

**Consumer Satisfaction/Dissatisfaction in Apparel Online Shopping at the
Product-Receiving Stage: The Effects of Brand Image and Product Performance**

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by

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ABSTRACT

Due to the success of apparel online shopping, many researchers in consumer behavior hope to extend the existing consumer behavior theories into the electronic commerce area to assist apparel marketers to develop effective marketing strategies to understand, attract, and maintain their consumers (Goldsmith & McGregor, 1999). Many apparel researchers have investigated Consumer Satisfaction/Dissatisfaction (CS/D) with online shopping (Hou, 2005; Jiang & Rosenbloom, 2005; Kim, Kim & Lennon, 2006; Lee, 2004). However, most of these studies focused on CS/D with apparel websites or e-service quality, rather than CS/D with the products purchased online.

In apparel online shopping, consumers cannot examine the textures, hand, or color of the fabric or try on the garment. Because of the intangibility of apparel products on the website, consumers may use extrinsic cues, such as brand image, to judge if the brand is worthy of the price and to make an inference of the product quality (O'Neal, 1992). Previous studies about brand image mainly discussed about how brand image influences consumers' perception and evaluation of product quality (d' Astous & Saint-Louis, 2005; Dodds, Monroe & Grewal, 1991) and the impact of brand image to consumers' purchase intention (Ataman & Ulengin, 2003; Li, 2004; Park & Stoel, 2005). No research has examined how brand image influences consumers' expectations at purchase and the perceptions of product performance at the product-receiving stage, and the role of brand image in CS/D after receiving products, especially in the realm of apparel online shopping. Therefore, a study investigating the roles of brand image and product performance in CS/D with apparel online shopping is essential.

The purpose of the study was to examine the factors related to CS/D with the purchased product and with the brand in apparel online shopping at the product-receiving stage. The four objectives of the study were to examine (a) the relationships between consumers' individual differences (i.e., brand sensitivity, brand familiarity, brand self-congruity and demographics) and perceived brand image at the purchase stage, (b) the influence of consumers' perceived brand image at purchase on their expectation for product performance and on perceived product performance, (c) antecedences of CS/D with the product and CS/D with the brand, and (d) antecedences of product return intention and repurchase intention.

A model of CS/D with the purchased apparel product and with the brand in an online shopping context was proposed as the framework of this study. Different from the two stages (i.e., purchase stage, product-consumption stage) usually proposed in the studies of offline shopping, an extra product-receiving stage was included between purchase and product-consumption stages to illustrate the process of CS/D after consumer receive the product that they ordered online. Fifteen hypotheses were developed according to the relationships proposed in the framework. A 2 X 2 between-subjects factorial experimental design was developed to conduct this study. The treatment variables were brand image and product performance. Two levels of brand image at the purchase stage (i.e., higher, lower) were manipulated by two brand names and logos. Two levels of product performance at the product-receiving stage (i.e., higher, lower) were manipulated by two sweatshirts with different levels of quality. A website was developed to simulate the apparel online shopping process, and a questionnaire was developed to measure the variables included in this study. A structural equation model was developed to examine the proposed relationships and hypotheses.

Results in this study showed that both brand image and product performance significantly influenced CS/D with product and CS/D with the brand. Product performance was the most important factor on consumers' satisfaction with the product that they ordered online. Brand image at purchase played a direct role in CS/D with the brand but an indirect role in CS/D with the product. Brand image at purchase positively influenced product performance expectation; product performance expectation positively influenced the perception of product performance; and then, perceived product

performance affected satisfaction/dissatisfaction with the product. Visible attribute (i.e., style, color) expectancy disconfirmation was also found to be an antecedence of CS/D with the product. If perceived product performance of style and color was better than what they expected, participants tended to be more satisfied with the product. CS/D with the product was found to be a significant antecedence of CS/D with the brand. CS/D with the product was found to be the direct factor influencing product return intention, and perceived brand image at the product-receiving stage and CS/D with the brand were antecedents of repurchase intention.

In conclusion, this study suggests that brand image and product performance were significant factors on CS/D with the purchased product and with the brand at the product-receiving stage in apparel online shopping. This study is beneficial to consumer behavior researchers and apparel e-tailers by identifying the roles of brand image and product performance in apparel online shopping. Based on the results, marketing strategies in apparel online shopping were provided.

TABLE OF CONTENT

ABSTRACT	ii
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF TABLES	x
CHAPTER I. INTRODUCTION	1
Introduction.....	1
Purpose of the Study.....	4
Definition of the Variables in the Study.....	4
CHAPTER II. REVIEW OF LITERATURE	6
Consumer Satisfaction/Dissatisfaction.....	6
Definitions and Components of Consumer Satisfaction/Dissatisfaction.....	6
Measurements of Consumer Satisfaction/Dissatisfaction.....	8
Expectancy Disconfirmation Model.....	9
Consumer Expectation.....	9
Perceived Performance.....	13
Expectancy Disconfirmation.....	14
Psychological Effects on the Expectancy Confirmation Process..	14
Consumer Expectation and Satisfaction/Dissatisfaction with Online	
Shopping.....	17
Navigation and Website Design.....	17
Ordering and Delivery Processes.....	19
Customer Service.....	20
Merchandising and Product Information.....	21

Brand Image.....	22
Definitions of Brand Image.....	22
Dimensions of Brand Image.....	23
Brand Name/Logo.....	23
Brand Benefits.....	24
Brand Attitudes.....	25
Brand Personality.....	26
Brand Providers and Users.....	27
Variables Related to Brand Image.....	27
Brand Sensitivity.....	28
Brand Familiarity.....	29
Summary of Literature Review.....	30
CHAPTER III. METHODOLOGY.....	34
Framework and Hypotheses of the Study.....	34
Individual Differences.....	36
Purchase Stage.....	38
Product-Receiving Stage.....	39
Product-Consumption Stage.....	46
Research Method.....	46
Selection of Participants.....	47
Selection of Treatments.....	48
Selection of Brand Name and Logo.....	48
Selection of Garment Samples.....	49
Instrument Development.....	51
Internet Shopping Web Pages.....	51
Questionnaire Development.....	52
Data Collection.....	57
Data Analysis.....	59

CHAPTER IV. RESULTS.....	61
Participants' Profiles.....	61
Demographic Characteristics.....	61
Wardrobe Expenditures and Apparel Online Shopping Experiences.....	63
Gender Differences.....	63
Measure Reliability and Manipulation Check.....	66
Measure Reliability.....	67
Manipulation Check.....	68
Results of Hypothesis Testing.....	70
The Relationship between Individual Differences and Perceived Brand Image.....	70
Results of Structural Equation Modeling.....	71
Processes of Correcting and Trimming the Model.....	71
Hypothesis Testing with Structural Equation Modeling.....	78
 CHAPTER V. SUMMARY, DISCUSSIONS, APPLICATIONS, LIMITATIONS, AND RECOMMENDATIONS.....	 85
Summary of the Study.....	85
Discussions and Applications of the Findings.....	87
Participants' Differences in Gender, Wardrobe Expenditures and Apparel Online Shopping Experiences.....	87
Brand Self-Congruity and Perceived Brand Image at Purchase.....	90
Perceived Brand Image at Purchase, Product Performance Expectation, and Perceived Product Performance.....	91
Antecedences of Consumer Satisfaction/Dissatisfaction with the Product and Consumer Satisfaction/Dissatisfaction with the Brand.....	92
Perceived Brand Image at the Product-Receiving Stage.....	96
Product Return Intention and Repurchase Intention.....	97
Conclusion and Suggestions for Strategies in Apparel Online Shopping.....	99
Limitations of the Study and Recommendations for Future Researches.....	100

REFERENCES.....	103
APPENDIXES.....	123
Appendix A – Advertisement for Recruiting Participants in the Dorms.....	124
Appendix B – Survey for Choosing Brand Names to Create Different Levels of Brand Image.....	125
Appendix C – Survey for Choosing Sweatshirts to Create Different Levels of Product Performance.....	126
Appendix D – Size Charts for Sample Sweatshirts.....	127
Appendix E.1 – Web Page for Higher Brand Image Group (Men’s Sweatshirt).	128
Appendix E.2 – Web Page for Lower Brand Image Group (Men’s Sweatshirt)..	135
Appendix E.3 – Web Page for Higher Brand Image Group (Women’s Sweatshirt).....	137
Appendix E.4 – Web Page for Lower Brand Image Group (Women’s Sweatshirt).....	140
Appendix F.1 – Questionnaire for Higher Brand Image Group – Part I.....	142
Appendix F.2 – Questionnaire for Higher Brand Image Group – Part II.....	143
Appendix F.3 – Questionnaire for Lower Brand Image Group – Part I.....	148
Appendix F.4 – Questionnaire for Lower Brand Image Group – Part II.....	149
Appendix G – Informed Consent for Participants.....	154
Appendix H.1 – Instruction 1 – Higher Brand Image Group.....	157
Appendix H.2 – Instruction 1 – Lower Brand Image Group.....	158
Appendix H.3 – Instruction 2 – Higher Brand Image Group.....	159
Appendix H.4 – Instruction 2 – Lower Brand Image Group.....	160
Appendix I – Random Number Sheet for Assigning Participants into Experimental Groups.....	161

LIST OF FIGURES

Figure 3.1	A framework of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context.....	35
Figure 4.1	The hypothesized SEM model.....	73
Figure 4.2	The results of the hypothesized SEM model.....	74
Figure 4.3	The SEM model with added paths.....	77
Figure 4.4	The final model of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context.....	79
Figure 5.1	The result model of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context.....	89

LIST OF TABLES

Table 3.1	Factorial design of treatment variables.....	47
Table 4.1	Demographic characteristics of the participants.....	62
Table 4.2	Wardrobe expenditures and apparel online shopping experiences of the participants.....	64
Table 4.3	Gender differences in wardrobe expenditures and apparel online shopping experiences.....	65
Table 4.4	Gender differences in variables measured in the framework.....	67
Table 4.5	Measure reliability.....	69
Table 4.6	Correlation matrix of model constructs.....	75
Table 4.7	Added paths and hypothesis testing with SEM results.....	76
Table 5.1	Hypotheses and summary of the results.....	88

CHAPTER I

INTRODUCTION

This chapter was composed of three sections. The first section was the introduction, which described the background of the study. The second section, the research purpose, discussed the objectives of the study. The third section stated the definition of each variable in this study.

Introduction

According to the prediction of Forrester Research (October, 2006), non-travel online retail revenues in the United States (U.S.) will reach the quarter-trillion-dollars mark by 2011. Wikipedia Encyclopedia Online reported that apparel, accessories and footwear became the largest category selling online in 2006, which was 18.3 billion. Other large categories selling online were computer hardware and software (17.2 billion), automobiles and auto parts (16.7 billion), and home furnishings (10.0 billion). The main reasons why consumers shop apparel products online are convenience, selection and price (Corcoran, 2006). Consumers can access brands they do not have in local markets, especially luxurious and high-end products. Because of the success of apparel online shopping, many researchers in consumer behavior hope to extend the existing consumer behavior theories into the electronic commerce area to assist apparel marketers to develop effective marketing strategies to understand, attract, and maintain their consumers (Goldsmith & McGregor, 1999).

Satisfaction is important for both consumers and marketers. For consumers, it is their ultimate goal to utilize limited financial resource and efforts to maximize their satisfaction and gain the optimal products or services (Chen-Yu, Williams & Kincade, 1999). For marketers, satisfying consumers' needs and want is a requirement to attract new consumers, keep existing consumers, and make profits (Bloemer & Kasper, 1995;

Peter & Olson, 2005). Although a satisfactory experience does not guarantee loyalty, the likelihood that consumers will remain loyal depends on their level of satisfaction (Blackwell, Miniard & Engel, 2001). In addition to the possibility of repeat purchase, consumer satisfaction/dissatisfaction (CS/D) may also shape consumers' word-of-mouth, which is one of the best promotions because of its high credibility (Peter & Olson, 2005). Consumers with satisfying experiences may tell their family and peers about the pleasurable purchase experiences and encourage them to try the products or services. Consumers with dissatisfying experiences, on the contrary, may decide not to use the product/service anymore or decide switching to another brand. Some consumers may discourage their family and friends to shop at the same store or buy the same brand (Chen-Yu & Hong, 2006).

Many studies have investigated consumer behavior within the scope of Internet shopping and showed that there were significant differences between online and offline shopping in consumer attitudes and behavior for products and services chosen. For example, Degeratu, Rangaswamy and Wu (2000) found that brand name had higher influences on consumers in online than offline shopping. Lynch and Ariely (2000) and Shankar, Rangaswamy and Pusateri (2001) found that consumers' price sensitivity was lower in online than offline shopping. Therefore, studies in understanding consumer behavior in online shopping are needed. In recent years, many apparel researchers have investigated CS/D with online shopping (Hou, 2005; Jiang & Rosenbloom, 2005; Kim, Kim & Lennon, 2006; Lee, 2004). However, most of these studies focused on CS/D with apparel websites or e-service quality, rather than CS/D with the products purchased online.

Chen-Yu et al., (1999) propose a model for CS/D with the performance of apparel products, which suggests that one important determinant of CS/D with a product at purchase was the confirmation/disconfirmation between consumers' perceived at-purchase performance and their experienced-based norm. However, this model can only be applied to traditional brick-and-mortar apparel shopping but cannot be applied to online shopping because in brick-and-mortar apparel shopping, consumers can examine how the garment looks like by trying on the garment. Consumers can evaluate the performance of the product and compare it with a norm based on their past experiences.

