age. According to Ibarra (1999), individuals observe role models to construct their possible selves. Through different modeling strategies, individuals try out provisional aspects of their self image by imitating the actions of others. However, individual's age and career stage tend to change or view role models differently (Gibson, 2003). Young female consumers tend to follow the images of models and actors in the ads or media (Schor, 2004; Wiseman, 2002) while older women prefer models of their own age, reflecting normal-sized and going about normal activities. Many consumers may find the image of some brands is not age appropriate as they get older because they cannot wear the products of the brand at work or even for everyday wear. Thus, customers may switch to other brands that reflect more of their current image and status.

### **Comparison of Results from Structural Equation Model and Quasi-Experimental Design**

The results of the first SEM for all participants showed that participants' perceived risk and purchase intention in buying a specific brand online were significantly influenced by the extent of the experience with a specific brand and brand-self image congruity. The results were consistent with the result of the two-way ANOVA test for the quasi-experimental design, indicating both variables were significantly related to perceived risk and purchase intention in all four experimental groups. One concern of the current study was that the research design of the study was a quasi-experimental study instead of a true experimental study. In social science, a quasi-experimental design for comparing groups is often used when random assignments of subjects are difficult to employ. For example, it is impossible to randomly assign individuals when a specific characteristic is desired in each group. In the current study, different experiences with a specific brand and brand-self image congruity were the required conditions in each group. Therefore, participants could not be randomly

assigned into the groups. Because they could not be randomly assigned, the internal validity of the study may be decreased. (i.e., the accuracy in the determination of causal relationships) (Harris, Lautenbach, & Perencevich, 2005). If each individual does not have an equal probability of being selected, the probability will be increased that the participants in all experimental groups are not comparable, and thus, the possibility will be increased that the study results are caused by extraneous factors or pre-existing differences (Gribbons & Herman, 1997). However, the consistent results between the SEM and ANOVA test for the quasi-experimental design have verified the results and increased the internal validity of the study.

### **Implications of the Findings**

The profiles of participant in the current study showed that slightly more male participants purchased apparel products online. This result indicates the importance of male segment in apparel online market. E-marketers of apparel products may want to consider developing websites specific for men, and based on male consumers' characteristics and references, design a website more appealing to them. For example, men prefer websites with wide product assortment, more product availability, and various designer brands, but do not like to spend a lot of time shopping (Smith, 2008). E-retailers can design websites for men according to these preferences and show more products on the screen at one time, such as adding the "view all" function, so that male customers can purchase products easier and faster. Apparel companies can mail their men's catalog to draw male customers to their website. In the current study, participants between 25 to 44 years old purchased apparel products online more than other age groups. This result suggests that consumers in age 25 to 44 years old are an important segment for apparel e-marketers. According to Chang and Samuel (2004), the middle aged (24 to 44 years old) shoppers are young enough to be progressive and old enough to be rich compared to other age groups, thus spending high amounts on online purchases. These middle aged consumers shop online more than five times a year, and are considered to be frequent online shoppers. Because these consumers are more likely to have a job and have relatively busy life styles, applications such as e-mail notice introducing new arrivals and promotions, may help these consumers in shopping online by receiving updated information without searching. One stop shopping could be

another application. For example, some apparel companies may want to collaborate and create an e-mall, providing links to other stores in their online stores and merged the shopping bags. Customers can buy products from each online store, but make a payment for the all products from each store in one shopping bag at once without paying multiple times. Therefore, customers are able to purchase apparel products for themselves as well as for family members by less typing, clicks, log-ins, and transaction processes. These applications may stimulate the middle aged customers' visit to online stores more often, and eventually, they will buy more apparel products from the online store.

The current study indicated that among participants who had experience with catalog shopping, those who felt more positive about their experience with catalog shopping also felt more positive about their experience with apparel online shopping. This result suggests that consumers' valence and extent experiences of apparel catalog shopping may increase their experience with apparel online shopping. According to this result, apparel catalog retailers can extend their distribution channel and change from a catalog only to a combination of catalog and online store so that they can use the advantages of each channel and provide their customers various ways to shop with them. For example, when catalogs are mailed to customers, consumers can see new products and styles instantly by reviewing the catalog without getting online. Retailers may indicate in their catalog that more pictures are available online to illustrate the details of each apparel product to solve the problem of limited space in a catalog. If customers see anything they like in catalogs, they may go online to find more information about the product. Customers not only can search more information about the product online, but also can compare with other alternatives easily. Other advantages of online shopping such as competitive price, faster and convenient purchase process, and direct delivery service, also may attract their catalog customers to use online service.

The current study reveals that consumers' valence of the experience with a specific brand may not influential to their extent of the experience with the brand when consumers already have experience with the brand. This finding suggests that to reduce customers' variety seeking from other online stores or brands, retailers can offer various designs and categories of products, and frequent updates of contents, design and technologies used in the website. These techniques may help customers to have fun and an interesting experience each time they shop, which could reduce customers' boredom and keep shopping with the brand.

Apparel online companies also could develop strategies to help their customers become loyal customers. For instance, providing exclusive member only promotions to loyal customers or sending birthday gift cards to customers so that they can receive free products or exclusive discounts may develop a special bond between the customer and the brand, and increase customers' positive feeling of the experience. Showing consistent care of loyal customers before, during, and after purchase is a key to build a solid relationship with their customers. Customer satisfaction programs by resolving problems with any shopping process or products, offering free or low-cost alteration, providing a discount for next purchase, and inviting to fashion shows may help customers feel that they are under constant care and are treasured by the company.

The current study indicated that experience with a specific brand influenced their perceived risk and purchase intention in apparel online shopping. Participants who had more experience with a specific brand perceived less risk and had more purchase intention in buying apparel products of the brand online. These results show the importance of attracting new customers to have at least one positive experience with the brand in order to reduce their perceived risk in continuing to buy the brand online. To attract new customers, providing a promotion such as discounts and coupons or free shipping/return for customers' first purchase may help customers feel positive about the brand so that they are willing to buy the products of the brand. Better customer service such as having friendly sales representatives to provide timely responses may also help customers' in their decision process and increase their willingness to try out a new brand. To increase the valence of the experience with the brand, the improvement in shopping environment is fundamental. According to Shergill and Chen (2005), the ambience associated with the website and how it functions play important roles in whether online consumers are satisfied or dissatisfied with their online shopping experiences. Website layout design and information content are important in order to arouse initial consumers' interest to further explore a website. Therefore, a well developed online store may increase customers' valence of experience with apparel e-retailers. (Iyer, Gupta, & Johri, 2005). Chen and Dubinsky (2003) also found that the valence of the experience with online shopping was related to relevant information, ease of use, and customer service. In an online environment, ease of use in website is associated with ease of finding items and ease

with the checkout process (Nielsen, 1999), and thus, these website attributes are crucial to provide a positive experience for online shoppers.

The current study also indicated that brand-self image congruity influenced experience with specific brand, perceived risk, and purchase intention in apparel online shopping. Participants who perceived the image of a specific brand as more consistent with their self-image had more experience with the brand, perceived less risk, and had more purchase intention in buying apparel products of the brand online. These results suggest that e-marketers of apparel brands that create a brand image consistent with their target customers can have a better chance to attract new customers and retain current customers. Therefore, marketers of apparel brands need to carefully research their target customers' self-image in order to create brand images that are consistent with their customers so that they can relate to the brand more. From advertising perspectives, advertising campaigns which address particular image of the brand similar to the general self-image of target market is important. Because the appeal of the brand lies not only on the functional advantages of its products, but also on the image that the brand conveys, the brand image helps the customer to express their desired image. Therefore, apparel marketers need to develop advertisements with a brand image to which their target customers can easily relate.

The present study indicated that perceived risk influenced purchase intention in apparel online shopping. Participants who perceived less risk in buying apparel products of a specific brand online had more purchase intention in buying the brand online. This result shows the importance of consumers' trust. E-retailers should upgrade their security and privacy systems of their online stores regularly as new technologies for online security and privacy available so that their customers can trust them and shop with confidence. Lastly, information regarding the trust building strategies needs to be announced to customers aggressively so that they understand the brand is making every effort to serve them the best.

### **Conclusions of the Study**

There were three purposes of the current study. The first purpose of the study was to examine the relationships between consumers' experiences with apparel catalog/TV shopping and their experience with apparel online shopping. The results showed that the

experience with apparel catalog shopping, both valence and extent of experiences, had a significant relationship with experience with apparel online shopping, but the experience with apparel TV shopping did not (see Table 6.1). In addition, the valence of the experience with apparel online shopping was found to have a significant effect on the extent of the experience with apparel online shopping. The second purpose of the study was to examine the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand. The results of the second purpose of the study showed that the extent of the experience with apparel online shopping and brand-self image congruity influenced the extent of the experience with a specific brand. In addition, among participants who had experience with a specific brand, the valence of the experience with a specific brand did not influence the extent of the experience with the brand. The third purpose of the study was to examine the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention in apparel online shopping context. The results of the third purpose of the study showed that perceived risk in buying apparel products of a specific brand online was influenced by the extent of the experience with a specific brand and brand-self image congruity. Purchase intention in buying apparel products of a specific brand online was influenced by the extent of the experience with a specific brand, brand-self image congruity, and perceived risk. However, among participants who had experience with a specific brand, the extent of the experience with a specific brand did not influence their perceived risk or purchase intention. Based on the findings, the current study has achieved the three proposed purposes of the study.