The outcome of the comparison between consumers' perceived performance and their experienced-based norm leads to satisfaction or dissatisfaction with the product. Because consumers already knew what the garment looks like at purchase, their expectation for the product is more related to product performance after wash or after a long-time wear, instead of the appearance of the garment. Consumers in online shopping, however, cannot physically examine the product at the purchase stage. They can only imagine how the apparel will look like or will fit based on the description and photographs of the product, or the sizing charts provided by the website. Only after consumers receive the purchased product, can they evaluate the product performance. Therefore, consumers' expectation at the purchase stage is more related to how the garment will look like and whether the product quality will be sufficient. The evaluation of the garment will not happen until at the product-receiving stage. The perception of the product performance may be similar to or significant different from their expectation at purchase, which leads to satisfaction or dissatisfaction with the product. Because the uniqueness of the process in apparel online shopping, it is essential to examine CS/D at the product-receiving stage in online shopping.

In apparel online shopping, consumers cannot examine the textures, hand, or color of the fabric or try on the garment. Because of the intangibility of apparel products on the website, consumers may perceive a high level of risk when they make their purchase decision. Consumers may use extrinsic cues, such as brand image, to judge if the brand is worthy of the price and to make an inference of the product quality (O'Neal, 1992) because brand image can help consumers to process, organize, and retrieve information in memory (Aaker, 1991). For marketers, brand image is extremely important because it can help them to position their products, differentiate themselves from other brands, create consumers' positive attitudes and emotions toward their brand, and help their target customers perceive a high level of benefits of purchasing or using their brand (Pitta & Kutsanis, 1995). Therefore, studies in the role of brand image in online shopping are needed and important. However, previous studies about brand image mainly have discussed about how brand image influences consumers' perception and evaluation of product quality (d' Astous & Saint-Louis, 2005; Dodds, Monroe & Grewal, 1991) and the impact of brand image to consumers' purchase intention (Ataman & Ulengin, 2003; Li,

2004; Park & Stoel, 2005). No research was found to examine how brand image influences consumers' expectations at purchase and the perceptions of product performance at the product-receiving stage, and the role of brand image in CS/D after receiving products, especially in the realm of apparel online shopping.

Purpose of the Study

The purpose of the study was to examine the factors related to CS/D with the purchased product and with the brand in apparel online shopping at the product-receiving stage. The four objectives of the study were to examine (a) the relationships between consumers' individual differences (i.e., brand sensitivity, brand familiarity, brand self-congruity and demographics) and perceived brand image at the purchase stage, (b) the influence of consumers' perceived brand image at purchase on their expectation for product performance and on perceived product performance, (c) antecedences of CS/D with the product and CS/D with the brand, and (d) antecedences of product return intention and repurchase intention. There was no research on CS/D with the product and with the brand purchased in online shopping. The findings of this study can extend the understanding of consumer online shopping behavior, especially in CS/D in the online shopping context. The study results may also help apparel e-tailers to understand the role of brand image in CS/D in order to develop effective marketing strategies to provide maximum customer satisfaction.

Definition of the Variables in the Study

- 1. Brand sensitivity:** the degree to which a consumer notices or uses brands as important information to making purchase decision (Nelson & Devanathan, 2006).
- 2. Brand familiarity:** the number of consumers' brand-related, direct or indirect, experiences (Kent & Allen, 1994).
- 3. Brand self-congruity:** the degree of similarity between consumer's self-image and brand image (Sirgy, 1982).

- 4. Brand image:** the total impression of a particular brand in consumers' minds (Ditcher, 1985).
- 5. Consumer expectation:** consumers' pre-usage belief that a product possesses a particular level of an attribute or a particular level of overall performance, or that product usage will result in a particular outcome (Bone, Shimp & Sharma, 1990).
- 6. Perceived product performance:** the subjective evaluation of performance made by a consumer at purchase or after a product is consumed (Chen-Yu et al., 1999; Halstead, Hartmann & Schmidt, 1994).
- 7. Expectancy Disconfirmation:** consumers' evaluation of the discrepancy between their expectations and their perception of the actual performance (Halstead et al., 1994).
- 8. Consumer satisfaction/dissatisfaction:** consumers' perception, overall evaluation, and psychological reaction to their experience (Hou, 2005).
- 9. Product return intention:** consumers' anticipation/likelihood of bringing or sending the purchased product to a former or proper place (Merriam-Webster Dictionary Online, 2008).
- 10. Repurchase intention:** consumers' anticipation/likelihood of buying the same product or products of the same brand again (Blackwell et al., 2001).

CHAPTER II

REVIEW OF LITERATURE

In this chapter of literature review, previous studies in consumer satisfaction/dissatisfaction (CS/D) and brand image were reviewed in the following sections. The first section, CS/D, included the review of definitions and components of CS/D, measurements of CS/D, antecedents of CS/D, and consumer expectation and CS/D toward online shopping. The second section, brand image, contained the reviews of definitions, dimensions and variables related to brand image.

Consumer Satisfaction/Dissatisfaction

Definitions and Components of Consumer Satisfaction/Dissatisfaction

CS/D has been deemed as a fundamental determinant of long-term consumer behavior (Oliver, 1980b). The concept of CS/D has been discussed extensively in the retailing and service quality areas (Anderson & Fornell, 1994; Bitner, Brown & Meuter, 2000; Cronin & Taylor, 1992; Zeithaml, Berry & Parasuraman, 1996). Meanwhile, the CS/D with e-tailing or e-satisfaction has attracted more researchers' attention (e.g., Selz & Schubert, 1998; Szymanski & Hise, 2000). However, the definition of CS/D is still divergent in the literature of the retailing and service quality areas (Hou, 2005).

Howard and Sheth (1969) first propose that CS/D as a related psychological state evaluates the responsiveness between what consumers actually get and give. CS/D is also defined as a total psychological state when there is a difference between the emotion and expectation, and the expectation is consumers' feelings anticipated and stored up from their previous experience (Oliver, 1981). Churchill and Surprenant (1982) pose that CS/D is a result of which consumers compare the expected reward and the actual cost after purchasing and using products. After the concept of CS/D is extended to service, Zeithaml and Bitner (2000) define CS/D as consumers' evaluation of a product or service

of whether the product or service has met their needs and expectation. Most researchers focus on the CS/D in the post-purchase stage, for example, Engel, Blackwell and Miniard (1995) state that CS/D is a post-purchase evaluation that a chosen alternative meets or exceeds expectation. Some researchers recognize that CS/D is not limited in the post-purchase stage but exists in various stages of consumer behavior process. Hou (2005) defines CS/D as consumers' perception, overall evaluation, and psychological reaction to their experience in the pre-purchasing, purchasing and post-purchasing stages.

CS/D could be distinguished as either a process or an outcome (Parker & Mathews, 2001; Yi, 1990). The process focuses on the perceptual, evaluative and psychological process that contributes to CS/D. The in-process CS/D is consumers' satisfaction/dissatisfaction during the sequence of episodes constructing the transaction (Jiang & Rosenbloom, 2005). In terms of levels of aggregation, an immediate post-purchase evaluative judgment or an affective reaction to a specific purchase occasion can be viewed as transaction-specific CS/D with less aggregation (Oliver, 1993). Transaction-specific CS/D captures the complex psychological reactions that consumers have and may offer diagnostic information about a specific product or service encounter for a firm (Oliver, 1997). On the other hand, when CS/D is regarded as the outcome, it is the result of the purchase experience or service reception (Yi, 1990). The experience of distinct emotions at a certain stage of purchasing may determine consumers' overall satisfaction/dissatisfaction and behavior intention. The outcomes and results in a certain stage can be accumulated and become overall CS/D or cumulative CS/D based on overall evaluation of the total purchase and consumption experiences with a product or service over time (Anderson, Fornell & Lehmann, 1994; Fornell, 1992). Overall CS/D is more fundamental indicator of the past, current and future performance of a firm (Anderson et al., 1994).

In online shopping, in-process CS/D is a set of discrete service encounters during the transaction process with the e-tailing service provider over a period of time while the overall CS/D is the general attitude toward the service provider after the transaction is done (Jiang & Rosenbloom, 2005; Oliver, 1997). Boulding, Kalra, Staelin and Zeithaml (1993) found that overall CS/D was the sum up of all previous transaction-specific evaluations and was updated after each transaction. Hou (2005) states that both the

outcome and the process contribute to the consumer's overall CS/D in online shopping because online consumers take much more time in searching information and communicating on the web than in actual purchasing time.

When it comes to components of CS/D, Giese and Cate (2000) define that there are three basic components composed of CS/D (i.e., response, focus, time). CS/D is a cognitive or affective response that relates to a specific focus (e.g., a product, brand, experience) and occurs at a certain time (i.e., pre-purchase stage, purchase stage, post-purchase stage). For example, a female customer was satisfied with the brand, Victoria Secret because during the purchasing process (time), the salesperson introduced many styles to her and the attitude was very polite (focus) that the customer held a positive image toward Victoria Secret (response).

Measurements of Consumer Satisfaction/Dissatisfaction

There is no standardized method for measuring CS/D. Hausknecht (1990) describes that the inconsistencies in theory have led to inconsistencies in measurement of CS/D which may be accountable for inconsistencies in reported results. He proposes two dimensions in measurements of CS/D. One dimension reflects what is being measured and has three approaches (i.e., evaluative/cognitive, emotional/affective, behavioral/conative). The second dimension reflects how the measurements are gathered and has two approaches (i.e., verbal, graphic). Hausknecht suggests that the graphic approach (e.g., faces, circles, and ladder) can communicate the concept of quantities of CS/D better than the verbal format. A verbal scale is easy to complete for respondents; however, it is ambiguous for researchers to analyze (Hill, Brierley & MacDougall, 2003). Although Kasten and Weintraub (1999) suggest using a graphic scale with numeric scores and verbal labels can reduce the ambiguity of the verbal scale, verbal scales have been used in most CS/D studies.

Various types of verbal scales have been used in CS/D studies. Two major types of scale are single-item scales and multi-item scales. Many researchers used single-item scales (e.g., one to five) from "very satisfied" to "very dissatisfied" responses to reflect the extent of overall CS/D (Murray & Howat, 2002; Shim & Mahoney, 1992; Yoon & Ekinci, 2003). Other researchers used multi-item scales (Danaher & Mattsson, 1994;

Estelami & Maeyer, 1997; Rust & Zahorik, 1993). For example, Estelami and Maeyer (1997) used five items (i.e., facilities, cost, decision of attending the school, time spending in the school, overall assessment) to measure CS/D toward the school. Westbrook and Oliver (1981) examined the reliabilities of various types of scales (i.e., verbal, graphic, semantic differential, Likert, inferential scales) and found that the semantic differential scale (e.g., satisfied vs dissatisfied) had the highest reliability.

Expectancy Disconfirmation Model

The expectancy disconfirmation model has been widely used to determine CS/D. The first proposition related to this model can be traced back to the proposition suggested by Swan and Combs (1976) indicating that satisfaction is related to performance that meets expectation, whereas dissatisfaction occurs when performance fails to meet expectation. Expectancy disconfirmation is a mental comparison of an actual state with its expected probability (Barsky, 1992; Lee, 2004; Spreng, MacKenzie & Olshavsky, 1996). Consumers purchase products and services with pre-purchase expectation about anticipated performance. After purchasing and using the products and services, the performance outcomes are compared with the initial expectation, resulting in a feeling of satisfaction, neutral or dissatisfaction. If the perceived performance exceeds a consumer's expectation, it leads to positive disconfirmation, and the consumer will feel satisfied with the product or service (Lee, 2004). If the perceived performance matches a consumer's expectation, it results in confirmation (or zero disconfirmation), and the consumer will feel neutral or satisfied. However, if the perceived performance does not meet a consumer's expectation, it leads to negative disconfirmation, and the consumer will be dissatisfied. Based on the expectancy disconfirmation model, CS/D has three antecedents (i.e., expectation, perceived performance, disconfirmation between expectation and perceived performance). Each antecedent is discussed in the following sections.

Consumer Expectation

One antecedent of CS/D is consumer expectation. Consumer expectation have been investigated in a number of research settings such as expectation on product promotion activities, product price, economic inflation, and financial spending (Kalwani

& Kim, 1992; Ludvigson, 2004; Roos, 2005); however, they have received the most attention in the CS/D and service quality literatures (Zeithaml, Berry & Parasuraman, 1993). Many researchers suggest that expectation are formed through mainly three sources: (a) direct prior experience with the product or similar products and knowledge of product attributes, (b) exposure to marketing stimuli and information from external sources such as advertising, promotion or price, and (c) communication from reference groups such as word-of-mouth information or observation of product usage (Holak, Lehmann & Sultan, 1987; Smith & Swinyard, 1988).

Many study findings support that consumer expectation is a determinant of CS/D. Chen-Yu, Hong and Lee (2001) compared U.S. and South Korean college student consumers and found that expectation for apparel product performance was a significant determinant of CS/D in both countries. Consumers who had a higher level of expectation for performance at the purchase stage had a higher level of satisfaction with the product at the product-consumption stage. Goode (2001) used CD players to examine CS/D and found that consumers' expectation for the product quality significantly influenced their satisfaction/dissatisfaction. If consumers had a higher level of expectation for the product quality of the CD player, they had a higher level of satisfaction. Kim, Ferrin and Rao (2003) conducted a web survey to investigate university students' satisfaction/dissatisfaction with e-tailers and also found that consumer expectation had direct effects on CS/D regardless of their perceived performance.

Many types of expectation have been identified in the CS/D literature including predictive expectation, ideal and desired expectation, normative and deserved expectation, and minimum tolerable and adequate expectation. Each type of expectation is discussed in the following sections.

Predictive expectation. Miller (1977) defined the predictive "will be" expectation standard as "expected standard". Swan and Trawick (1980) and Prakash (1984) then termed this standard as predictive expectation, defined as estimates of anticipated performance level, which are expectation that consumer-defined probabilities of the occurrence of positive or negative events (Oliver, 1981). Several other researchers also give a similar definition. For example, Spreng and Page (2001) and Zeithaml et al.

(1993) define predictive expectation as consumers' beliefs or predictions about what is likely to happen in the future. Schommer (1996) and Swan, Trawick, and Carroll (1981) found that predictive expectation was a significant comparison standard to determine CS/D. Schommer found that after perceiving a relatively low level of performance, consumers who hold high predictive expectation are less likely to be satisfied than those who hold low expectation. Swan et al. (1981) found that if the product performance equaled to consumers' predictive expectation, they held a neutral attitude. If the performance failed to meet the predictive expectation, consumers felt dissatisfied.

Ideal and desired expectation. Miller (1977) identified another type of expectation, ideal expectation, as the "wished for" level of performance. It is what consumers believe the performance can be. In CS/D research, no researchers have studied this type of expectation. It is possible that most consumers do not use ideal expectation as a comparison standard to determine their CS/D. Swan and Trawick (1980) identified desired expectation as the level at which consumers subjectively want the product or service to perform. Compared the level of performance in desired expectation and predictive expectation, consumers usually expect a higher level of performance in their desired expectation than that in predictive expectation. Swan et al. (1981) found that if product performance equaled to desired expectation, consumers felt satisfied. Nevertheless, if the product performance equaled to consumer's predictive expectation, they only held neutral attitudes toward the product. Spreng and Mackoy (1996) found that desired expectation had a larger effect on consumer satisfaction while predictive expectation had a larger effect on dissatisfaction.

Normative and deserved expectation. Summers and Granbois (1977) identified a type of expectation related to how frequently problems should occur. Prakash (1984) called this type of expectation as "normative expectation", which were what the consumers think the level of performance "ought to be" or "should" happen. Normative expectation is often modified based on consumers' past expectation (Woodruff, Cadotte & Jenkins, 1983). For instance, a consumer expected a shirt to have a pilling problem after one wash. However, if a shirt he bought did not show any pilling problem until

one-year's wear and wash, when the consumer buy a shirt again, his normative expectation for the time to occur a pilling problem on a shirt might be modified from after one wash to after one-year's usage based on his last experience. Deserved expectation is also defined as what the consumers think the level of performance "ought to be" or "should" happen; however, it is based on consumers' investment (Miller, 1977). Consistently, Liethy and Churchill (1979) also view deserved expectation as the level of performance the consumer ought to receive under a perceived set of costs. Gilly, Cron and Barry's study (1982) showed that the deserved expectation was valid as a comparison standard for consumers to evaluate performance, and the difference between the deserved expectation and the consumers' perceived performance could measure CS/D sufficiently. Ekinici (2003) found that deserved expectation was significant in predicting service quality and CS/D in the hospitality industry.

Minimum tolerable and adequate expectation. Miller (1977) proposes minimum tolerable expectation, defined as the lowest level of performance acceptable to consumers. It is the minimum level that the consumer believes the level of performance "must be". Ekinici (2002) indicates that even if the performance is better than a consumer's minimum tolerable expectation, the consumer may not feel satisfied. If the actual performance falls between minimum tolerable expectation and deserved expectation, consumers will feel dissatisfied. Ekinici's minimum tolerable expectation is similar to the "adequate expectation" proposed by Zeithaml et al. (1993) and Liljander and Strandvik (1993). They propose a zone of tolerance (i.e., the zone between ideal expectation and adequate expectation), which is corresponded to a hierarchy of expectation in the order of ideal, normative, desired, predicted, deserved and adequate expectation from top to bottom. If the actual performance falls into the zone of tolerance between ideal and predictive expectation, consumers will feel satisfied. If the actual performance falls within predictive and deserved expectation, they will feel neutral. If the actual performance falls into the zone of tolerance between deserved and adequate expectation, consumers will feel dissatisfied. An individual consumer's zone of tolerance increases or decreases depending on many factors, including product attributes, price, or service (Santos & Boote, 2003).

Perceived Performance

Another antecedent of CS/D is perceived performance and is usually defined as the subjective evaluation of performance made by a consumer at purchase or after a product is consumed (Chen-Yu, Williams & Kincade, 1999; Churchill & Surprenant, 1982; Halstead, Hartmann & Schmidt, 1994). Compared the characteristics of online and offline shopping, consumers cannot experience the product while browsing websites; therefore, their perceived performance is formed only at the product-receiving stage.

Many researchers found perceived performance was an important determinant in CS/D at the product-consumption stage. Whenever a product performed well, consumers were satisfied, regardless of the levels of the pre-existing comparison standard (e.g., expectation). Chen-Yu et al. (1999) used sweatshirts as experimental samples and found that perceived performance had a significant cause-and-effect relationship with CS/D at product-consumption stage. Tse and Wilton (1988) used record players as the product and also concluded that whenever a product performed well, regardless of the previous comparison standard and disconfirmation, consumers would be satisfied. Spreng et al., (1996) manipulated the product performance of camcorders and found a strong direct effect of performance on CS/D at product-consumption stage.

For the perceived performance of apparel products, O' Neal (1992) suggests that consumers evaluate clothing quality in eight areas, including appropriateness for intended end use (e.g., the style of a cocktail dress is suitable for a formal party), price in relation to benefits (i.e., good value), product performance (e.g., durability, drapes, wrinkle-resistance), product life cycle (i.e., trendy or out-of-date), store image, brand reputation, social benefits, and psychological benefits. Hatch and Roberts (1985) propose that the attributes of apparel products can be categorized into two aspects: intrinsic and extrinsic. Intrinsic attributes are physical product attributes that cannot be changed, for example, fiber content, style, color, fit/size, and comfort. Extrinsic attributes are product attributes that the manufacturer or retailer provides, such as price, brand name, store image, and warranty. Most researchers have focused on the study of intrinsic attributes of apparel products and identified many criteria in the evaluation of apparel products (i.e., fiber content, style or design, color or pattern, fit, comfort, suitability or appropriateness for a specific occasion, coordination with other clothing, how pleasing it was to others)

(Eckman, Damhorot & Kadolph, 1990; McLean, Roper & Smothers, 1986; Workman, 1990). When it comes to extrinsic attributes, researchers have only examined the role of price in quality evaluation and did find that price was an important criterion (Brown & Rice, 1998; Burns & Bryant, 1997; Forsythe, 1991).

Expectancy Disconfirmation

The third antecedent of CS/D is expectancy disconfirmation. Expectancy disconfirmation is consumers' evaluation of the discrepancy between their expectation held at the pre-purchase stage and their perception of the actual performance (Halstead et al., 1994). Lee (2004) indicates that expectancy disconfirmation is the extent to which performance exceeds, meets or falls below of consumers' expectation, resulting in positive, zero or negative disconfirmation. Expectancy disconfirmation is broadly accepted as a determinant of CS/D and many research results support the expectancy disconfirmation model (Hong & Rucker, 1995; Oliver & DeSarbo, 1988; Tse & Wilton, 1988). Hong and Rucker (1995) examined CS/D of female consumers in northern California toward either a jacket or pantyhose and found that CS/D was affected directly by expectancy disconfirmation. Furthermore, Chen-Yu et al. (1999) utilized sweatshirts as products and university students as samples and found that expectancy disconfirmation between the performance expectation at purchase and performance perception after product consumption was a significant determinant of CS/D. In Spreng and Chiu's (2002) study of CS/D formation process, they examined the expectancy disconfirmation model and also found that expectancy disconfirmation had a strong positive correlation with CS/D.

Psychological Effects on the Expectancy Confirmation Process

Various psychological theories have been proposed and used in the assessment of the consequences of consumer decisions. Four theories are often used to address the psychological effects on the consumer expectancy confirmation process in assessing CS/D (i.e., assimilation/cognitive dissonance theory, contrast theory, assimilation-contrast theory, generalized negativity theory). Each theory is introduced in the following sections.

Assimilation (cognitive dissonance) theory. According to assimilation (or cognitive dissonance) theory, disconfirmed expectation creates a state of dissonance or psychological discomfort (Festinger, 1957). If a person perceives that two ideas are psychologically dissonant, he or she will try to reduce this mental discomfort by changing or distorting one or both the ideas to make them consistent (Festinger, 1962). As applied to product evaluation, if a disparity exists between expectation and actual product performance, consumer may minimize it by changing his or her expectation toward the perception of the product or adjusting the perception of the product to be more consistent with his or her expectation (Anderson, 1973). Chen-Yu, Hong and Lee (2001) compared the determinants of CS/D with the performance of apparel products (i.e., sweatshirts) between South Korea and the U.S. and found that the assimilation effect could explain Korean university students' satisfaction at the product-consumption stage. For Korean participants, no matter the performance of sweatshirts was high or low, their initial expectation of product performance had a positive influence on their satisfaction. Korean participants would adjust their perception to reduce the disconfirmation between their expectation and perceived performance of sweatshirts.

Contrast theory. Contrast theory is opposite to the cognitive dissonance theory presuming that when product expectation is not met by actual performance, the discrepancy consumer perceived will be exaggerated (Engel & Blackwell, 1982). If the product performs better than expected, consumers will evaluate the product higher than its actual performance. If the product performs worse than expected, consumers will evaluate the product lower than its actual performance (Anderson, 1973). In other words, perceptions of product performance are enhanced by positive disconfirmation, and lowered by negative disconfirmation (Yi, 1990). Many research results support the contrast theory. Duhaime (1988) and Chen-Yu, et al (2001) found that U.S. consumers were more satisfied when the perceived product performance met their expectation held at the purchase stage, whereas they were more dissatisfied when the perceived performance at the product-consumption stage fell below their expectation. Kennedy and Thirkell (1988) found a positive correlation between expectation and CS/D among satisfied consumers, but an inverse relationship between expectation and CS/D among

dissatisfied consumers. Consumers who had high initial expectation would feel strongly dissatisfied than those who had relatively low expectation when dissatisfaction occurred. Dagenais and Duhaime (1992) also found a significant contrast effect when dissatisfaction occurred.

Assimilation-contrast theory. The assimilation-contrast theory combines assimilation theory and contrast theory and suggests that there are latitudes of acceptance, rejection, and neutrality in a consumer's perception (Anderson, 1973). When consumers' have a moderate level of disconfirmation between their expectation and the actual product performance, they will adjust their product perceptions to meet expectation; and therefore, the assimilation effect occurs. However, when a large disparity exists between consumers' expectation and perceived performance, consumers will magnify the disparity; and therefore, the contrast effect will happen. This argument is supported by several research results. Bone, Shimp and Sharma (1990), Boulding et al., (1993), and Spreng et al. (1996) found that the assimilation effects occurred when perceived performance was close to expectation. Bone, et al. (1990) found that the contrast effects occurred when perceived performance was much different from the expectation. Higher expectation would result in lower perceived performance.

Generalized negativity theory. Carlsmith and Aronson (1963) propose the generalized negativity theory that any disconfirmation of expectation will be perceived as less pleased than a confirmation of expectation. If consumers expect a specific performance of the product, and a different performance occurs, they will judge the product less favorably than if they had no prior expectation. Either positive or negative disconfirmation lowers product evaluation (Yi, 1990); Oliver (1976) also supports the theory that positive or negative disconfirmation leads to an unfavorable evaluation of a product under the circumstance of high consumers' involvement, commitment, and interest toward products. In Spreng and Page's study (2003) on measures of disconfirmation, the authors found that there was a significant negative effect of disconfirmation on CS/D to support the generalized negativity theory. Participants in this study hold a lower satisfaction toward the camcorders as long as the product performance

was not as they expected, no matter the performance of camcorder is higher or lower than their expectation.

Consumer Expectation and Satisfaction/Dissatisfaction with Online Shopping

Czepiel, Solomon, Suprenant and Gutman (1985) suggest that there are two independent elements contribute to CS/D. One is the functional element, which usually refers to the product itself and the other element is the service provided by the retailer. In the scope of CS/D toward online shopping, many researchers have focused on service quality including website design, navigation, security and customer service rather than the merchandise itself. For example, in Lam and Lee's (1999) model of Internet CS/D, the authors propose that logistics support, customer service, pricing attractiveness and website storefront affect CS/D towards e-tailers. Ho and Wu (1999) suggest that logistical support, technological characteristics, information characteristics, homepage presentation, and product characteristics affect CS/D with e-tailers. Szymanski and Hise (2000) found that convenience, site design, and financial security were dominant factors in e-satisfaction while the product information had relatively small impact on e-satisfaction. Jun, Yang and Kim (2004) identified six factors associated with e-satisfaction including reliable/prompt responses, access, ease of use, attentiveness, security, and credibility, and found that reliable/prompt responses, ease of use, and attentiveness had significant influence on CS/D. Integrating these factors mentioned above, four factors (i.e., navigation and website design, ordering and delivery processes, customer service, merchandising and product information) which would influence consumer expectation and CS/D toward online shopping are discussed in the following sections.

Navigation and Website Design

Consumers expect to save time and efforts to reduce search cost in online shopping (Lim & Dubinsky, 2004). The search costs include Internet connection time, actual time, efforts taken for the user to search an e-tailer's website, and time to download information (Gupta & Chatterjee, 1997). Consumers are unwilling to tolerate delays related to delivering audio, animation, graphics and video (Lohse & Spiller, 1998). Several studies found a significant positive correlation between the information

downloading time and the website user's CS/D (Page & Lepkowska-White, 2002; Van Riel, Liljander & Jurriens, 2001). Weinberg (2000) suggests that consumers are likely to feel distracted by the wait when they are uncertain about the actual waiting time. Consistent with Weinberg's argument, Dellaert and Kahn (1999) found that consumers' waiting time for the website could influence their evaluations of the website negatively if there was no countdown information available. Lim and Dubinsky (2004) suggest that e-tailers should provide waiting time information (e.g., time bar indicator at the bottom of the web page) to help consumers become more tolerant of waiting.