This study may benefit the researchers in the area of apparel by expanding the understanding of consumers' apparel online shopping behavior and identifying the roles of experiences and brand-self image congruity in apparel online shopping context. Two models, based on previous propositions and research results, were developed as the frameworks of the study. The first framework was for all consumers including the consumers who had experience with a specific brand and those did not have experience with a specific brand, and the second framework was only for the consumers who had experience with a specific brand. The study results fully supported the first proposed model, and additional relationships that did not propose were also identified. Future studies are needed to verify if the additional

**Table 6.1 Examination of Proposes of the Study**

Purpose of the Study	Conclusion of Each Hypothesis
To examine the relationships between consumers' experience with apparel catalog/TV shopping and their experience with apparel online shopping	H1: The extent of the experience with apparel catalog shopping had a significant relationship with the extent of the experience with apparel online shopping, but the extent of the experience with apparel TV shopping did not.
	H2: The valence of the experience with apparel catalog shopping had a significant relationship with the valence of the experience with apparel online shopping, but the valence of the experience with apparel TV shopping did not.
	H3 & H9: The valence of experience with apparel online shopping influenced the extent of the experience with apparel online shopping.
To examine the effects of consumers' experience with apparel online shopping and brand-self image congruity on their experience with a specific brand	H4 & H10: The extent of the experience with apparel online shopping influenced the extent of the experience with a specific brand
	H5, H11: Brand-self image congruity influenced the extent of the experience with a specific brand
	H8: The valence of the experience with a specific brand did not influence the extent of the experience with the brand.
To examine the effects of consumers' experience with a specific brand and brand-self image congruity on their perceived risk and purchase intention	H6: The extent of the experience with a specific brand and brand-self image congruity influenced perceived risk in buying apparel products of a specific brand online
	H7: The extent of the experience with a specific brand, brand-self image congruity, and perceived risk influenced purchase intention in buying apparel products of a specific brand online
	H12: Among participants who had experience with a specific brand, brand-self image congruity influenced perceived risk in buying apparel products of a specific brand online; however, the extent of the experience with a specific brand did not.
	H13: Among participants who had experience with a specific brand, brand-self image congruity and perceived risk influenced purchase intention in buying apparel products of a specific brand online; however, the extent of the experience with a specific brand did not influence purchase intention in buying apparel products of a specific brand online
	H14: In quasi-experimental groups, the extent of the experience with a specific brand and brand-self image congruity influenced perceived risk in buying apparel products of a specific brand online
	H15: In quasi-experimental groups, The extent of the experience with a specific brand and brand-self image congruity influenced purchase intention in buying apparel products of a specific brand online

relationships could provide a better explanation for consumers' perceived risk and purchase intention in apparel online shopping. The study results also supported the second proposed framework, however, with some modifications. The results indicated that the extent of experience with a specific brand played a different role in perceived risk and purchase intention in apparel online shopping between consumers in general and the consumers who had previous experience with a specific brand. The extent of experience with a specific brand did not influence perceived risk and purchase intention among consumers who had experience with a specific brand. Besides the possible contribution to researchers, the results of the study could provide apparel e-retailers with helpful information in establishing effective retail strategies of apparel online shopping based on consumers' previous shopping experiences and brand-self image congruity. Suggestions for potential marketing strategies were provided in the study.

### **Limitations of the Study and Recommendations for Future Research**

The sample of the current study was recruited from a survey company that provides a proprietary marketing research panel containing more than two million subjects. The demographic distribution of the panel is similar to the U.S. Census data to ensure population representation. However, because participants who could not select an apparel brand that fulfilled the given condition based on the quasi-experimental design were eliminated, participants in the current study may not represent all apparel online shoppers in the United States. Therefore, the findings of the current study cannot be generalized to the general population in the United States. Further studies using a national sample are needed to verify the current findings and confirm the validity of the framework.

In the current study, the extent of experience with a specific brand and brand-self image congruity were included as two aspects of consumers' internal information that they use to perceive the risk and determine their purchase intention in buying a specific apparel brand online. Other internal information stored in customers' mind, such as product/brand knowledge and word-of-mouth, or external information, such as advertising, price, and in-store sign, may also play important roles in apparel online shopping and should be included in future research to fully understand how consumers use information in apparel online



shopping context. Furthermore, participants in Group 2 in the current study were asked the reason they purchased the brand although the brand image was not consistent with their own image. Besides price and the attributes related to the product itself, such as design, fit/size/comfort, and quality, they also mentioned special occasion and the influence of peers. These reasons suggest that social-psychological variables also influence consumers' purchase intention and future research should consider the topics in the area. For example, several studies have investigated the roles of peer groups in adolescents' purchase intention for apparel products (Schor, 2004; Wiseman, 2002). However, few studies have examined the influence of peer group on adult consumers' purchase intention for apparel products. It is possible that adults are also influenced by their peer groups' fashion styles depending on their occupation and workplace.

The current study explored the two constructs of experience, the valence and the extent of the experience, and validated that the two aspects of experience were separate constructs. Almost all the studies in the apparel area have only examined consumers' extent of the experience. More studies are needed to examine the valence of the experience to better understand their roles in apparel online shopping and the factors that may influence this aspect of the shopping experience. When more valence of experience is known, efficient strategies can be developed to increase consumers' positive feelings of their shopping experience.

Some participants in the study indicated that they had purchased products of a certain brand; however, they stopped purchasing products of the brand. Future research needs to investigate how consumers' self-image change and the causes for the change such as age, life cycle, occupation, or other factors so that apparel marketers can develop other brands with new images accordingly to retain their customers.

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## **APPENDIXES**

Appendix A.  
Final Questionnaires for Four Groups

Appendix B.  
Demographic Data Comparison of US Census and Survey Company

Appendix C.  
Results of Factor Analysis: Brand-Self Image Congruity

Appendix D.  
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Appendix F.  
Approved IRB

## **Appendix A**

### **Final Questionnaires for Four Groups**

## Questionnaire for Group 1

### Instruction for Selecting One Apparel Brand

Please think about several brands of apparel products.

The definition of apparel products in this study includes all the products that you wear and carry that influence your total outfit such as clothing, accessory, and shoes.

These brands do not need to be sold online exclusively. Of those brands, please choose one brand that fulfills the following condition:

**I have purchased and worn this brand before. The image of the brand is consistent with my own image.**

If you cannot remember the name of the brand that can fulfill the above condition, please refer to the brand list provided below. This list is just for your reference. You may select a brand that is not included in the list.

Adidas	Abercrombie & Fitch	American Eagle Outfitters	Banana Republic
Betsey Johnson	Billabong	Birkenstock	Burton
Calvin Klein	Chaco	Christian Dior	Champion
Cherokee	Cloudveil	Columbia	Converse
Cutter & Buck	Dickies	Diesel	Disney
Dockers	Dolce & Gabbana	Duofold	Easy Spirit
Eddie Bauer	Ex Officio	Fcuk	Fila
Gap	Gucci	Haggar	Hanes
Hugo Boss	Hurley	Izod	J Crew
Juicy Couture	Junk Food	Keen	Keneth Cole
L.L. Bean	Landau	Lands' End	Lee Jeans
Levi's	Lucky Brand	Marc Jacobs	Marmot
New Balance	North Face	Nike	Old Navy
O'Neil	Orvis	Prada	Prana
Puma	Rainbow	Ralph Lauren	Reebok
Roxy	Sean John	Steve Madden	Theory
Volcom	Woolrich	Xhilaration	St. John

1. Can you choose one apparel brand that fulfills the above condition?

\_\_\_\_ Yes \_\_\_\_ No

2. Please write down the name of the selected brand and continue.

\_\_\_\_\_

### Experiences with the Selected Brand

Please click the one answer to each question that best indicates your experiences with the brand that you selected.

Please remember that the brand you selected is: **I have purchased and worn this brand before. The image of the brand is consistent with my own image.**

3. How often do (did) you purchase apparel products of the selected brand?

- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

4. How much have you spent on apparel products of the selected brand in the last six months?

- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

5. How many apparel products of the selected brand have you purchased in the last six months?

- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

**Strongly  
Strongly  
Agree**

**Disagree**

6. I have enjoyed purchasing and wearing apparel products of the selected brand .....1.....2.....3.....4.....5.....6

7. Purchasing and wearing apparel products of the selected brand has been a good experience.....1.....2.....3.....4.....5.....6

8. I am satisfied with my experiences with buying and wearing apparel products of the selected brand.....1.....2.....3.....4.....5.....6

### Attitude toward the Selected Brand

Please click the one answer to question that best indicates your attitude toward the brand that you selected.