Besides waiting time, a well-structured and user-friendly website is more favorable than the hard-to-navigate one (Eighmey & McCord, 1998; Fram & Grady, 1995). A well designed website can save consumers' searching time and cognitive efforts to shop more effectively online (Szymanski & Hise, 2000). Manes (1997) found that a good website design contained good organization and easy search, and each of the elements of website design could influence consumers' satisfaction with the website. Chen, Clifford and Wells (2002) found informativeness, organization, and entertainment created positive attitudes towards a website. Within these three features, informativeness played the most important role in CS/D with a store website.

Then and DeLong (1999) raise the importance of visual display in communicating information. They suggest that the more information the e-tailer offers through the visual display, the more interested the consumers will be in purchasing the product. The authors examined 63 university students' perceptions of apparel website design features and identified three important visual aspects of successful websites (i.e., images of the online product in the closest representation of end use, displayed in conjunction with similar items, from various angles, such as front and back views). They also found that consumers preferred a realistic human model rather than a fashion model to display the silhouette of the garment and how the apparel would drape on the body. Consumers expected and were interested in display of the product in a variety of images and features on the web pages.

Ordering and Delivery Processes

In addition to providing a fast, easy-to-navigate, and informative website, consumers also expect e-tailers to offer a convenient and easy online ordering process (Lim & Dubinsky, 2004). Shopping cart and express checkout process would help consumers save time and confirmation letter and auto-saved feature of personal information (e.g., consumer name, address, phone number) could also help consumer perceive “convenience” during shopping online. Beside convenience, consumers also expect security while ordering products online. The security refers to online transaction safety. Researchers suggest that the lack of security on the websites will make online shoppers have serious concerns about their credit card transactions and privacy of personal information (French & O’ Cass, 2001; Jun et al., 2004; Madu & Madu, 2002). Studies also showed that the concern of transaction security significantly influenced CS/D and purchase intention (Szymanski & Hise, 2000; Yoo & Donthu, 2001). In addition, credibility, which is regarded as trustworthiness and believability of e-tailers, is also a factor that influences CS/D toward online shopping. The results of Jun et al. (2004) study showed that consumers considered the length of business history as an important indicator of trustworthy e-tailers. E-tailers can help reduce online risk perceived by consumers through informing them about the company and the security of online transactions (Jeffery, 1999).

After ordering, the merchandises have to be processed by shipping, handling and delivering via postal services and then could be reached by consumers (Park & Kim, 2007). Convenient delivery is an important advantage of online shopping over offline shopping because it can help consumers save efforts in the transportation to physical stores and searching parking spaces, and the costs of fuel (Wang, Wang & Wang, 2006). Many researchers have noticed the importance of delivery time in online shopping. Gommans, Krishnan, and Scheffold (2001) pose that fast delivery may influence consumers’ attitudes toward online shopping and indirectly influence CS/D. Studies also found that delivery delay resulted in a lower evaluation in purchase experience (Hui, Thakor & Gill, 1998; Taylor, 1995). Consumers have different delivery needs; for example, some consumers prefer quick delivery to experience products soon while others are willing to wait to save the shipping fee (Jiang & Rosenbloom, 2005). Therefore, the

time-related information (i.e., stock availability, shipping/handling cycle, expected waiting time) is needed for online shoppers (Hui & Zhou, 1996). Park and Kim (2007) examined the effect of delivery-time-related information on perceived consumption delay, perceived time risk, attitude toward the website, and online purchase intention. They found that participants who had been informed of in-stock information perceived significantly less consumption delay than those who had been informed of back-order information. Participants who had ships-within-24-hours information perceived significantly less consumption delay than those who had no such information. The authors also found that perceived consumption delay also had significant direct effects on perceived time risk and purchase intention in online apparel shopping. Besides information related to delivery, Jiang and Rosenbloom (2005) found that whether the product was delivered as promised and whether consumers could access to order tracking were also significant influences of consumers' expectation and CS/D.

Customer Service

Yang, Peterson and Huang (2001) examined online pharmacy patrons and found customer service was an important factor related to CS/D. The online customer service usually includes answers to frequently ask questions (FAQ), sales representative service, payment and credit return policies, and information about shipping and handling costs (Then & DeLong, 1999; Lim & Dubinsky, 2004). Among various service items that e-tailer provided, Lohse and Spiller (1998) found that having FAQ sections and offering sales representative service increased website visits and sales, and the extent of information gathering from e-tailers and the ease of contact would influence CS/D toward online shopping (Jun et al., 2004). Ghose and Dou (1998) also found that online shoppers preferred two-way communication with e-tailers rather than being passive information recipients. Consumers expected the communication between the staffs and customers to be careful, continuous, useful, and across geographic barriers (Yang et al., 2001). Moreover, online consumers preferred to have multiple ways to contact e-tailers, such as through e-mail box, question posting boards, mail-in address, telephone, and fax numbers. Ghose and Dou (1998) also found that online shoppers preferred two-way communication with e-tailers rather than being passive information recipients. For

example, consumers often contact customer representatives through telephone or e-mails and they expect e-tailers' comments and feedback through e-inquiry (Burke, 1997; Cox & Dale, 2002). Another online customer service that online shoppers like to use is online community (i.e., surfer postings) where consumers can report their feelings and experience with products and e-tailers. This service feature may decrease consumers' perceived risk associated with purchasing from e-tailers (Park & Stoel, 2002). Personal attentiveness (i.e., e-tailers offer personalized service to their consumers) is another dimension that online consumers are longing for in customer service (Jun et al., 2004). For example, the website of Land's End offers "Specialty Shoppers" option. The company creates a personalized file for each individual customer to keep information such as the customer's sizes, tastes and past purchases so that the customer service representative can answer the customer's questions or provide suggestions for the selection of size, style or gift.

Merchandising and Product Information

In previous studies, merchandising referred to product variety, assortment, and the product-related information online (Jarvenpaa & Todd, 1997; Szymanski & Hise, 2000). The findings of previous studies showed that wider assortments and richer product information would increase the consumers' positive perception toward the e-tailers. Greater assortments could increase the possibility to attract consumers and to satisfy their wants and needs, especially when the items were not widely distributed. Product information is also a critical factor affecting consumers' choice in online shopping because consumers cannot actually see and feel the products (Alba et al., 1997; Lynch & Ariely, 2000; Ward & Lee, 2000). Peterson, Balasubramanian and Bronnenberg (1997) indicate that the extent and quality of product-related information on the e-tailer's website will influence consumers' decision-making and the level of CS/D. For apparel products, product information usually includes intrinsic features, such as fiber content, fabric construction, size chart, and color description, and extrinsic features, such as price, country of origin and brand name (Eckman et al., 1990). Compared with other product categories, fit issue may be more critical for apparel online shoppers because they are

unable to try on the garments featured on the website (Then & DeLong, 1999), and therefore, the information about size is crucial for apparel online shoppers.

Brand Image

In this section, the definitions of brand image will be addressed at first, and then the five dimensions of brand image (i.e., brand name/logo, brand benefits, brand attitudes, brand personality, and brand providers and users) and the variables related to the brand image (i.e., brand sensitivity, brand familiarity) are followed.

Definitions of Brand Image

Although brand image has been acknowledged as an important concept in marketing (Gardner & Levy, 1955), there is no consistency in its definition (Dobni & Zinkhan, 1990). For example, Herzog (1963) proposes that brand image is the sum of impressions that consumers receive from various sources. Kotler (1988) defines brand image as the set of beliefs held by consumers about a specific brand. Kapferer (1992) suggests that brand image is the result of consumer's decoding, extracting, and interpreting the brand signals. Although there are different definitions of brand image, in general, researchers agree that brand image is a set of consumer-constructed associations linked to the brand, which is usually organized in some meaningful ways (Aaker, 1991; Keller, 1993; Nandan, 2005). For example, Biel (1992) defines that brand image as the combined effects of brand associations. Brand association is the category of a brand's assets and liabilities that involves anything linked in memory to a brand (Aaker, 1991, Faircloth, Capella & Alford, 2001). Engel, Blackwell and Miniard (1993) suggest that brand image is bound up with the consumer's perceptions of the brand's tangible and intangible associations. For an image of apparel brand, the tangible associations are usually related to the functional attributes of clothing, such as warmth or comfort of clothing (Keller, 1993). The intangible associations are related to the emotional attributes, such as aesthetics expression and creating fun. Neal and Bathe (1997) state that many image drivers are the intangible symbolic benefits, which are used to satisfy consumers'

social or emotional needs. These brand images are often associated with the wearer's trustworthiness, lifestyle and self-image.

Dimensions of Brand Image

Brand image can be categorized into five dimensions, (i.e., brand name/logo, brand benefits, brand attitudes, brand personality, and brand providers and users). These five dimensions are described individually in following sections:

Brand Name/Logo

According to the American Marketing Association, a brand is name, term, sign or symbol or a combination of them to identify the products or services of the seller and differentiate the seller from its competitors (Keller, 2003). Hem and Iversen (2004) define logo as the graphic design, with or without brand name attached to it, to identify a brand with quality products or services. Kapferer (1992) indicates that brand image contains a logo or a word, related to a product, acquires a meaning determined by the product, and the history and culture of the company. Biel (1992) describes brand image as a cluster of attributes and associations that consumers connect to the brand name/logo. Brand names/logos are valuable assets that help communicate quality and evoke specific knowledge frameworks associate with the brand (Hoyer & Brown, 1990; Keller, 1993). Dodds, Monroe and Grewal (1991) state that brand name/logo plays an important role in enhancing the value of a product. For marketers, a good brand name/logo may create high levels of brand awareness, stimulate strong consumer preference, and contribute to the success of the product (Chan & Huang, 1997). For consumers, brand names/logos help them to recall brand benefits (Janiszewski & van Osselaer, 2000), to make product inferences and evaluations (Zinkhan & Prenshaw, 1994), and to make purchase decision (Holden & Vanhuele, 1999). Zinkhan and Martin (1987) indicate that consumers often form instant, non-neutral attitudes towards the product based on brand name or logo alone. These instant attitudes can be very strong and may not be changed by subsequent communications, either from the marketers or from other consumers' words of mouth. Degeratu, Rangaswamy and Wu (2000) found that the brand name was regarded as more important when there was less information available. Hogg, Bruce and Hill (1998)

examined young consumers' brand recognition of sportswear and found the significant result that young consumers used brand names and logos/symbols to associate with brand images.

Rao and Ruekert (1994) indicate that one of the major purposes of a brand name/logo is providing cues about product quality for both observable and unobservable product attributes. Consumers often perceive a high level of risk in purchasing apparel because the quality of many after-care attributes such as dimensional stability or durability are difficult to be evaluated at purchase. To reduce risk, consumers may learn to rely on brand name/logo to draw inferences about the product quality (Fowler & Clodfelter, 2001). Although marketers often use brand name/logo to signal product quality to reduce consumers' uncertainty about product performance (Heiman & Muller, 1996), inconsistent study results were found in the relationship of brand name/logo and perceived product quality. In an early study, the highest consumers' quality ratings were attributed to products with better brand names selling in a better-quality store at a higher price (Render & O'Connor, 1976). In later studies, Holstius and Palschik (1983) found that brand name influenced the perceptions of garment quality only among fashion-conscious consumers, not among consumers in general. Baugh and Davis (1989) found that consumers perceived designer brand clothing as a status symbol but not necessarily as an indicator of high quality. Forsythe (1991) examined the impact of brand name on consumer evaluation of the apparel quality and found no significant relationship between brand name and quality perceptions. However, because the inability of examining products online, brand/logo plays a more important role in online shopping. Degeratu et al. (2000) found that brand name/logo was an important factor influencing consumers' buying decision in online shopping and e-store patronage.

Brand Benefits

Benefits are the personal value that consumers attach to the product attributes; that is, what consumers can gain from the product or service (Keller, 1993). Benefits can be distinguished into three types: functional, experiential, and symbolic benefits (Park, Jaworski, & MacInnis, 1986). Functional benefits are intrinsic advantages of product/service consumption corresponded to the intrinsic attributes (e.g., fiber content,

style, color, size) (Keller, 1993). For example, Maloney (2001) found that consumers preferred to buy New Balance athletic shoes because of the functional benefits such as wide selections of shoe width and cushioning support for exercising. Experiential benefits relate to what it feels like to use the product or service. For example, a consumer may feel very excited when he or she wears the clothes, enjoy feeling the texture, and appreciate the appearance of the garments. These benefits satisfy consumers' sensory pleasure, variety and cognitive stimulation. Symbolic benefits satisfy consumers' underlying needs for social approval, self-esteem and personal expression. They are more extrinsic advantages of product or service consumption (Keller, 1998) and more related to extrinsic attributes (e.g., country of origin, price). For example, Gucci handbags are popular due to Gucci's trendy image that helps consumers to distinguish themselves from the majority and show their social status.

Brand Attitudes

Another dimension of brand image is brand attitudes, which refers to consumers' affect or feelings toward the brand. Keller (1993) indicates that brand images are closely related to how favorably the brand is evaluated. The higher the brand attitude, the higher the brand image is. A positive overall brand attitude can be formed if consumers believe that the brand has attributes that can satisfy their wants and needs. According to the multi-attribute attitude model (Wilkie & Pessimier, 1973), only salient attributes play an important role in brand attitude. If consumers do not consider certain brand attributes to be important, they are unlikely to view the brand as very good or bad (Keller, 1993). For example, the consumer who considers quality is more important than price would have a positive attitude toward the brand providing products with high quality, but may not have strong preference with the brand providing products with a low price. Prior experience with a certain brand or other similar brands would influence brand attitudes (Woodruff et al., 1983). For example, the consumer bought a J. Crew wool coat and found it kept body warm in the severe weather; therefore, she formed a positive attitude toward J. Crew.

Brand Personality

Brand personality is a set of characteristics related to a brand. These characteristics are the ones being used to describe human individuals, for example, classic, reliable, and charming. Brand personality can be an important way to differentiate a brand in a product category (Halliday, 1996) and can be a propellant of consumer preference and usage (Biel, 1993). Brand personality traits are often developed through brand positioning (Harris & Chernatony, 2001), users' imagery, and consumers' contacts with the company's employees (Aaker, 1997). For example, the brand personality traits of Abercrombie and Fitch are young, active and sexy. It sells casual luxury apparel products and targets 18 to 22 year old college students who live in a confident, classically stylish lifestyle (Abercrombie and Fitch, n.d.). It recruits college students as sales associates to enhance the brand personality of youth and energy when consumers contact with their employees.

Consumers may develop brand preferences because the brand personality reflects their actual self-images. Consumers tend to link their self-images with the product images at the pre-purchase stage (Ataman & Ulenin, 2003) and would choose products with the attributes that match some aspects of their selves (Onkvisit & Shaw, 1987). The idea that consumers prefer brands with images similar to their self-images is regarded as self-image and product-image congruity (i.e., brand self-congruity) (Hogg & Savolainen, 1999). Consumers may express themselves who they are, what they are and how they want to be viewed by using the self-congruity brands (Graeff, 1997). Self-image is a multidimensional concept with different types of self, including actual self, ideal self, social self and sex-role self (Onkivisit & Shaw, 1987).

Many study results support the proposition of brand self-congruity. Jamal and Goode (2001) and Sirgy et al. (1997) examined the relationship between brand self-congruity and brand preference, and found that brand self-congruity was a significant predictor of brand preference (i.e., brand attitude), purchase intention and store loyalty. Malhotra (1988) found that consumers were likely to prefer, intend to purchase, or use brands with image that they deem consistent as their self-images. Some brands may be chosen because consumers regard them as projecting images that they do not possess now but desire to have (Schiffman & Kanuk, 1983). For example, if a boy desires to be as

professional as an athlete that he admires, he may buy sportswear with the athletic name or his number, using the product to project his ideal self image. Consumers may also select brands that match the social expectation of others within a particular situation. They may use a brand to express themselves to others in an appropriate manner and project the desired image (Graeff, 1997). Sirgy et al., (1997) introduce a global measure of brand self-congruity that respondents can directly rate the congruity between brand image and their own self-image (e.g., Wearing Nike shoes is consistent with how I see myself). In recent studies, this direct measurement has been increasingly adopted to examine the brand/product self-congruity within the realm of brand/product personality (Govers & Mugge, 2004; Govers & Schoormans, 2005; Helgeson & Supphellen, 2004) and has been proved to be an appropriate approach to compare the consumer's self-image with their perception of brand (Han, 2006).

Brand Providers and Users

Biel (1992) proposes that beside components related to product itself, providers and users also influence brand image. The three elements (i.e., the image of the provider of the product/service or the corporate image, the image of the user, and the image of the product/service itself) contribute to brand image variously depend on product category and different brands. In apparel product categories, taking Ralph Lauren Collection as an example, although the high-quality apparel product itself contributes to the brand image, the positive corporate image of social responsibility (e.g., campaigns against breast cancer) also contributes to the brand image. In addition, the users of Ralph Lauren Collection, such as consumers in upper social class, enhance the brand image. In other product categories, such as consumption goods (e.g., shampoo, tissues, cleaners), the image of product itself plays an important role in the brand image, but the image of the brand provider and the image of users contributes rather less.

Variables Related to Brand Image

Brand Sensitivity and brand familiarity are two variables closely related to brand image. Brand image is stored as associations and impressions mentally in consumers'

mind; therefore, to what extent consumers are sensitive and familiar with the brand would also influence their perception of the brand image.

Brand Sensitivity

Brands play an important role if a consumer is sensitive to them while making purchase decision (Kapferer & Laurent, 1992). However, consumers can be very sensitive to brands within a specific category but insensitive in other category (Kapferer, 1991). Kapferer and Laurent (1983) indicate that consumers' involvement in a certain category of products is the most important factor to brand sensitivity. They propose three dimensions of involvement that were particularly related to brand sensitivity. First, a person's interest in a product category affects one's involvement with the product category, and in turns influences one's sensitivity to the brands in this product category. The more a consumer is interested in a certain category, the more he or she is sensitive to the brands in the product category. For example, teenagers are a group that pays more attention to fashion and physical appearance (Bouchard, 2002; Wilson & Sweeney-MacGillivray, 1998). They may be more sensitive to the brands of fashion products and the brands of products that influence their appearance. The second dimension of involvement is how risky a consumer feels about a purchase decision for a certain product category. The more the consumer feels the purchase is risky, the more he or she is involved in the product category, and the more the consumer is sensitive to brands. For example, young consumers may have emotional stress and feelings of deprivation if they dress differently from the standard dress code (Liskey-Fitzwater, Moore & Gurel, 1993). They may pay much attention on brand selection to avoid the risk of becoming the outlier of the dress standard. The last dimension of involvement is how much a consumer believes that a product can reflect his or her self-image. Kapferer and Laurent (1983) found that the stronger the consumer has this belief, the more he or she is involved with the product, and the more the consumer cares about brands. Clothing is an important tool in non-verbal communication, and in reflecting and establishing one's actual and desired self-image (Sweeney-MacGillivray & Wilson, 1997); therefore, many consumers may be sensitive to brands of apparel products.

Brand Familiarity

Brand familiarity is the number of consumers' brand-related, direct or indirect, experiences (Alba & Hutchinson, 1987; Kent & Allen, 1994). The experiences (e.g., exposure to advertisements of the brand, exposure to the brand in a store, purchase or usage of the brand) increase brand familiarity. Brand familiarity can increase the degree of the influence of brand image because it captures consumers' brand associations within their memory and help form the brand knowledge structure (Alba & Hutchinson, 1987). Moreover, Sen and Johnson (1997) found that familiarity resulting from the mere possession of a brand could lead to positive evaluation towards the brand. Compared to less familiar brands, well-known brands could gain better recall from consumers' memory (Kent & Allen, 1994). MacInnis, Moorman and Jaworski (1991) also found that consumers tended to pay more attention to product information in advertisements for familiar brands rather than unfamiliar brands.

Summary of Literature Review

Consumer Satisfaction/Dissatisfaction

CS/D has been deemed as a fundamental determinant of long-term consumer behavior (Oliver, 1980b). CS/D could be distinguished as either a process or an outcome (Parker & Mathews, 2001; Yi, 1990). CS/D as a process is an immediate post-purchase evaluative judgment or an affective reaction to a specific purchase occasion (Oliver, 1993). CS/D as a process captures the complex psychological reactions that consumers have and may offer diagnostic information about a specific product or service encounter for a firm (Oliver, 1997). On the other hand, when CS/D is regarded as the outcome, it is the result of the purchase experiences or service receptions (Yi, 1990). The overall CS/D or cumulative CS/D as an outcome is based on overall evaluation of the purchase and consumption experiences over time (Anderson, Fornell & Lehmann, 1994; Fornell, 1992). Boulding, Kalra, Staelin and Zeithaml (1993) found that overall CS/D was the sum up of all previous transaction-specific evaluations and was updated after each transaction.

To determine CS/D, the expectancy disconfirmation model has been widely used. Based on the expectancy disconfirmation model, CS/D has three antecedents. They are: consumer expectation, perceived performance, and disconfirmation between expectation and perceived performance. Many study findings support that consumer expectation is a determinant of CS/D. Chen-Yu, Hong and Lee (2001) found that expectation for apparel product performance was a significant determinant of CS/D for both U.S. and Korean college student consumers. Consumers who had a higher level of expectation for performance at the purchase stage had a higher level of CS/D with the product at the product-consumption stage. Kim, Ferrin and Rao (2003) also found that consumer expectation had direct effects on CS/D regardless of their perceived performance. Another antecedent of CS/D is perceived performance and is usually defined as the subjective evaluation of performance made by a consumer at purchase or after a product is consumed (Chen-Yu, Williams & Kincade, 1999; Halstead, Hartmann & Schmidt, 1994). Tse and Wilton (1988) found that whenever a product performed well, regardless of the previous comparison standard and disconfirmation, consumers would be satisfied. Spreng et al., (1996) and Chen-Yu, Hong and Lee (2001) also found a strong direct effect

of performance on CS/D at product-consumption stage. Expectancy disconfirmation is consumers' evaluation of the discrepancy between their expectation held at the pre-purchase stage and their perception of the actual performance (Halstead et al., 1994). If the perceived performance exceeds a consumer's expectation, it leads to positive disconfirmation, and the consumer will feel satisfied with the product or service (Lee, 2004). Hong and Rucker (1995) found that CS/D was affected directly by expectancy disconfirmation. Consumers' clothing satisfaction with the jacket or pantyhose was significantly higher when they perceived product performance after consumption was better than their expectation for the product performance formed at purchase (i.e., positive expectancy disconfirmation). Consistently, Chen-Yu et al. (1999) found that expectancy disconfirmation between consumers' performance expectation formed at purchase and performance perception after product consumption was a significant determinant of CS/D with sweatshirts.

Consumer Expectation and Satisfaction/Dissatisfaction with Online Shopping

Four factors (i.e., navigation and website design, ordering and delivery processes, customer service, merchandising and product information) influencing consumer expectation and CS/D were reviewed (Ho and Wu, 1999; Jun, Yang and Kim, 2004; Szymanski and Hise, 2000). For navigation and website design, several studies found a significant positive correlation between the information downloading time and the website user's CS/D (Page & Lepkowska-White, 2002; Van Riel, Liljander & Jurriens, 2001). Manes (1997) found that a good website design contained good organization and easy search, and each of the elements of website design could influence consumers' satisfaction with the website.

Many researchers have noticed the importance of delivery time in online shopping. Gommans, Krishnan, and Scheffold (2001) pose that fast delivery may influence consumers' attitudes toward online shopping and indirectly influence CS/D. Park and Kim (2007) examined the effect of delivery-time-related information on perceived consumption delay, perceived time risk, attitude toward the website, and online purchase intention. They found that participants who had been informed of in-stock information

perceived significantly less consumption delay than those who had been informed of back-order information.

Customer service is another factor influence CS/D in online shopping. Yang, Peterson and Huang (2001) found customer service was an important factor related to CS/D. The online customer service usually includes answers to frequently ask questions (FAQ), sales representative service, payment and credit return policies, and information about shipping and handling costs (Lim & Dubinsky, 2004; Then & DeLong, 1999).

For merchandising and product information on the website, the findings of previous studies showed that wider assortments and richer product information would increase the consumers' positive perception toward the e-tailers. Peterson, Balasubramanian and Bronnenberg (1997) indicate that the extent and quality of product-related information on the e-tailer's website will influence consumers' decision-making and the level of CS/D. For apparel products, product information usually includes intrinsic features, such as fiber content, fabric construction, size chart, and color description, and extrinsic features, such as price, country of origin and brand name (Eckman et al., 1990).

Brand Image

Brand image is a set of consumer-constructed associations linked to the brand, which is usually organized in some meaningful ways (Aaker, 1991; Keller, 1993; Nandan, 2005). Brand image can be categorized into five dimensions, (i.e., brand name/logo, brand benefits, brand attitudes, brand personality, and brand providers and users). Rao and Ruekert (1994) indicate that one of the major purposes of a brand name/logo is providing cues about product quality for both observable and unobservable product attributes. Brand Benefits can be distinguished into three types: functional, experiential, and symbolic benefits (Park, Jaworski, & MacInnis, 1986). Brand attitudes refer to consumers' affect or feelings toward the brand. Keller (1993) indicates that the higher the brand attitude, the higher the brand image is. Brand personality as a dimension is a set of characteristics related to a brand. These characteristics are the ones being used to describe human individuals, for example, classic, reliable, and charming. The idea that consumers prefer brands with images similar to their self-image is regarded as self-image

and product-image congruity (i.e., brand self-congruity) (Hogg & Savolainen, 1999). Consumers may express themselves who they are, what they are and how they want to be viewed by using the self-congruity brands (Graeff, 1997). The fifth dimension of brand image is brand providers and users. Biel (1992) proposes that beside components related to product itself, providers and users also influence brand image.

In addition, brand sensitivity and brand familiarity are two variables closely related to brand image. Brands play an important role if a consumer is sensitive to them while making purchase decision (Kapferer & Laurent, 1992). Brand familiarity is the number of consumers' brand-related, direct or indirect, experiences (Alba & Hutchinson, 1987; Kent & Allen, 1994). Brand familiarity can increase the degree of the influence of brand image because it captures consumers' brand associations within their memory and help form the brand knowledge structure (Alba & Hutchinson, 1987).

CHAPTER III

METHODOLOGY

The methodology chapter was divided into five sections. The first section was the framework and hypotheses of the study that were developed according to the purpose of the study. The research method was in the second section including the selection of participants, and then the selection of the treatments was followed. The third section, instrument development, discussed the web page design and the questionnaire development. In the fourth section, the data collection method and procedure were described. The data analysis part was in the fifth section to explain how the data and hypotheses were analyzed.