Please remember that the brand you selected is: **I have purchased and worn this brand before. The image of the brand is consistent with my own image.**

	Strongly Disagree	Strongly Agree
9. The selected brand is good.....	1	6
10. My general attitude toward the selected brand is favorable.....	1	6
11. I consider the selected brand to be valuable and important to me.....	1	6
12. The selected brand is desirable.....	1	6
13. The selected brand is useful (e.g., I can wear many items from the selected brand).....	1	6
14. The selected brand is likable.....	1	6

### Brand-Self Image Congruity

Please click the one answer to each question that best indicates the consistency between your self-image and the image of the brand that you selected.

	Strongly Disagree	Strongly Agree
15. The image of the selected brand is consistent with how I see myself.....	1	6
16. Wearing the selected brand reflects who I am.....	1	6
17. The overall image of the people who wear the selected brand is consistent with my own image .....	1	6
18. The image of the selected brand is consistent with how I would like to be.....	1	6
19. The image I would like to be is consistent with the overall image of people who wear the selected brand .....	1	6
20. Wearing the selected brand reflects who I would like to be .....	1	6

## Perceived Risk

**Please click the one answer to each question that best indicates the potential risks may arise when you purchase the selected brand online.**

**Please remember that the brand you selected is: I have purchased and worn this brand before. The image of the brand is consistent with my own image.**

- |  | Very<br>Unlikely                | Very<br>Likely |
|--|---------------------------------|----------------|
| 21. I can be certain that when I buy the selected brand online, it will be the same as what I have expected.....   | 1.....2.....3.....4.....5.....6 |                |
| 22. I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.....   | 1.....2.....3.....4.....5.....6 |                |
| 23. I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.....                             | 1.....2.....3.....4.....5.....6 |                |
| 24. I can be assured that the apparel product that I purchase online of the selected brand will look good on me.....   | 1.....2.....3.....4.....5.....6 |                |
| 25. I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.....   | 1.....2.....3.....4.....5.....6 |                |
| 26. I can be certain that I will save time by shopping apparel products online of the selected brand.....  | 1.....2.....3.....4.....5.....6 |                |
| 27. I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.....  | 1.....2.....3.....4.....5.....6 |                |
| 28. I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).....                 | 1.....2.....3.....4.....5.....6 |                |
| 29. I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).....      | 1.....2.....3.....4.....5.....6 |                |
| 30. I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.....   | 1.....2.....3.....4.....5.....6 |                |
| 31. I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof)..... | 1.....2.....3.....4.....5.....6 |                |

32. I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.....1.....2.....3.....4.....5.....6
33. I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.....1.....2.....3.....4.....5.....6
34. I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand .....1.....2.....3.....4.....5.....6
35. I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.....1.....2.....3.....4.....5.....6
36. I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand..... 1.....2.....3.....4.....5.....6
- 37I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).....1.....2.....3.....4.....5.....6
38. I can be certain that I will lose money if I purchase apparel products online of the selected brand .....1.....2.....3.....4.....5.....6
39. Overall, purchasing apparel products of the selected brand online is risky.....1.....2.....3.....4.....5.....6

### **Intention of Purchasing the Selected Brand Online**

**Please click the one answer to each question that best indicates your intention of buying apparel products of the selected brand online in the future.**

**Please remember that the brand you selected is: I have purchased and worn this brand before. The image of the brand is consistent with my own image.**

- |   | <b>Very<br/>Unlikely</b> | <b>Very<br/>Likely</b> |
|---|--------------------------|------------------------|
| 40. How likely is it that you will purchase apparel products online of the selected brand?.....1.....2.....3.....4.....5.....6                            |                          |                        |
| 41. How likely is it that you will purchase the selected brand online the next time when you need an apparel product?.....1.....2.....3.....4.....5.....6 |                          |                        |
|   | <b>Very<br/>Low</b>      | <b>Very<br/>High</b>   |
| 42. The probability of buying the selected brand in the future when you shop for apparel products online is.....1.....2.....3.....4.....5.....6           |                          |                        |

### Experiences with Apparel Catalog Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from catalogs.

If you have never purchased any apparel products from catalogs, please click **Never** or **None**.

43. How often do (did) you purchase apparel products from catalogs?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

44. How much have you spent on apparel products that you bought from catalogs in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

45. How many apparel products have you purchased from catalogs in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

If you have never purchased apparel products from catalogs, please click **7 Not Applicable** for following questions.

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>	<b>Not Applicable</b>				
46. I have enjoyed purchasing and wearing apparel products from catalogs .....	1	2	3	4	5	6	7



47. Purchasing apparel products from catalogs has been a good experience.....1...2...3...4...5...6.....7

48. I am satisfied with my experiences with buying apparel products from catalogs.....1...2...3...4...5...6.....7

### Experiences with Apparel TV Shopping

**Please click the one answer to each question that best indicates your experiences with buying apparel products from TV retailers (e.g., shopping networks, infomercials, ads with 800 numbers).**

**If you have never purchased any apparel products from TV retailers, please click **Never** or **None**.**

49. How often do (did) you purchase apparel products from TV retailers?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

50. How much have you spent on apparel products that you bought from TV retailers in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

51. How many apparel products have you purchased from TV retailers in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

**If you have never purchased apparel products from catalogs, please click 7 Not Applicable for following questions.**

- |  | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> | <b>Not<br/>Applicable</b> |   |   |   |   |
|--|------------------------------|---------------------------|---------------------------|---|---|---|---|
| 52. I have enjoyed purchasing and wearing apparel products on TV.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 53. Purchasing apparel products on TV has been a good experience.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 54. I am satisfied with my experiences with buying apparel products on TV..... | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |

### **Experiences with Apparel Online Shopping**

**Please click the one answer to each question that best indicates your experiences with buying apparel products from online stores.**

55. How often do (did) you purchase apparel products online?  
 Less than once a year  
 About once a year  
 About every 6 months  
 About every 3 months  
 About once a month  
 About twice a month  
 About once a week  
 About twice a week  
 More than twice a week
56. How much have you spent on apparel products that you bought online in the last six months?  
 \$1 - \$25  
 \$26 - \$50  
 \$51 - \$75  
 \$76 - \$100  
 \$101 - \$150  
 \$151 - \$200  
 \$201 - \$250  
 \$251 - \$500  
 \$501 - \$1000  
 \$1001 and more
57. How many apparel products have you purchased online in the last six months?  
 1 - 2 items  
 3 - 4 items  
 5 - 6 items  
 7 - 8 items  
 9 - 10 items  
 11 items and more

- |   | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|---|---------------------------------|---------------------------|
| 58. I have enjoyed purchasing and wearing apparel products online.....          | 1.....2.....3.....4.....5.....6 |                           |
| 59. Purchasing apparel products online has been a good experience.....          | 1.....2.....3.....4.....5.....6 |                           |
| 60. I am satisfied with my experiences with buying apparel products online..... | 1.....2.....3.....4.....5.....6 |                           |

### **More about you**

Please check one answer that reflects the best to the questions below.

61. My gender is \_\_\_\_\_.
- Male
  - Female
62. My age is \_\_\_\_\_.
- 20- 24 years
  - 25- 29 years
  - 30- 34 years
  - 35- 39 years
  - 40- 44 years
  - 45- 49 years
  - 50- 54 years
  - 55- 59 years
  - 60 - 64 years
  - 65 - 69 years
  - 70 -74 years
  - 75 - 79 years
  - 80 - 84 years
  - 85 years or older
63. My highest level of education is \_\_\_\_\_.
- Elementary school graduate
  - High school graduate
  - Some college/No degree
  - Associate's degree, occupational
  - Associate's degree, academic
  - Bachelor's degree
  - Master's degree
  - Professional degree
  - Doctoral degree

64. My occupation is in the category of \_\_\_\_\_.

- Retired
- Homemaker
- Student
- Service occupations
- Sales and office occupations
- Farming, fishing, and forestry occupations
- Construction, extraction, and maintenance occupations
- Production, transportation, and material moving occupations
- Management, professional, and related occupations

\*Examples of management and professional occupations are as following: Management occupations, Farmers and farm managers, Business and financial operations occupations, Computer and mathematical occupations, Architecture and engineering occupations, Life, physical, and social science occupations, Community and social services occupations, Legal occupations, Education, training, and library occupations, Arts, design, entertainment, sports, and media occupations, Healthcare practitioners and technical occupations

65. Please specify your occupation: \_\_\_\_\_

66. My race is \_\_\_\_\_.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Other, please specify \_\_\_\_\_

67. My last year household income is approximately \_\_\_\_\_.

- I don't know.
- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

68. My yearly apparel product expenditure is about \_\_\_\_\_.

- None
- \$1 - \$99
- \$100 - \$199
- \$200 - \$299
- \$300 - \$399
- \$400 - \$499
- \$500 - \$599
- \$600 - \$699
- \$700 - \$799
- \$800 - \$899

- \_\_\_\_\_ \$900 - \$999
- \_\_\_\_\_ \$1000 - \$1999
- \_\_\_\_\_ \$2000 - \$2999
- \_\_\_\_\_ \$3000 - \$3999
- \_\_\_\_\_ \$4000 - \$4999
- \_\_\_\_\_ More than \$5000

## Questionnaire for Group 2

### Instruction for Selecting One Apparel Brand

Please think about several brands of apparel products.

The definition of apparel products in this study includes all the products that you wear and carry that influence your total outfit such as clothing, accessory, and shoes.