Framework and Hypotheses of the Study

Based on previous literature review in Chapter II, a model of CS/D with the purchased apparel product and the brand in an online shopping context was developed as the framework of this study (see Figure 3.1). This model started from the individual difference variables, which were proposed to be significantly related to consumers' perception of brand image at the purchase stage. Consumers' online shopping processes were categorized into three stages, the purchase stage, the product-receiving stage, and the product-consumption stage. The inclusion of purchase and product-consumption stages was based on Chen-Yu, Williams and Kincade's (1999) model of CS/D with the performance of ready-to-wear apparel products, suggesting that the process of determining CS/D includes the purchase and the product-consumption stages. The purchase stage is the time when consumers search, compare, examine and decide the apparel product that they want to purchase and the product-consumption stage is the time when consumers use/wear and care (e.g., wash, dry-clean) the apparel product. However, Chen-Yu et al.'s model only considers consumers' experiences in offline shopping,

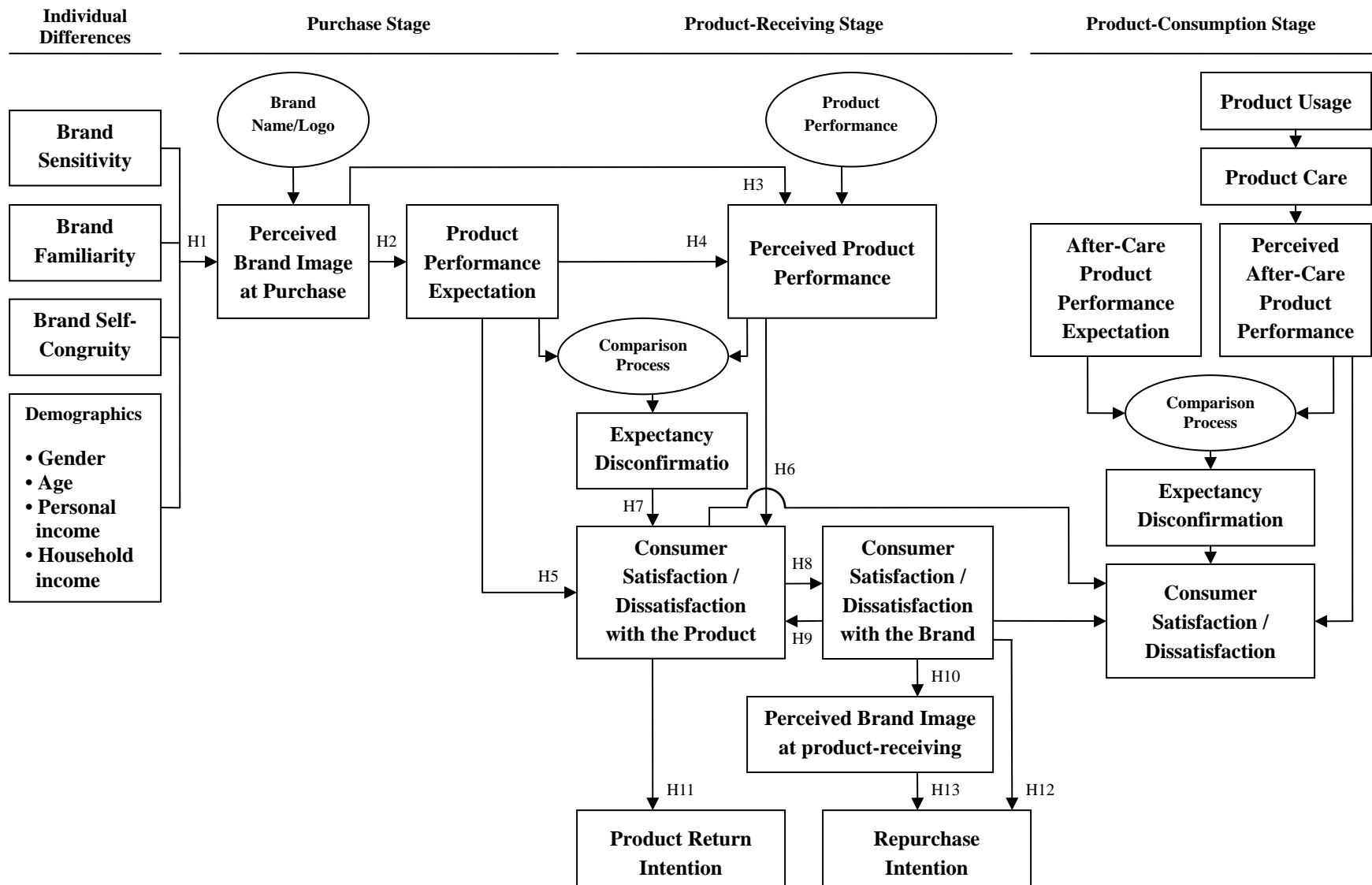


Figure 3.1 A framework of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context

in which, consumers can see, touch, and try on the garment that they choose. In online shopping, consumers cannot physically examine or try on the garment that they like. When they purchase the product, they only can predict the product quality and how it may look like or may fit. They can only examine the garment that they purchased after they receive it. To examine CS/D when consumers receive the product that they ordered, the stage of product-receiving stage was added in the framework of this study. The product-receiving stage is the time when consumers receive and open the package, and try on the product. They ordered the product from a website and have waited for a period of time for the product to be delivered. This is the first time that consumers actually see and touch the product. The proposed relationships and the hypotheses were discussed in the following sections:

Individual Differences

Individual differences among consumers, such as gender, employment status and personal income influence consumers' attitude toward the whole process of apparel online shopping (Xu & Paulins, 2005). d' Astous & Saint-Louis (2005) suggest that consumers' brand sensitivity and familiarity with apparel brands would influence their purchase decision. If consumers are more sensitive to or familiar with a certain apparel brand, they are more likely to purchase the products of the brand. In this framework, four individual difference variables (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics) were proposed to have a significant influence on consumers' perception of brand image at purchase.

The first variable was brand sensitivity, which has been defined as the degree to which a consumer notices or uses brands as important information to make purchase decision (d' Astous, and Saint-Louis, 2005; Nelson & Devanathan, 2006). Lachance, Beaudoin and Robitaille (2003) suggest that if a consumer is brand sensitive, brands will play an important role in his or her psychological process that precedes the purchasing act. These propositions suggest that consumers with different levels of brand sensitivity may place different levels of importance on brand information (e.g., brand name) when they form their perception of brand image. Therefore, the relationship between brand sensitivity and perceived brand image was included in the framework.

The second individual difference variable was brand familiarity, which can be defined as the number of consumers' brand-related, direct or indirect, experiences (Kent & Allen, 1994). Alba and Hutchinson (1987) suggest that brand familiarity can increase the degree of the influence of brand image because it captures consumers' brand associations within their memory and help consumers to form the brand knowledge structure. Based on this proposition, the relationship between brand familiarity and perceived brand image was included in the framework.

The third individual difference variable was brand self-congruity, which is defined as the degree of similarity between consumer's self-image and brand image (Sirgy, 1982). Sirgy et al. (1997) found that brand self-congruity was a significant predictor of brand preference, purchase intention and store loyalty. Malhotra (1988) examined consumers' product purchasing choices and also found that consumers were likely to prefer, intend to purchase, or use brands with image that they deemed consistent with their self-images. According to these study findings, brand self-congruity was expected to be related to brand image, and therefore, the relationship between brand self-congruity and perceived brand image was included in the framework.

The fourth individual difference variable was demographics, including gender, age, personal income, and household income. Sahdev and Gautama (2007) examined the relationship between consumer characteristics including gender, nationality, level of materialism, and brand perception, and found that nationality had a significant relationship with brand perception. Laforet (2007) investigated the relationship between consumers' demographic characteristics and brand trust of banks, and found that gender, age, and income were significantly related to participants' brand trust. These study results suggest that consumers' demographic characteristics may be significant related to brand image, and therefore, the relationships between consumers' demographics and perceived brand image was included in the framework.

To examine the relationships between the four individual difference variables (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics) and perceived brand image, the first hypothesis was stated as below:

Hypothesis 1. There will be a significant relationship between perceived brand image at purchase and the proposed individual difference variables (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics).

Purchase Stage

At the purchase stage of online shopping, consumers browse websites to search apparel product information. They use brand name and logo shown on the website to distinguish various brands (Keller, 2003). Brand names also assist the consumer in recalling brand benefits and play an important role in brand image (Holden & Vanhuele, 1999; Janiszewski & van Osselaer, 2000). Hem and Iversen (2004) define logo as the graphic design, with or without brand name attached to it, to identify a brand image with quality products or services. Based on these propositions, brand name/logo was proposed to have influence on consumers' perception of brand image in this framework.

Miller (1977) suggests that consumers form expectation for product performance at purchase. Consumers may use various cues to form their expectation for the product performance. In this framework, consumers' perceived brand image at purchase was proposed to be an important influence on the formation of consumers' expectation for product performance. Chen and Ching (2007) investigated university students' perception of mobile service to examine the relationship between consumers' perception of brand image and their expectation. The study results showed that there was a significant relationship between the university students' perceived brand image and their expectation. When they perceived the mobile service company have better image, they had greater expectation for the mobile service. O'Neal (1992) also found that consumers' existing perceived brand image influenced their expectation toward product performance of the brand. Randall, Ulrich and Reibstein (1998) propose that in consumers' mind, brand is usually associated with product performance especially for the product attributes that are difficult to observe. Since in online shopping, consumers cannot examine the performance of many product attributes, it is possible that consumers may use brand image to predict apparel product quality and form performance expectation of apparel product quality. Thus, the relationship between perceived brand image at purchase and

consumers' expectation for product performance was included in the framework of study. The second hypothesis was stated as below:

Hypothesis 2. There will be a significant relationship between participants' perceived brand image at purchase and their expectation for product performance. Participants who perceive the brand with better image will have a higher level of expectation for product performance at the purchase stage.

Product-Receiving Stage

At the product-receiving stage in online shopping, after consumers receive the product that they ordered online, they would examine the product performance such as fit, style, color and workmanship to determine the product quality (Eckman, Damhorot & Kadolph, 1990), and thus, product performance was included in the study framework and proposed to have a significant influence on consumers' perceived product performance.

Variables Influencing Perceived Product Performance at Product-Receiving

Various variables may influence consumers' perception of the product performance at the product-receiving stage. Jang, Dickerson and Hawley (2005) conducted person-to-person interviews to examine how the performance of apparel was measured by consumers and found that brand image was one of important criteria for measuring apparel product performance. Swinker and Hines (2006) also found that brand image significantly affected consumers' perceived performance of garments. Baugh and Davis (1989) found that store image influenced consumers' evaluation of private label shirts. Based on these study results, the relationship between perceived brand image at purchase and consumers' perceived product performance at the product-receiving stage was included in this framework. The third hypothesis was stated as below:

Hypothesis 3. There will be a significant relationship between participants' perceived brand image at purchase and their perceived product performance at the product-receiving stage. Participants who perceive the brand with better image at

the purchase stage will perceive the product performance to be better at the product-receiving stage.

Miller (1977) suggests that when consumers evaluate the product performance after they use the product, if the perceived performance is not consistent with their initial expectation formed at purchase, they may adjust their perception of product performance to make their expectation and perceived performance to be more consistent. This proposition suggests that consumers' expectation formed at purchase may influence their evaluation of product performance at the product-consumption stage. This proposition was supported by several study findings. Spreng, MacKenzie and Olshavsky (1996) and Spreng and Mackoy (1996) examined the positive or negative effects of expectation on perceived product performance and found a significantly positive effect of expectation on perceived performance. Participants with a higher level of expectation perceived the product performance significantly better than those with a lower level of expectation. Based on these propositions and study results, it is possible that in online shopping, consumers' expectation formed at purchase may influence their evaluation of product performance at the product-receiving stage, and thus, the relationship between consumer expectation for product performance and perceived performance after they received the product was included in the framework, and the fourth hypothesis was stated as below:

Hypothesis 4. There will be a significant relationship between participants' expectation for product performance at the purchase stage and their perceived performance at the product-receiving stage. Participants who have a higher level of expectation for product performance at the purchase stage will perceive the product performance to be better at the product-receiving stage.

Variables Influencing CS/D with the Product and CS/D with the Brand

After consumers receive the product and evaluate the product performance, their evaluation may directly or indirectly lead to satisfaction, indifference, or dissatisfaction. Various variables may significantly influence CS/D at product-receiving stage. One is product performance expectation at the purchase stage. Chen-Yu, Hong and Lee (2001)

compared U.S. and South Korean college student consumers and found that expectation for apparel product performance to be a significant determinant of CS/D for college student consumers in both countries. Consumers who had a higher level of expectation for product performance at the purchase stage had a higher level of CS/D with the product at the product-consumption stage. Chen-Yu et al. (1999) used apparel product information (i.e., store name, price, country of origin, product performance information) to manipulate consumers' expectation for product performance at the purchase stage and found that the higher the consumer expectation for product performance, the higher the CS/D with the apparel product at the product-consumption stage. These study findings suggest that it is possible that in online shopping, consumers' product performance expectation at the purchase stage may also have a significant influence on CS/D with the product at the product-receiving stage, and thus, this relationship was included in the framework, and Hypothesis 5 was developed as below:

Hypothesis 5. There will be a significant relationship between participants' expectation for product performance at the purchase stage and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who have a higher level of expectation for product performance at the purchase stage will have a higher level of satisfaction with the product.

Another antecedence of CS/D is perceived product performance. Tse and Wilton (1988) found that whenever consumers perceived that a product performed well, regardless of the previous comparison standard (e.g., expectation), consumers would be satisfied. Chen-Yu et al. (1999) found that consumers' perceived performance was a determinant of CS/D with apparel products at purchase. Consumers who perceived the product performance to be better had a higher level of satisfaction with the product at purchase. Spreng et al. (1996) found a strong direct effect of perceived product performance on CS/D at the product-consumption stage. When consumers perceived better product performance, they had a higher level of satisfaction with the product after consumption. Based on these study findings, the relationship between perceived product

performance and CS/D with the product at the product-receiving stage was included in the framework and Hypothesis 6 was developed as below:

Hypothesis 6. There will be a significant relationship between participants' perceived product performance at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who perceive the product with better performance will have a higher level of satisfaction with the product.

Another common predictor of CS/D is expectancy disconfirmation (i.e., the difference between consumers' perceived product performance and their expectation for the product performance formed at purchase). Hong and Rucker (1995) examined CS/D of female consumers in northern California toward either a jacket or pantyhose and found that expectancy disconfirmation significantly affected CS/D with the product. Consumers' clothing satisfaction with the jacket or pantyhose was significantly higher when they perceived product performance after consumption was better than their expectation for the product performance formed at purchase (i.e., positive expectancy disconfirmation). Chen-Yu et al. (1999) examining CS/D with apparel product performance also found that expectancy disconfirmation was a determinant of CS/D with the apparel product at the product-consumption stage. Consumers who perceived the product performance at the product-consumption stage above their performance expectation at purchase had a higher level of satisfaction. Based on these study findings, the relationship between expectancy disconfirmation and CS/D with the product at the product-receiving stage was included in the framework and Hypothesis 7 was developed as below:

Hypothesis 7. There will be a significant relationship between participants' expectancy disconfirmation and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who perceive that the product performance is better than the product performance they expected will have a higher level of satisfaction with the product. Participants who perceive that the product

performance is worse than the product performance they expected will have a lower level of satisfaction with the product.

CS/D with the product and CS/D with the brand may have a significant interrelationship. Day (1982) suggests that CS/D with the retailer and CS/D with the product are separate concepts, but they are interrelated. Ha (2004) proposes that if consumers are not satisfied with the product performance sold on a website, their satisfaction with the brand will be reduced and their probability of purchase the product or service online will be decreased. Beerli, Martin and Quintana (2004) investigated CS/D in the retail banking market and found the importance of consumers' perceived quality of the service in CS/D with the bank. If consumers perceived a higher level of service quality, they had a higher level of satisfaction with the bank. These propositions suggest that significant interrelationships may exist between CS/D with the product and CS/D with the brand. Therefore, Hypothesis 8 and Hypothesis 9 were developed to examine these relationships.

Hypothesis 8. Participants who have a higher level of satisfaction with the product will have a higher level of satisfaction with the brand.

Hypothesis 9. Participants who have a higher level of satisfaction with the brand will have a higher level of satisfaction with the product.

Influence of CS/D with the Brand on Perceived Brand Image at Product-Receiving

After consumers received and examined the product they ordered online, their satisfaction/dissatisfaction with the brand may influence their perception of brand image at product-receiving stage. No studies were found have discussed the relationship between CS/D with the brand and the perception of brand image. However, Pritchard, Havitz and Howard (1999) propose that CS/D influences consumers' brand attitude. Russell-Bennett, McColl-Kennedy and Coote (2007) found that consumers who had a higher level of satisfaction held a positive attitude toward the preferred brand and had a higher brand loyalty. Above proposition and study finding suggest that CS/D with the

brand may influence consumer's perceived brand image. This relationship was included in this framework. Hypothesis 10 was developed as below:

Hypothesis 10. There will be a significant relationship between participants' satisfaction/dissatisfaction with the brand and their perception of brand image at the product-receiving stage. Participants who have a higher level of satisfaction with the brand will perceive the brand with better image at the product-receiving stage.

Influence of CS/D with the Product on Intention of Product Return

CS/D with the product may play a significant role in consumers' future behaviors, such as product return. Blumberg (2008) proposes that a large portion of product return is due to customers who are not satisfied with the product. Nitse, Parker, Krumwiede and Ottaway (2004) investigated consumers' satisfaction with fashion websites and found that if consumers were dissatisfied with the color of the product, they were more likely to return the product. Based on the proposition and the study result and, the relationship between CS/D with the product and product return intention was included in this framework. Hypothesis 11 was developed as below:

Hypothesis 11. There will be a significant relationship between participants' satisfaction/dissatisfaction with the product at the product-receiving stage and their product return intention. Participants who have a higher level of satisfaction with the product will have a lower level of intention to return the product.

Influences of CS/D with the Brand and Perceived Brand Image at Product-Receiving on Repurchase Intention

CS/D with the brand may play a significant role in consumers' intention to repurchase products of the same brand. Oliver (1980a) proposes a cognitive model of the antecedents and consequences of CS/D, in which, repurchase intention is proposed as a consequence of CS/D. Kim, Ferrin and Rao (2003) investigated college students' online shopping behavior and found that there was a significant relationship between CS/D with

the e-tailer and their repurchase intention to buy products on the same website of the e-tailer. The higher the level of consumers' satisfaction with the e-tailer, the more likely they would repurchase products on the same website. Based on these propositions and study results, the relationship between CS/D with the brand and repurchase intention was included in the framework. Hypothesis 12 was developed as below:

Hypothesis 12. There will be a significant relationship between participants' satisfaction/dissatisfaction with the brand at the product-receiving stage and their intention to repurchase the products of the same brand. Participants who have a higher level of satisfaction with the brand will have a higher level of repurchase intention.

Studies showed that consumers' perception of brand image had a significant relationship with their purchase intention and repurchase intention. Grewal, Krishnan, Baker and Borin (1998) found that store image had a direct and positive relationship with consumers' purchase intention. Consumers who perceived the better the store image, the higher the consumers' intention to purchase the products from the same store. Lo (2001) used jeans and grocery products to examine the relationship between consumers' brand image evaluation and their repurchase intention. The author found that consumers who evaluated the brand image to be better had a higher level of intention to repurchase the products of the brand. These study findings suggest that there may be a relationship between consumers' perception of brand image at the product-receiving stage and their intention to repurchase the product of the same brand. Thus, this relationship was included in this framework and Hypothesis 13 was developed as followed:

Hypothesis 13. There will be a significant relationship between participants' perception of brand image at the product-receiving stage and their intention to repurchase the product of the same brand. Participants who perceive the brand with better image at the product-receiving stage will have a higher level of repurchase intention.

Product-Consumption Stage

Based on the model proposed by Chen-Yu, et al. (1999), the product-consumption stage starts from the time that consumers wear the apparel product. After they take care of the garment, for example, washing or dry-cleaning the garment, consumers form a perception of the product performance. According to the study results of Chen-Yu et al., three variables were determinants of CS/D with performance after wash (i.e., consumers' perception of after-wash product performance, the disconfirmation between consumers' after-wash performance expectation and perceived after-wash performance, and CS/D at purchase). Based on these results, four antecedents of CS/D at the product-consumption stage were included in this framework, (i.e., consumers' perception of after-care performance, expectancy disconfirmation between after-care product performance expectation at the product-receiving stage and perceived after-care product performance, CS/D with the product, CS/D with the brand). Because this study only focused on CS/D at the product-receiving stage, no hypothesis was proposed for the examination of the relationship at the product-consumption stage.

Research Method

Both experimental and survey design techniques were used in the study. A 2 X 2 between-subjects factorial experimental design was developed. At the purchase stage, the treatment variable was perceived brand image. Brand name and logo were used to create two levels of perceived brand image at the purchase stage (i.e., higher, lower). At the product-receiving stage, the treatment variable was perceived product performance. Garments with two levels of performance were used to create two levels of perceived product performance (i.e., higher, lower). This design resulted in four experimental groups (See Table 3.1). In Group 1, participants were exposed to a *higher* level of brand image at the purchase stage and a *higher* level of product performance at the product-receiving stage. In Group 2, participants were exposed to a *higher* level of brand image at the purchase stage and a *lower* level of product performance at the product-receiving stage. In Group 3, participants were exposed to a *lower* level of brand image and a *higher* level of product performance at the product-receiving stage. In Group

4, participants were exposed to a *lower* level of brand image and a *lower* level of product performance at the product-receiving stage. Thirty participants were randomly assigned to each experimental group, 120 participants in total.

Selection of Participants

University students were selected as participants in this study for the following reasons. University students are one of the major users of Internet (Pitkow & Kehoe, 1996). They are usually savvy in computer skills and web browsing. They search for product information on websites and spend a lot in online apparel shopping (Comegys & Brennan, 2003). However, their perceptions of quality of apparel products do not significantly differ from non-students (Peterson & Jolibert, 1995). In addition, the data collection of an experimental design study needs to be conducted in a controlled environment. University students are willing to come to the experimental setting and commit to the time requirements. These factors are important for an experimental study.

Table 3.1 Factorial design of treatment variables

		Product Performance at the Product-Receiving Stage	
		<i>High</i>	<i>Low</i>
Brand Image at the Purchase Stage	<i>High</i>	Group 1 • Higher Brand Image • Higher Product Performance	Group 2 • Higher Brand Image • Lower Product Performance
	<i>Low</i>	Group 3 • Lower Brand Image • Higher Product Performance	Group 4 • Lower Brand Image • Lower Product Performance

A convenience sampling method was adopted in this study. An advertisement (See Appendix A) regarding experiment time, place and the contact information of the researcher was placed on the announcement boards in each dorm on campus to recruit

undergraduate students to participate in the study. To control the variance of gender, the number of male and female participants in each experimental cell was 15 males and 15 females. Due to the size range of garment samples was M, L, XL and XXL, the undergraduate students who wore size S were not recruited.

Selection of Treatments

There were two treatment variables: brand image at the purchase, and product performance at the product-receiving stage. The selection of each treatment is discussed in the following sections.

Selection of Brand Name and Logo

Brand image is a set of consumer-constructed associations linked to the brand, which is usually organized in some meaningful ways (Aaker, 1991; Keller, 1993; Nandan, 2005). Brand image can be categorized in five dimensions: brand name/logo, brand benefits, brand attitudes, brand personality, and brand providers and users. According to Biel (1992), consumers connect the brand name/logo directly to brand image. Zinkhan and Martin (1987) indicate that consumers often form instant, non-neutral attitudes towards the brand based on brand name or logo alone. Van Gelder (2003) also states that brand image can be transferred into a logo or a name that presents identity. In Yang's study (2003) about the impact of brand image on perceived value in the woman's underwear market, she successfully used brand names and logos to create different brand image; therefore, brand name and logo were also used to create high and low levels of brand image in this study.

To select two brand names/logos to create different levels of brand image, the researchers first conducted an online survey to identify the brands of sweatshirts provided on the e-tailers. Using the filter criteria of selling both men's and women's sweatshirts and offering at least 10 styles of sweatshirts, 15 brands were identified. These brands could be categorized into four price ranges from the highest to the lowest. The highest price range was \$60 to \$74.99, including Abercrombie & Fitch, Armani Exchange and J. Crew. The second price range was \$45 to \$59.99, including, Adidas, Nike, and Reebok. The third price range was \$30 to \$44.99, including American Eagle, Gap, Hollister Co.

and Champion. The lowest price range was \$15 to \$29.99, including Aéropostale, Forever 21, Hanes, Land's End and Old Navy.

After identifying 15 brands of sweatshirts, 60 undergraduate students were asked to participate in a survey to evaluate the image of the 15 brands identified by the online survey (see Appendix B). The measure scale ranged from 0 to 6. If the participants did not know the brand, they chose “0”. Six is the maximum possible point, indicating that the highest brand image. The campus interception method was used to recruit participants for this survey. Undergraduate students in the library, dining halls, bus stops and math emporium were recruited to participate in the survey. The results showed four brands (i.e., Armani Exchange, Champion, Forever 21, Land's End) being rated more than 10 times of “0” (i.e., did not know the brand), and thus being eliminated. The average scores of the rest of 11 brands showed that the brand with highest brand image was Abercrombie & Fitch, and the brand with lowest brand image was Aéropostale. The mean scores were 4.73 and 2.33, respectively. The paired *t*-test result showed that there was a significant difference between these two brands in brand image ($t = 2.00, p < .001$). Based on these results, the brand name/logo of Abercrombie & Fitch and Aéropostale were used to create two levels of brand image.

Selection of Garment Samples

Sweatshirts were chosen to be the garment samples of this study because sweatshirts can be found in many online shopping websites and almost all consumers have experiences in wearing and buying sweatshirts. There is no age or gender limitation in wearing sweatshirts. Based on the results of an online survey conducted by the researchers, the most common fiber content of sweatshirts sold online was 80% cotton and 20% polyester. To avoid the results to be influenced by participants' preference in fiber content, 80% cotton and 20% polyester was used to describe the fiber content of the sweatshirts. To avoid the results to be influenced by participants' preference in color and design patterns, a sweatshirt with a basic style (i.e., rib crew neck, rib cuffs, long sleeves, solid color, no logos, no pockets, no design features) was selected as the garment sample for this study.