These brands do not need to be sold online exclusively. Of those brands, please choose one brand that fulfills the following condition:

**I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.**

If you cannot remember the name of the brand that can fulfill the above condition, please refer to the brand list provided below. This list is just for your reference. You may select a brand that is not included in the list.

Adidas	Abercrombie & Fitch	American Eagle Outfitters	Banana Republic
Betsey Johnson	Billabong	Birkenstock	Burton
Calvin Klein	Chaco	Christian Dior	Champion
Cherokee	Cloudveil	Columbia	Converse
Cutter & Buck	Dickies	Diesel	Disney
Dockers	Dolce & Gabbana	Duofold	Easy Spirit
Eddie Bauer	Ex Officio	Fcuk	Fila
Gap	Gucci	Haggar	Hanes
Hugo Boss	Hurley	Izod	J Crew
Juicy Couture	Junk Food	Keen	Keneth Cole
L.L. Bean	Landau	Lands' End	Lee Jeans
Levi's	Lucky Brand	Marc Jacobs	Marmot
New Balance	North Face	Nike	Old Navy
O'Neil	Orvis	Prada	Prana
Puma	Rainbow	Ralph Lauren	Reebok
Roxy	Sean John	Steve Madden	Theory
Volcom	Woolrich	Xhilaration	St. John

1. Can you choose one apparel brand that fulfills the above condition?

\_\_\_\_ Yes \_\_\_\_ No

2. Please write down the name of the selected brand and continue.

\_\_\_\_\_

### Experiences with the Selected Brand

Please click the one answer to each question that best indicates your experiences with the brand that you selected.

Please remember that the brand you selected is: **I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.**

3. How often do (did) you purchase apparel products of the selected brand?  
 Less than once a year  
 About once a year  
 About every 6 months  
 About every 3 months  
 About once a month  
 About twice a month  
 About once a week  
 About twice a week  
 More than twice a week
4. How much have you spent on apparel products of the selected brand in the last six months?  
 \$1 - \$25  
 \$26 - \$50  
 \$51 - \$75  
 \$76 - \$100  
 \$101 - \$150  
 \$151 - \$200  
 \$201 - \$250  
 \$251 - \$500  
 \$501 - \$1000  
 \$1001 and more
5. How many apparel products of the selected brand have you purchased in the last six months?  
 1 - 2 items  
 3 - 4 items  
 5 - 6 items  
 7 - 8 items  
 9 - 10 items  
 11 items and more

- |   | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---------------------------|
| 6. I have enjoyed purchasing and wearing apparel products of the selected brand .....                     | 1                            | 6                         |
| 7. Purchasing and wearing apparel products of the selected brand has been a good experience.....          | 1                            | 6                         |
| 8. I am satisfied with my experiences with buying and wearing apparel products of the selected brand..... | 1                            | 6                         |

### Attitude toward the Selected Brand

Please click the one answer to question that best indicates your attitude toward the brand that you selected.

Please remember that the brand you selected is: **I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.**

- |   | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---------------------------|
| 9. The selected brand is good.....  | 1                            | 6                         |
| 10. My general attitude toward the selected brand is favorable.....                         | 1                            | 6                         |
| 11. I consider the selected brand to be valuable and important to me.....                   | 1                            | 6                         |
| 12. The selected brand is desirable.....  | 1                            | 6                         |
| 13. The selected brand is useful (e.g., I can wear many items from the selected brand)..... | 1                            | 6                         |
| 14. The selected brand is likable.....  | 1                            | 6                         |

### Brand-Self Image Congruity

Please click the one answer to each question that best indicates the consistency between your self-image and the image of the brand that you selected.

- |   | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---------------------------|
| 15. The image of the selected brand is consistent with how I see myself.....                                      | 1                            | 6                         |
| 16. Wearing the selected brand reflects who I am.....   | 1                            | 6                         |
| 17. The overall image of the people who wear the selected brand is consistent with my own image .....             | 1                            | 6                         |
| 18. The image of the selected brand is consistent with how I would like to be.....                                | 1                            | 6                         |
| 19. The image I would like to be is consistent with the overall image of people who wear the selected brand ..... | 1                            | 6                         |
| 20. Wearing the selected brand reflects who I would like to be .....  | 1                            | 6                         |



## Perceived Risk

**Please click the one answer to each question that best indicates the potential risks may arise when you purchase the selected brand online.**

**Please remember that the brand you selected is: I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.**

- |  | Very<br>Unlikely                | Very<br>Likely |
|--|---------------------------------|----------------|
| 21. I can be certain that when I buy the selected brand online, it will be the same as what I have expected.....   | 1.....2.....3.....4.....5.....6 |                |
| 22. I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.....   | 1.....2.....3.....4.....5.....6 |                |
| 23. I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.....                             | 1.....2.....3.....4.....5.....6 |                |
| 24. I can be assured that the apparel product that I purchase online of the selected brand will look good on me.....   | 1.....2.....3.....4.....5.....6 |                |
| 25. I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.....   | 1.....2.....3.....4.....5.....6 |                |
| 26. I can be certain that I will save time by shopping apparel products online of the selected brand.....  | 1.....2.....3.....4.....5.....6 |                |
| 27. I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.....  | 1.....2.....3.....4.....5.....6 |                |
| 28. I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).....                 | 1.....2.....3.....4.....5.....6 |                |
| 29. I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).....      | 1.....2.....3.....4.....5.....6 |                |
| 30. I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.....   | 1.....2.....3.....4.....5.....6 |                |
| 31. I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof)..... | 1.....2.....3.....4.....5.....6 |                |

32. I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.....1.....2.....3.....4.....5.....6
33. I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.....1.....2.....3.....4.....5.....6
34. I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand .....1.....2.....3.....4.....5.....6
35. I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.....1.....2.....3.....4.....5.....6
36. I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand..... 1.....2.....3.....4.....5.....6
- 37I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).....1.....2.....3.....4.....5.....6
38. I can be certain that I will lose money if I purchase apparel products online of the selected brand .....1.....2.....3.....4.....5.....6
39. Overall, purchasing apparel products of the selected brand online is risky.....1.....2.....3.....4.....5.....6

### **Intention of Purchasing the Selected Brand Online**

**Please click the one answer to each question that best indicates your intention of buying apparel products of the selected brand online in the future.**

**Please remember that the brand you selected is: I have purchased and worn this brand before. However, the image of the brand is not consistent with my own image.**

- |   | <b>Very<br/>Unlikely</b> | <b>Very<br/>Likely</b> |
|---|--------------------------|------------------------|
| 40. How likely is it that you will purchase apparel products online of the selected brand?.....1.....2.....3.....4.....5.....6                            |                          |                        |
| 41. How likely is it that you will purchase the selected brand online the next time when you need an apparel product?.....1.....2.....3.....4.....5.....6 |                          |                        |
|   | <b>Very<br/>Low</b>      | <b>Very<br/>High</b>   |
| 42. The probability of buying the selected brand in the future when you shop for apparel products online is.....1.....2.....3.....4.....5.....6           |                          |                        |

### Experiences with Apparel Catalog Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from catalogs.

If you have never purchased any apparel products from catalogs, please click **Never** or **None**.

43. How often do (did) you purchase apparel products from catalogs?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

44. How much have you spent on apparel products that you bought from catalogs in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

45. How many apparel products have you purchased from catalogs in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

If you have never purchased apparel products from catalogs, please click **7 Not Applicable** for following questions.

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>	<b>Not Applicable</b>				
46. I have enjoyed purchasing and wearing apparel products from catalogs .....	1	2	3	4	5	6	7

47. Purchasing apparel products from catalogs has been a good experience.....1...2...3...4...5...6.....7

48. I am satisfied with my experiences with buying apparel products from catalogs.....1...2...3...4...5...6.....7

### Experiences with Apparel TV Shopping

**Please click the one answer to each question that best indicates your experiences with buying apparel products from TV retailers (e.g., shopping networks, infomercials, ads with 800 numbers).**

**If you have never purchased any apparel products from TV retailers, please click **Never** or **None**.**

49. How often do (did) you purchase apparel products from TV retailers?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

50. How much have you spent on apparel products that you bought from TV retailers in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

51. How many apparel products have you purchased from TV retailers in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

**If you have never purchased apparel products from catalogs, please click 7 Not Applicable for following questions.**

- |  | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> | <b>Not<br/>Applicable</b> |   |   |   |   |
|--|------------------------------|---------------------------|---------------------------|---|---|---|---|
| 52. I have enjoyed purchasing and wearing apparel products on TV.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 53. Purchasing apparel products on TV has been a good experience.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 54. I am satisfied with my experiences with buying apparel products on TV..... | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |

### **Experiences with Apparel Online Shopping**

**Please click the one answer to each question that best indicates your experiences with buying apparel products from online stores.**

55. How often do (did) you purchase apparel products online?  
 Less than once a year  
 About once a year  
 About every 6 months  
 About every 3 months  
 About once a month  
 About twice a month  
 About once a week  
 About twice a week  
 More than twice a week
56. How much have you spent on apparel products that you bought online in the last six months?  
 \$1 - \$25  
 \$26 - \$50  
 \$51 - \$75  
 \$76 - \$100  
 \$101 - \$150  
 \$151 - \$200  
 \$201 - \$250  
 \$251 - \$500  
 \$501 - \$1000  
 \$1001 and more
57. How many apparel products have you purchased online in the last six months?  
 1 - 2 items  
 3 - 4 items  
 5 - 6 items  
 7 - 8 items  
 9 - 10 items  
 11 items and more

- |   | <b>Strongly<br/>Disagree</b> |   |   |   |   |   | <b>Strongly<br/>Agree</b> |
|---|------------------------------|---|---|---|---|---|---------------------------|
| 58. I have enjoyed purchasing and wearing apparel products online.....          | 1                            | 2 | 3 | 4 | 5 | 6 |                           |
| 59. Purchasing apparel products online has been a good experience.....          | 1                            | 2 | 3 | 4 | 5 | 6 |                           |
| 60. I am satisfied with my experiences with buying apparel products online..... | 1                            | 2 | 3 | 4 | 5 | 6 |                           |

### **More about you**

Please check one answer that reflects the best to the questions below.

61. My gender is \_\_\_\_\_.
- Male
  - Female
62. My age is \_\_\_\_\_.
- 20- 24 years
  - 25- 29 years
  - 30- 34 years
  - 35- 39 years
  - 40- 44 years
  - 45- 49 years
  - 50- 54 years
  - 55- 59 years
  - 60 - 64 years
  - 65 - 69 years
  - 70 -74 years
  - 75 - 79 years
  - 80 - 84 years
  - 85 years or older
63. My highest level of education is \_\_\_\_\_.
- Elementary school graduate
  - High school graduate
  - Some college/No degree
  - Associate's degree, occupational
  - Associate's degree, academic
  - Bachelor's degree
  - Master's degree
  - Professional degree
  - Doctoral degree

64. My occupation is in the category of \_\_\_\_\_.

- Retired
- Homemaker
- Student
- Service occupations
- Sales and office occupations
- Farming, fishing, and forestry occupations
- Construction, extraction, and maintenance occupations
- Production, transportation, and material moving occupations
- Management, professional, and related occupations

\*Examples of management and professional occupations are as following: Management occupations, Farmers and farm managers, Business and financial operations occupations, Computer and mathematical occupations, Architecture and engineering occupations, Life, physical, and social science occupations, Community and social services occupations, Legal occupations, Education, training, and library occupations, Arts, design, entertainment, sports, and media occupations, Healthcare practitioners and technical occupations

65. Please specify your occupation: \_\_\_\_\_

66. My race is \_\_\_\_\_.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Other, please specify \_\_\_\_\_

67. My last year household income is approximately \_\_\_\_\_.

- I don't know.
- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

68. My yearly apparel product expenditure is about \_\_\_\_\_.

- None
- \$1 - \$99
- \$100 - \$199
- \$200 - \$299
- \$300 - \$399
- \$400 - \$499
- \$500 - \$599
- \$600 - \$699
- \$700 - \$799
- \$800 - \$899

- \_\_\_\_\_ \$900 - \$999
- \_\_\_\_\_ \$1000 - \$1999
- \_\_\_\_\_ \$2000 - \$2999
- \_\_\_\_\_ \$3000 - \$3999
- \_\_\_\_\_ \$4000 - \$4999
- \_\_\_\_\_ More than \$5000



### Questionnaire for Group 3

#### Instruction for Selecting One Apparel Brand

Please think about several brands of apparel products.

The definition of apparel products in this study includes all the products that you wear and carry that influence your total outfit such as clothing, accessory, and shoes.

These brands do not need to be sold online exclusively. Of those brands, please choose one brand that fulfills the following condition:

**I have heard about this brand. The image of the brand is consistent with my own image. However, I have never purchased or worn this brand before.**

If you cannot remember the name of the brand that can fulfill the above condition, please refer to the brand list provided below. This list is just for your reference. You may select a brand that is not included in the list.

Adidas	Abercrombie & Fitch	American Eagle Outfitters	Banana Republic
Betsey Johnson	Billabong	Birkenstock	Burton
Calvin Klein	Chaco	Christian Dior	Champion
Cherokee	Cloudveil	Columbia	Converse
Cutter & Buck	Dickies	Diesel	Disney
Dockers	Dolce & Gabbana	Duofold	Easy Spirit
Eddie Bauer	Ex Officio	Fcuk	Fila
Gap	Gucci	Haggar	Hanes
Hugo Boss	Hurley	Izod	J Crew
Juicy Couture	Junk Food	Keen	Keneth Cole
L.L. Bean	Landau	Lands' End	Lee Jeans
Levi's	Lucky Brand	Marc Jacobs	Marmot
New Balance	North Face	Nike	Old Navy
O'Neil	Orvis	Prada	Prana
Puma	Rainbow	Ralph Lauren	Reebok
Roxy	Sean John	Steve Madden	Theory
Volcom	Woolrich	Xhilaration	St. John

1. Can you choose one apparel brand that fulfills the above condition?

\_\_\_\_ Yes \_\_\_\_ No

2. Please write down the name of the selected brand and continue.

\_\_\_\_\_

**Attitude toward the Selected Brand**

Please click the one answer to question that best indicates your attitude toward the brand that you selected.

Please remember that the brand you selected is: **I have heard about this brand. The image of the brand is consistent with my own image. However, I have never purchased or worn this brand before.**

- |  | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|--|---------------------------------|---------------------------|
| 3. The selected brand is good.....   | 1.....2.....3.....4.....5.....6 |                           |
| 4. My general attitude toward the selected brand is favorable.....                         | 1.....2.....3.....4.....5.....6 |                           |
| 5. I consider the selected brand to be valuable and important to me.....                   | 1.....2.....3.....4.....5.....6 |                           |
| 6. The selected brand is desirable.....  | 1.....2.....3.....4.....5.....6 |                           |
| 7. The selected brand is useful (e.g., I can wear many items from the selected brand)..... | 1.....2.....3.....4.....5.....6 |                           |
| 8. The selected brand is likable.....  | 1.....2.....3.....4.....5.....6 |                           |

**Brand-Self Image Congruity**

Please click the one answer to each question that best indicates the consistency between your self-image and the image of the brand that you selected.

- |   | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|---|---------------------------------|---------------------------|
| 9. The image of the selected brand is consistent with how I see myself.....                                       | 1.....2.....3.....4.....5.....6 |                           |
| 10. Wearing the selected brand reflects who I am.....   | 1.....2.....3.....4.....5.....6 |                           |
| 11. The overall image of the people who wear the selected brand is consistent with my own image .....             | 1.....2.....3.....4.....5.....6 |                           |
| 12. The image of the selected brand is consistent with how I would like to be.....                                | 1.....2.....3.....4.....5.....6 |                           |
| 13. The image I would like to be is consistent with the overall image of people who wear the selected brand ..... | 1.....2.....3.....4.....5.....6 |                           |
| 14. Wearing the selected brand reflects who I would like to be .....  | 1.....2.....3.....4.....5.....6 |                           |

## Perceived Risk

**Please click the one answer to each question that best indicates the potential risks may arise when you purchase the selected brand online.**

**Please remember that the brand you selected is: I have heard about this brand. The image of the brand is consistent with my own image. However, I have never purchased or worn this brand before.**

- |  | Very<br>Unlikely                | Very<br>Likely |
|--|---------------------------------|----------------|
| 15. I can be certain that when I buy the selected brand online, it will be the same as what I have expected.....   | 1.....2.....3.....4.....5.....6 |                |
| 16. I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.....   | 1.....2.....3.....4.....5.....6 |                |
| 17. I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.....                             | 1.....2.....3.....4.....5.....6 |                |
| 18. I can be assured that the apparel product that I purchase online of the selected brand will look good on me.....   | 1.....2.....3.....4.....5.....6 |                |
| 19. I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.....   | 1.....2.....3.....4.....5.....6 |                |
| 20. I can be certain that I will save time by shopping apparel products online of the selected brand.....  | 1.....2.....3.....4.....5.....6 |                |
| 21. I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.....  | 1.....2.....3.....4.....5.....6 |                |
| 22. I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).....                 | 1.....2.....3.....4.....5.....6 |                |
| 23. I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).....      | 1.....2.....3.....4.....5.....6 |                |
| 24. I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.....   | 1.....2.....3.....4.....5.....6 |                |
| 25. I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof)..... | 1.....2.....3.....4.....5.....6 |                |

26. I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.....1.....2.....3.....4.....5.....6
27. I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.....1.....2.....3.....4.....5.....6
28. I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand .....1.....2.....3.....4.....5.....6
29. I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.....1.....2.....3.....4.....5.....6
30. I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand..... 1.....2.....3.....4.....5.....6
31. I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).....1.....2.....3.....4.....5.....6
32. I can be certain that I will lose money if I purchase apparel products online of the selected brand .....1.....2.....3.....4.....5.....6
33. Overall, purchasing apparel products of the selected brand online is risky.....1.....2.....3.....4.....5.....6

**Intention of Purchasing the Selected Brand Online**

**Please click the one answer to each question that best indicates your intention of buying apparel products of the selected brand online in the future.**

**Please remember that the brand you selected is: I have heard about this brand. The image of the brand is consistent with my own image. However, I have never purchased or worn this brand before.**

- |   |                          |                        |
|---|--------------------------|------------------------|
|   | <b>Very<br/>Unlikely</b> | <b>Very<br/>Likely</b> |
| 34. How likely is it that you will purchase apparel products online of the selected brand?.....1.....2.....3.....4.....5.....6                            |                          |                        |
| 35. How likely is it that you will purchase the selected brand online the next time when you need an apparel product?.....1.....2.....3.....4.....5.....6 |                          |                        |
|   | <b>Very<br/>Low</b>      | <b>Very<br/>High</b>   |
| 36. The probability of buying the selected brand in the future when you shop for apparel products online is.....1.....2.....3.....4.....5.....6           |                          |                        |

### Experiences with Apparel Catalog Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from catalogs.

If you have never purchased any apparel products from catalogs, please click **Never** or **None**.

37. How often do (did) you purchase apparel products from catalogs?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

38. How much have you spent on apparel products that you bought from catalogs in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

39. How many apparel products have you purchased from catalogs in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

If you have never purchased apparel products from catalogs, please click **7 Not Applicable** for following questions.

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>	<b>Not Applicable</b>				
40. I have enjoyed purchasing and wearing apparel products from catalogs .....	1	2	3	4	5	6	7

41. Purchasing apparel products from catalogs has been a good experience.....1...2...3...4...5...6.....7

42. I am satisfied with my experiences with buying apparel products from catalogs.....1...2...3...4...5...6.....7

### Experiences with Apparel TV Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from TV retailers (e.g., shopping networks, infomercials, ads with 800 numbers).

If you have never purchased any apparel products from TV retailers, please click **Never** or **None**.

43. How often do (did) you purchase apparel products from TV retailers?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

44. How much have you spent on apparel products that you bought from TV retailers in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

45. How many apparel products have you purchased from TV retailers in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

If you have never purchased apparel products from catalogs, please click **7 Not Applicable** for following questions.

- |  | Strongly<br>Disagree | Strongly<br>Agree | Not<br>Applicable |   |   |   |   |
|--|----------------------|-------------------|-------------------|---|---|---|---|
| 46. I have enjoyed purchasing and wearing apparel products on TV.....          | 1                    | 2                 | 3                 | 4 | 5 | 6 | 7 |
| 47. Purchasing apparel products on TV has been a good experience.....          | 1                    | 2                 | 3                 | 4 | 5 | 6 | 7 |
| 48. I am satisfied with my experiences with buying apparel products on TV..... | 1                    | 2                 | 3                 | 4 | 5 | 6 | 7 |

### Experiences with Apparel Online Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from online stores.

49. How often do (did) you purchase apparel products online?
- Less than once a year
  - About once a year
  - About every 6 months
  - About every 3 months
  - About once a month
  - About twice a month
  - About once a week
  - About twice a week
  - More than twice a week
50. How much have you spent on apparel products that you bought online in the last six months?
- \$1 - \$25
  - \$26 - \$50
  - \$51 - \$75
  - \$76 - \$100
  - \$101 - \$150
  - \$151 - \$200
  - \$201 - \$250
  - \$251 - \$500
  - \$501 - \$1000
  - \$1001 and more
51. How many apparel products have you purchased online in the last six months?
- 1 - 2 items
  - 3 - 4 items
  - 5 - 6 items
  - 7 - 8 items
  - 9 - 10 items
  - 11 items and more

- |   | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|---|---------------------------------|---------------------------|
| 52. I have enjoyed purchasing and wearing apparel products online.....          | 1.....2.....3.....4.....5.....6 |                           |
| 53. Purchasing apparel products online has been a good experience.....          | 1.....2.....3.....4.....5.....6 |                           |
| 54. I am satisfied with my experiences with buying apparel products online..... | 1.....2.....3.....4.....5.....6 |                           |

### **More about you**

Please check one answer that reflects the best to the questions below.

55. My gender is \_\_\_\_\_.
- Male
  - Female
56. My age is \_\_\_\_\_.
- 20- 24 years
  - 25- 29 years
  - 30- 34 years
  - 35- 39 years
  - 40- 44 years
  - 45- 49 years
  - 50- 54 years
  - 55- 59 years
  - 60 - 64 years
  - 65 - 69 years
  - 70 -74 years
  - 75 - 79 years
  - 80 - 84 years
  - 85 years or older
57. My highest level of education is \_\_\_\_\_.
- Elementary school graduate
  - High school graduate
  - Some college/No degree
  - Associate's degree, occupational
  - Associate's degree, academic
  - Bachelor's degree
  - Master's degree
  - Professional degree
  - Doctoral degree



58. My occupation is in the category of \_\_\_\_\_.

- Retired
- Homemaker
- Student
- Service occupations
- Sales and office occupations
- Farming, fishing, and forestry occupations
- Construction, extraction, and maintenance occupations
- Production, transportation, and material moving occupations
- Management, professional, and related occupations

\*Examples of management and professional occupations are as following: Management occupations, Farmers and farm managers, Business and financial operations occupations, Computer and mathematical occupations, Architecture and engineering occupations, Life, physical, and social science occupations, Community and social services occupations, Legal occupations, Education, training, and library occupations, Arts, design, entertainment, sports, and media occupations, Healthcare practitioners and technical occupations

59. Please specify your occupation: \_\_\_\_\_

60. My race is \_\_\_\_\_.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Other, please specify \_\_\_\_\_

61. My last year household income is approximately \_\_\_\_\_.

- I don't know.
- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

62. My yearly apparel product expenditure is about \_\_\_\_\_.

- None
- \$1 - \$99
- \$100 - \$199
- \$200 - \$299
- \$300 - \$399
- \$400 - \$499
- \$500 - \$599
- \$600 - \$699
- \$700 - \$799
- \$800 - \$899

- \_\_\_\_\_ \$900 - \$999
- \_\_\_\_\_ \$1000 - \$1999
- \_\_\_\_\_ \$2000 - \$2999
- \_\_\_\_\_ \$3000 - \$3999
- \_\_\_\_\_ \$4000 - \$4999
- \_\_\_\_\_ More than \$5000

## Questionnaire for Group 4

### Instruction for Selecting One Apparel Brand

Please think about several brands of apparel products.

The definition of apparel products in this study includes all the products that you wear and carry that influence your total outfit such as clothing, accessory, and shoes.

These brands do not need to be sold online exclusively. Of those brands, please choose one brand that fulfills the following condition:

**I have heard about this brand, but I have never purchased or worn it before. The image of the brand is not consistent with my own image.**

If you cannot remember the name of the brand that can fulfill the above condition, please refer to the brand list provided below. This list is just for your reference. You may select a brand that is not included in the list.

Adidas	Abercrombie & Fitch	American Eagle Outfitters	Banana Republic
Betsey Johnson	Billabong	Birkenstock	Burton
Calvin Klein	Chaco	Christian Dior	Champion
Cherokee	Cloudveil	Columbia	Converse
Cutter & Buck	Dickies	Diesel	Disney
Dockers	Dolce & Gabbana	Duofold	Easy Spirit
Eddie Bauer	Ex Officio	Fcuk	Fila
Gap	Gucci	Haggar	Hanes
Hugo Boss	Hurley	Izod	J Crew
Juicy Couture	Junk Food	Keen	Keneth Cole
L.L. Bean	Landau	Lands' End	Lee Jeans
Levi's	Lucky Brand	Marc Jacobs	Marmot
New Balance	North Face	Nike	Old Navy
O'Neil	Orvis	Prada	Prana
Puma	Rainbow	Ralph Lauren	Reebok
Roxy	Sean John	Steve Madden	Theory
Volcom	Woolrich	Xhilaration	St. John

1. Can you choose one apparel brand that fulfills the above condition?

\_\_\_\_ Yes \_\_\_\_ No

2. Please write down the name of the selected brand and continue.

\_\_\_\_\_

### Attitude toward the Selected Brand

Please click the one answer to question that best indicates your attitude toward the brand that you selected.

Please remember that the brand you selected is: **I have heard about this brand, but I have never purchased or worn it before. The image of the brand is not consistent with my own image.**

- |  | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|--|---------------------------------|---------------------------|
| 3. The selected brand is good.....   | 1.....2.....3.....4.....5.....6 |                           |
| 4. My general attitude toward the selected brand is favorable.....                         | 1.....2.....3.....4.....5.....6 |                           |
| 5. I consider the selected brand to be valuable and important to me.....                   | 1.....2.....3.....4.....5.....6 |                           |
| 6. The selected brand is desirable.....  | 1.....2.....3.....4.....5.....6 |                           |
| 7. The selected brand is useful (e.g., I can wear many items from the selected brand)..... | 1.....2.....3.....4.....5.....6 |                           |
| 8. The selected brand is likable.....  | 1.....2.....3.....4.....5.....6 |                           |

### Brand-Self Image Congruity

Please click the one answer to each question that best indicates the consistency between your self-image and the image of the brand that you selected.

- |   | <b>Strongly<br/>Disagree</b>    | <b>Strongly<br/>Agree</b> |
|---|---------------------------------|---------------------------|
| 9. The image of the selected brand is consistent with how I see myself.....                                       | 1.....2.....3.....4.....5.....6 |                           |
| 10. Wearing the selected brand reflects who I am.....   | 1.....2.....3.....4.....5.....6 |                           |
| 11. The overall image of the people who wear the selected brand is consistent with my own image .....             | 1.....2.....3.....4.....5.....6 |                           |
| 12. The image of the selected brand is consistent with how I would like to be.....                                | 1.....2.....3.....4.....5.....6 |                           |
| 13. The image I would like to be is consistent with the overall image of people who wear the selected brand ..... | 1.....2.....3.....4.....5.....6 |                           |
| 14. Wearing the selected brand reflects who I would like to be .....  | 1.....2.....3.....4.....5.....6 |                           |

## Perceived Risk

**Please click the one answer to each question that best indicates the potential risks may arise when you purchase the selected brand online.**

**Please remember that the brand you selected is: I have heard about this brand, but I have never purchased or worn it before. The image of the brand is not consistent with my own image.**

- |  | Very<br>Unlikely                | Very<br>Likely |
|--|---------------------------------|----------------|
| 15. I can be certain that when I buy the selected brand online, it will be the same as what I have expected.....   | 1.....2.....3.....4.....5.....6 |                |
| 16. I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.....   | 1.....2.....3.....4.....5.....6 |                |
| 17. I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.....                             | 1.....2.....3.....4.....5.....6 |                |
| 18. I can be assured that the apparel product that I purchase online of the selected brand will look good on me.....   | 1.....2.....3.....4.....5.....6 |                |
| 19. I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.....   | 1.....2.....3.....4.....5.....6 |                |
| 20. I can be certain that I will save time by shopping apparel products online of the selected brand.....  | 1.....2.....3.....4.....5.....6 |                |
| 21. I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.....  | 1.....2.....3.....4.....5.....6 |                |
| 22. I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).....                 | 1.....2.....3.....4.....5.....6 |                |
| 23. I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).....      | 1.....2.....3.....4.....5.....6 |                |
| 24. I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.....   | 1.....2.....3.....4.....5.....6 |                |
| 25. I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof)..... | 1.....2.....3.....4.....5.....6 |                |

26. I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.....1.....2.....3.....4.....5.....6
27. I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.....1.....2.....3.....4.....5.....6
28. I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand .....1.....2.....3.....4.....5.....6
29. I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.....1.....2.....3.....4.....5.....6
30. I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand..... 1.....2.....3.....4.....5.....6
31. I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).....1.....2.....3.....4.....5.....6
32. I can be certain that I will lose money if I purchase apparel products online of the selected brand .....1.....2.....3.....4.....5.....6
33. Overall, purchasing apparel products of the selected brand online is risky.....1.....2.....3.....4.....5.....6

### **Intention of Purchasing the Selected Brand Online**

**Please click the one answer to each question that best indicates your intention of buying apparel products of the selected brand online in the future.**

**Please remember that the brand you selected is: I have heard about this brand, but I have never purchased or worn it before. The image of the brand is not consistent with my own image.**

- |   | <b>Very<br/>Unlikely</b> | <b>Very<br/>Likely</b> |
|---|--------------------------|------------------------|
| 34. How likely is it that you will purchase apparel products online of the selected brand?.....1.....2.....3.....4.....5.....6                            |                          |                        |
| 35. How likely is it that you will purchase the selected brand online the next time when you need an apparel product?.....1.....2.....3.....4.....5.....6 |                          |                        |
|   | <b>Very<br/>Low</b>      | <b>Very<br/>High</b>   |
| 36. The probability of buying the selected brand in the future when you shop for apparel products online is.....1.....2.....3.....4.....5.....6           |                          |                        |

### Experiences with Apparel Catalog Shopping

Please click the one answer to each question that best indicates your experiences with buying apparel products from catalogs.

If you have never purchased any apparel products from catalogs, please click **Never** or **None**.

37. How often do (did) you purchase apparel products from catalogs?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

38. How much have you spent on apparel products that you bought from catalogs in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

39. How many apparel products have you purchased from catalogs in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

If you have never purchased apparel products from catalogs, please click **7 Not Applicable** for following questions.

	<b>Strongly Disagree</b>	<b>Strongly Agree</b>	<b>Not Applicable</b>				
40. I have enjoyed purchasing and wearing apparel products from catalogs .....	1	2	3	4	5	6	7

41. Purchasing apparel products from catalogs has been a good experience.....1...2...3...4...5...6.....7

42. I am satisfied with my experiences with buying apparel products from catalogs.....1...2...3...4...5...6.....7

### Experiences with Apparel TV Shopping

**Please click the one answer to each question that best indicates your experiences with buying apparel products from TV retailers (e.g., shopping networks, infomercials, ads with 800 numbers).**

**If you have never purchased any apparel products from TV retailers, please click **Never** or **None**.**

43. How often do (did) you purchase apparel products from TV retailers?

- Never
- Less than once a year
- About once a year
- About every 6 months
- About every 3 months
- About once a month
- About twice a month
- About once a week
- About twice a week
- More than twice a week

44. How much have you spent on apparel products that you bought from TV retailers in the last six months?

- None
- \$1 - \$25
- \$26 - \$50
- \$51 - \$75
- \$76 - \$100
- \$101 - \$150
- \$151 - \$200
- \$201 - \$250
- \$251 - \$500
- \$501 - \$1000
- \$1001 and more

45. How many apparel products have you purchased from TV retailers in the last six months?

- None
- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more



**If you have never purchased apparel products from catalogs, please click 7 Not Applicable for following questions.**

- |  | <b>Strongly<br/>Disagree</b> | <b>Strongly<br/>Agree</b> | <b>Not<br/>Applicable</b> |   |   |   |   |
|--|------------------------------|---------------------------|---------------------------|---|---|---|---|
| 46. I have enjoyed purchasing and wearing apparel products on TV.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 47. Purchasing apparel products on TV has been a good experience.....          | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |
| 48. I am satisfied with my experiences with buying apparel products on TV..... | 1                            | 2                         | 3                         | 4 | 5 | 6 | 7 |

### **Experiences with Apparel Online Shopping**

**Please click the one answer to each question that best indicates your experiences with buying apparel products from online stores.**

49. How often do (did) you purchase apparel products online?
- Less than once a year
  - About once a year
  - About every 6 months
  - About every 3 months
  - About once a month
  - About twice a month
  - About once a week
  - About twice a week
  - More than twice a week
50. How much have you spent on apparel products that you bought online in the last six months?
- \$1 - \$25
  - \$26 - \$50
  - \$51 - \$75
  - \$76 - \$100
  - \$101 - \$150
  - \$151 - \$200
  - \$201 - \$250
  - \$251 - \$500
  - \$501 - \$1000
  - \$1001 and more

51. How many apparel products have you purchased online in the last six months?

- 1 - 2 items
- 3 - 4 items
- 5 - 6 items
- 7 - 8 items
- 9 - 10 items
- 11 items and more

- |   | <b>Strongly<br/>Disagree</b> |        |        |        |        |        | <b>Strongly<br/>Agree</b> |
|---|------------------------------|--------|--------|--------|--------|--------|---------------------------|
| 52. I have enjoyed purchasing and wearing apparel products online.....          |                              | 1..... | 2..... | 3..... | 4..... | 5..... | 6                         |
| 53. Purchasing apparel products online has been a good experience.....          |                              | 1..... | 2..... | 3..... | 4..... | 5..... | 6                         |
| 54. I am satisfied with my experiences with buying apparel products online..... |                              | 1..... | 2..... | 3..... | 4..... | 5..... | 6                         |

**More about you**

Please check one answer that reflects the best to the questions below.

55. My gender is \_\_\_\_\_.

- Male
- Female

56. My age is \_\_\_\_\_.

- 20- 24 years
- 25- 29 years
- 30- 34 years
- 35- 39 years
- 40- 44 years
- 45- 49 years
- 50- 54 years
- 55- 59 years
- 60 - 64 years
- 65 - 69 years
- 70 -74 years
- 75 - 79 years
- 80 - 84 years
- 85 years or older

57. My highest level of education is \_\_\_\_\_.

- Elementary school graduate
- High school graduate
- Some college/No degree
- Associate's degree, occupational
- Associate's degree, academic
- Bachelor's degree
- Master's degree
- Professional degree
- Doctoral degree

58. My occupation is in the category of \_\_\_\_\_.

- Retired
- Homemaker
- Student
- Service occupations
- Sales and office occupations
- Farming, fishing, and forestry occupations
- Construction, extraction, and maintenance occupations
- Production, transportation, and material moving occupations
- Management, professional, and related occupations

\*Examples of management and professional occupations are as following: Management occupations, Farmers and farm managers, Business and financial operations occupations, Computer and mathematical occupations, Architecture and engineering occupations, Life, physical, and social science occupations, Community and social services occupations, Legal occupations, Education, training, and library occupations, Arts, design, entertainment, sports, and media occupations, Healthcare practitioners and technical occupations

59. Please specify your occupation: \_\_\_\_\_

60. My race is \_\_\_\_\_.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White or Caucasian
- Other, please specify \_\_\_\_\_

61. My last year household income is approximately \_\_\_\_\_.

- I don't know.
- Less than \$10,000
- \$10,000 to \$14,999
- \$15,000 to \$24,999
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

62. My yearly apparel product expenditure is about \_\_\_\_\_.

- None
- \$1 - \$99
- \$100 - \$199
- \$200 - \$299
- \$300 - \$399
- \$400 - \$499
- \$500 - \$599
- \$600 - \$699
- \$700 - \$799
- \$800 - \$899
- \$900 - \$999
- \$1000 - \$1999
- \$2000 - \$2999
- \$3000 - \$3999
- \$4000 - \$4999
- More than \$5000

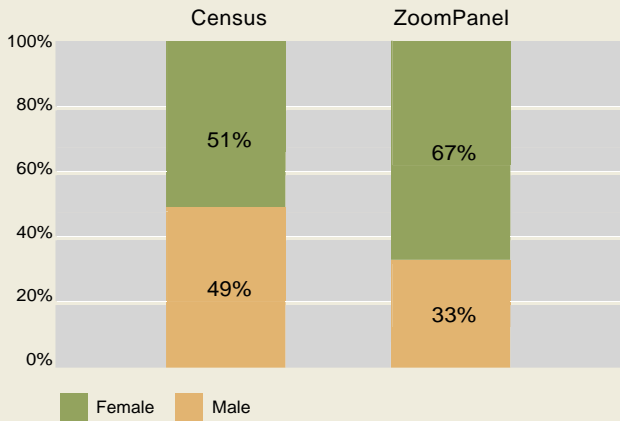
## **Appendix B**

### **Demographic Data Comparison of US Census and Survey Company**

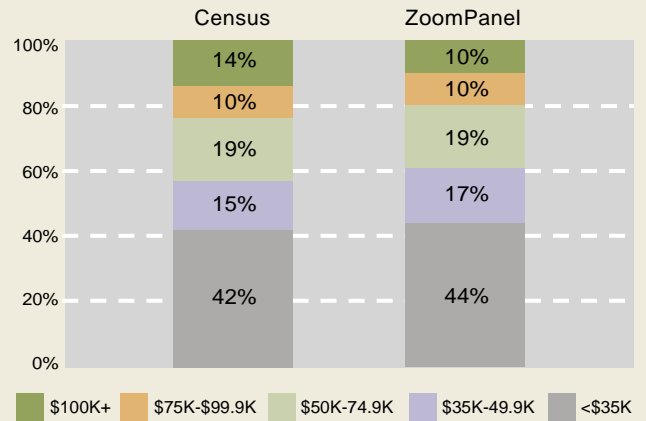
# United States

## Basic Demographics

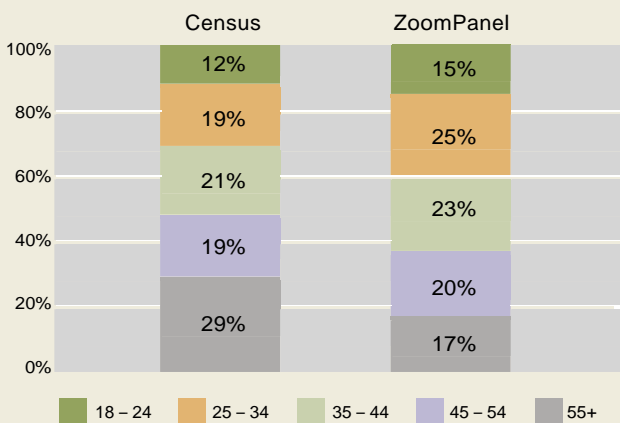
### Gender



### Household Income (annual)



### Age



- ⑦ Date of birth
- ⑦ Marital status
- ⑦ Children in household
- ⑦ Children date of birth
- ⑦ Expecting baby
- ⑦ Ethnicity
- ⑦ Hispanic
- ⑦ Hispanic acculturation level
- ⑦ Language
- ⑦ Occupation
- ⑦ Education
- ⑦ State
- ⑦ Zip code
- ⑦ Geographic region
- ⑦ Internet connection
- ⑦ Home ownership
- ⑦ Pet ownership

## **Appendix C**

### **Results of Factor Analysis: Brand-Self Image Congruity**

### Results of Factor Analysis: Brand-Self Image Congruity

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Brand-Self Image Congruity	<i>Brand-Self Image Congruity</i>		5.34	88.96%	.98
	The image of the selected brand is consistent with how I see myself.	0.93			
	The overall image of the people who wear the selected brand is consistent with my own image.	0.92			
	Wearing selected brand reflects who I am.	0.90			
	The image of the selected brand is consistent with how I would like to be.	0.97			
	The image I would like to be is consistent with the overall image of people who wear the selected brand.	0.97			
	Wearing selected brand reflects who I would like to be.	0.93			



## **Appendix D**

### **Results of Factor Analysis: Perceived Risk in Buying a Specific Brand Online**

### Results of Factor Analysis: Perceived Risk in Buying a Specific Brand Online

Variable	Factor	Factor Loading	Eigenvalue	Percentage of Variance	Cronbach's Alpha
Perceived Risk in Buying a Specific Brand Online	<i>Perceived Risk</i>		11.42	67.18%	.96
	I can be certain that when I buy the selected brand online, it will be the same as what I have expected.	0.80			
	I can count on being able to find the same apparel product of the selected brand at offline stores. The price will be the same or lower than the price at online stores.	0.66			
	I can be certain that the color of the apparel product of the selected brand shown online will be the same as the color of the actual product.	0.84			
	I can be assured that the apparel product that I purchase online of the selected brand will look good on me.	0.86			
	I can be assured that the selected size of the apparel product that I purchase online of the selected brand will fit me.	0.85			
	I can be certain that I will save time by shopping apparel products online of the selected brand.	0.81			
	I can be assured that the fabric quality of the apparel product that I purchase online of the selected brand will be as I expected.	0.86			
	I can be certain that I will save money and time in purchasing apparel products online of the selected brand (e.g., the product will be what I expected.).	0.86			
	I can be assured that the construction quality of the apparel product that I purchase online of the selected brand will be as I expect (e.g., stitches, workmanship).	0.86			
	I can be assured that the apparel product that I purchase online of the selected brand will affect the way others think of me.	0.66			
	I can be certain that the functional features of apparel product that I purchase online of the selected brand will perform properly (e.g., a raincoat will be waterproof).	0.84			
	I am confident that the process for returning the apparel product that I purchase online of the selected brand will not take a long time.	0.81			
	I can be certain that no alteration will be needed for the apparel product that I purchase online of the selected brand.	0.85			
	I can be certain that my friends will think that I look great when I wear the apparel product that I purchase online of the selected brand.	0.81			
	I can count on being able to mix and match the apparel product that I purchase online of the selected brand with my current clothing.	0.84			
	I am confident that it will be easy to return or exchange the apparel product purchased online of the selected brand.	0.83			
I am confident that the apparel product that I purchase online of the selected brand will be durable after washing (e.g., no color change, shrinkage).	0.87				

## **Appendix E**

### **Results of Factor Analysis: Purchase Intention in Buying a Specific Brand Online**

**Results of Factor Analysis: Purchase Intention in Buying a Specific Brand Online**


<b>Variable</b>	<b>Factor</b>	<b>Factor Loading</b>	<b>Eigenvalue</b>	<b>Percentage of Variance</b>	<b>Cronbach's Alpha</b>
Purchase Intention in Buying a Specific Brand Online	<u>Purchase Intention</u>		2.85	94.92%	.97
	How likely is that you will purchase the selected brand online the next time when you need an apparel product?	0.97			
	How likely is it that you will purchase the selected brand online the next time when you need an apparel product?	0.96			
	The probability of buying the selected brand in the future when you shop for apparel products online is ____.	0.98			

**Appendix F**  
**Approved IRB**

DATE: February 6, 2008

MEMORANDUM

TO: Hsiu I Chen-Yu  
Siwon Cho

FROM: Carmen Green 

SUBJECT: **IRB Exempt Approval:** "Influence of Experiences and Brand Attitude on Perceived Risk and Purchase Intention in Apparel Online Shopping Context", IRB # 08-044

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of February 6, 2008.

As an investigator of human subjects, your responsibilities include the following:


1. Report promptly proposed changes in previously approved human subject research activities to the IRB, including changes to your study forms, procedures and investigators, regardless of how minor. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

cc: File

DATE: April 7, 2008

MEMORANDUM

TO: Hsiu I Chen-Yu  
Siwon Cho

FROM: Carmen Green 

SUBJECT: **IRB Amendment 1 Approval:** "Purchase Intention in Apparel Online Shopping Context: Influence of Experience, Self-Brand Image Congruity, Brand Attitude, and Perceived Risk", IRB # 08-044

This memo is regarding the above referenced protocol which was previously granted approval by the IRB on February 6, 2008. You subsequently requested permission to amend your IRB application. Approval has been granted for the requested protocol amendment, effective as of April 7, 2008.

As an investigator of human subjects, your responsibilities include the following:

1. Report promptly proposed changes in the research proposal. The proposed changes must not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the subjects.
2. Report promptly to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

cc: File