To create different levels of product performance, sweatshirts with different quality were selected. Two, navy color, men's sweatshirts and two, gray color, women's sweatshirts were chosen. For men's sweatshirts, the sweatshirts with a higher level of quality were purchased from the Belk Department Store and the brand name was "Saddlebred." The sweatshirts with a lower level of quality were purchased from Clothingwarehouse.com and the brand name was "Jerzees". The fabric thickness of the two sweatshirts was compared. The thickness of the men's sweatshirts with better quality was 1.60 mm in average and the sweatshirts with a lower level of quality was 1.16 mm in average. The *t*-value showed that the fabric thickness of the two men's sweatshirts was significant different ($t = 2.44, p < .001$). To ensure the perception of the quality of the two men's sweatshirts were significantly different, a pilot-test, using a survey in Appendix C, was conducted. One group of 33 undergraduate students was asked to evaluate the sweatshirts representing the one with a higher level of quality and another group of 36 students was asked to evaluate the sweatshirts representing the one with a lower level of quality. The mean scores were 4.36 and 3.50, respectively. The *t*-test results showed that there was a significant difference between these two sweatshirt samples in product performance ($t = 1.67, p < .001$). Therefore, the two navy men's sweatshirts were adopted as the garment samples in this study.

For women's sweatshirts, the sweatshirts with a higher level of quality were from the Belk Department Store and the brand name was "Kim Rogers". The sweatshirts with a lower level of quality were purchased from Clothingwarehouse.com and the brand name was "Jerzees". The fabric thickness of the two sweatshirts was compared. The thickness of the women's sweatshirts with better quality was 1.54 mm in average and the sweatshirts with a lower level of quality was 1.32 mm in average. The *t*-value showed that the fabric thickness of the two women's sweatshirts was significant different ($t = 2.31, p < .001$). To ensure the quality of the two women sweatshirts were evaluated significantly different, a pilot-test, using a survey in Appendix C, was conducted. One group of 16 undergraduate students was asked to evaluate the sweatshirts representing the one with a higher level of quality and another group of 37 students was asked to evaluate the sweatshirts representing the one with a lower level of quality. The mean scores of product evaluation were 5.00 and 2.70, respectively. The *t*-test results showed that there

was a significant difference between these two sweatshirt samples in product performance ($t = 2.04, p < .001$).

In this study, 30 male and 30 female participants were recruited to try on the sweatshirts with a high level of quality, and another 30 male and 30 female participants were recruited to try on the sweatshirts with a low level of quality. Each garment was estimated to be tried on by five participants; therefore, 6 men's and 6 women's sweatshirts with a higher quality, and 6 men's and 6 women's sweatshirts with a lower quality were purchased. For both men's and women's, the size range was M, L, XL, and XXL. The S size was not included because S size sweatshirt was not available in the Belk store. According to the sales associate, customers seldom purchase S size sweatshirts, and therefore, the Belk store does not carry S size for sweatshirts. Based on the available sizes in the stores, the size ratio purchased for both men's and women's sweatshirts was 1, 2, 2, 1 for sizes M, L, XL, and XXL, respectively. The measurements of chest, shoulder, and body length of each size were listed in Appendix D.

Instrument Development

Online shopping web pages and two sets of questionnaires were developed as the instruments of the research. The development of the web pages and the questionnaire were described in the following sections.

Internet Shopping Web Pages

Internet web pages were used as a medium to create an online shopping environment for participants to role-play an online purchase with a sweatshirt. For men's sweatshirt, Appendix E.1 showed the web pages for the brand having a higher level of brand image. Appendix E.2 showed the main page and size chart for the brand having a lower level of brand image. To prevent the study results being influenced by the website design, the design of web page shown to different experimental groups were the same. The only differences were the brand name, brand logo and the size chart. The picture of sweatshirts in both web pages (i.e., the web page for the higher brand image, the web page for the lower brand image) was the same. The picture of the sweatshirt represents

the higher-quality one was used in both web pages to prevent the influence of participants' perception of pictures rather than brand image on the study results. For women's sweatshirt, Appendix E.3 and E.4 showed the main page and size chart for the brand having a higher level of brand image and a lower level of brand image respectively.

The web page design included six elements. They were: the view of the product, product information, privacy policy, ordering and delivery process, shipping and return policy, and customer service information. The view of the product included normal size and larger-sized photos that gave participants a detailed view of the product. According to Eckman, Damhorot and Kadolph (1990), product information should include style description, color description, fiber content, size chart/availability, and therefore, these four features were included in the web pages. Studies results showed that price and country of origin were significant factors that consumers used to assess apparel product quality (Hatch & Roberts, 1985; Heisey, 1990). To avoid the influence of price and country of origin on the perception of brand image and product performance, the information of price and country of origin was omitted. Researchers suggest that the lack of security on the websites will make online shoppers have serious concerns about their credit card transactions and privacy of personal information (French & O' Cass, 2001; Jun et al., 2004; Madu & Madu, 2002). Therefore, the privacy policy regarding consumer personal information protection was included in the web pages. For ordering and delivery process, purchasing and payment options were provided, and order status checking was included for consumers to estimate waiting time of receiving products (Hui & Zhou, 1996). Shipping and return policy such as shipping and handling charges and return/exchange policy were adopted from a website selling apparel products. The contact fax/phone number and company e-mail address were also included in the web page design.

Questionnaire Development

Two sets of questionnaires were developed with identical questions but with different brand names. One questionnaire contained a brand name with a higher level of brand image (see Appendix F.1 and F.2) was used in the Higher Brand Image Groups (i.e., Groups 1, 2). The other questionnaire contained a brand name with a lower level of brand

image (see Appendix F.3 and F.4) was used in the Lower Brand Image Groups (i.e., Groups 3, 4). The first part of the questionnaire was for participants to answer after seeing a web page (see Appendix F.1 and Appendix F.3). The second part was for them to respond after role-playing that they have purchased the sweatshirt shown on the web page, received the product after the delivery time they expected, and tried on the sweatshirt that they received (see Appendix F.2 and Appendix F.4). The questions in each part were discussed in the following sections.

Questionnaire – Part I

Two variables were measured in Questionnaire – Part I. They were perceived brand image and performance expectation at the purchase stage.

Perceived brand image at purchase. Participant’s total impression toward the brand shown on the web page was measured in Questionnaire – Part I, Question 1. This item was adapted from Chung (2002). A six-point scale ranging from “Terrible” (1) to “Excellent” (6) was used.

Performance expectation. The predictive performance expectation (i.e., what the consumer believes the performance will be) was measured in Questionnaire – Part I, Question 2. The participant was asked to indicate their expectation about the sweatshirt based on the picture and information shown on the web pages. This item was adapted from Chen-Yu’s study (1995) and a six-point scale ranging from “Terrible” (1) to “Excellent” (6) was used.

Questionnaire – Part II

Seventeen variables were measured in Questionnaire – Part II. The measure of each variable was discussed in the following sections.

Perceived performance. Six items were included in Questionnaire – Part II, Section I, Question 1 to 6 to measure the participant’s perception of the performance of the sweatshirt at the product-receiving stage. After trying on the sweatshirt, the participant was asked to evaluate the overall performance of the sweatshirt in Question 1. In Question 2 to 6, the participant was asked to evaluate the style, color, fabric, fit and workmanship of the sweatshirt, respectively. A six-point scale, ranging from “Terrible” (1)

to “Excellent” (6), was used and these questions were adapted from the study of Chen-Yu (1995).

Expectancy disconfirmation. Expectancy disconfirmation was measured in Questionnaire – Part II, Section II, Question 1 to 6. In Question 1, the participant was asked to compare his/her initial expectation held at purchase and the perception of the performance of the sweatshirt and indicate if the performance was worse than he/she expected, just as expected, or better than expected. In Question 2 to 6, the participant was asked to compare his/her initial expectation held at purchase and the perception of the performance of the style, color, fabric, fit, and workmanship of the sweatshirt and indicate if the performance was worse than he/she expected, just as expected, or better than expected. These items were derived from Chen-Yu (1995) and a scale ranging from “Much Worse Than I Expected” (-3), to “Just as I Expected” (0), to “Much Better Than I Expected” (+3) was used.

Perceived brand image at product-receiving. Perceived brand image at the product-receiving stage was measured in Questionnaire – Part II, Section III, Question 1. Participant’s total impression toward the brand was measured again using the same question that measured the perceived brand image at purchase. A six-point scale ranging from “Terrible” (1) to “Excellent” (6) was used.

Satisfaction/dissatisfaction with the brand and with the product. Two types of satisfaction/dissatisfaction were measured in this study. The CS/D with the brand was measured in Questionnaire – Part II, Section III, Questions 2 and 3, and CS/D with the product was measured in Questionnaire – Part II, Section III, Questions 4 to 6. Two different measure formats (i.e., verbal, graphic), adapted from Chen-Yu’s study (1995), were used. In Question 2, the participant was asked to evaluate the degree of his/her satisfaction/dissatisfaction with the brand by choosing from a seven-point scale with “Very Low” (-3), to “Neutral” (0), to “Very High” (+3). In Question 3, a graphic format of a continuum of percentage of satisfaction was shown to the participant. The participant was asked to write down the percent of satisfaction that he/she had with the brand. In Question 4, the participant was asked to evaluate the degree of his/her satisfaction/dissatisfaction with the performance of the sweatshirt by choosing from a seven-point scale with “Very Low” (-3), to “Neutral” (0), to “Very High” (+3). Question

5 was similar to Question 3; a graphic format of a continuum of percentage of satisfaction was used to measure the percent of satisfaction that the participant had with the sweatshirt. In Question 6, an open-end question was used to ask the participant to explain why he or she was satisfied or dissatisfied with the sweatshirt.

Product return intention. Product return intention was measured in Questionnaire – Part II, Section III, Question 7. The participant was asked to indicate how likely he/she would be to return the sweatshirt based on the price which corresponds to the actual market price of the brand. The statement was adapted from the study of Jiang and Rosenbloom (2005). A scale ranging from “Very Unlikely” (1) to “Very Likely” (6) was used.

Repurchase intention. Repurchase intention was measured in Questionnaire – Part II, Section III, Question 8. The participant was asked to indicate how likely he/she would be to buy apparel products of the brand. This item was adapted from the study of Belleau et. al (2007). A scale ranging from “Very Unlikely” (1) to “Very Likely” (6) was used to measure the repurchase intention.

Brand sensitivity. Brand sensitivity was measured in Questionnaire – Part II, Section IV, Questions 1 to 7. Questions 1 and 2 were to measure the participant’s attention to apparel brands and if consumers use brands as a cue of the quality of apparel products. These two questions were adapted from the study of d’ Astous and Saint-Louis (2005). Question 3 was to measure the degree of importance of buying a brand name apparel product for consumers. This question was created by the researchers of this study. Questions 4 to 7 were to measure the participant’s sensitivity to brand while buying sweatshirts, which were adapted from Lachance, Beaudoin and Robitaille (2003). The participant was asked to choose the number from 1 to 6, ranging from “Strongly Disagree” (1) to “Strongly Agree” (6).

Brand familiarity. Brand familiarity was measured in Questionnaire – Part II, Section V, Questions 1 to 3. For Question 1, Park and Stoel’s (2005) statement was adapted. The participant was asked to indicate how familiar he or she was with the brand shown in the questionnaire. The question was measured on a six-point scale, ranging from “Very Unfamiliar” (1) to Very Familiar” (6). In Question 2, the participant was asked to indicate how knowledgeable he or she was with the brand shown in the

questionnaire. The question was measured on a six-point scale ranging from “Not Knowledgeable” (1) to “Very Knowledgeable” (6). In Question 3, the participants was asked if he or she had any previous experience with the brand. The question was measured on a seven-point scale, ranging from “No Experience” (0) to “A Lot of Experiences” (6). These two statements in Question 2 and 3 were adapted from the study of Kent and Allen (1994).

Brand self-congruity. Brand self-congruity contained two types of brand self-congruity, actual brand self-congruity and ideal brand self-congruity. Actual brand self-congruity was measured in Questionnaire – Part II, Section VI, Questions 1 to 3. Three items (i.e., how the brand reflects myself, comparing myself with others, the brand image fits how I see myself) were adapted from the studies of Han (2006) and Helgeson and Supphellen (2004). Ideal brand self-congruity was measured in Questionnaire – Part II, Section VI, Questions 4 to 6, which were also adapted from Han (2006) and Helgeson and Supphellen (2004). In these three statements, the term “would like to be” was used to measure the participant’s expected ideal self-image by wearing the brand. For example, one statement was “Wearing (the brand name) products reflect who I would like to be”. The scale for actual brand self-congruity and ideal brand self-congruity was the same, which was a six-point scale, ranging from “Strongly Disagree” (1) to “Strongly Agree” (6).

Wardrobe expenditures and experiences in apparel online shopping. In Questionnaire – Part II, Section VII, Questions 1 to 4, the participant’s wardrobe expenditure and experiences in apparel products online shopping were asked. In Question 1, the participant’s total wardrobe expenditure in last year was asked. The frequency of apparel online shopping was asked in Question 2. How much money and how many apparel items the participant has purchased online in last six months were asked in Questions 3 and 4.

To measure the participant’s confirmation/disconfirmation of perception on the picture and actual product, the participant was asked to indicate how similar the sweatshirt he or she received to the picture shown on the web page. If differences exist, he or she had to briefly explain the differences. Two items were developed by researchers in Questionnaire – Part II, Section VII, Questions 5 and 6.

Demographics. In Questionnaire – Part II, Section VIII, Questions 1 to 6, demographic characteristics of the participant was asked, including gender, age, major, class standing, personal income, and annual household income. These questions were adapted from Chen-Yu’s study (1995).

Data Collection

Virginia Tech undergraduate students were recruited as participants in this study. There were 25 dorms on campus for Virginia Tech undergraduate students, and nine of them were assigned for different specific groups, such as students with leaderships or transferred students. Among the 16 non-assigned dorms, eight of them were co-ed dorms (i.e., both male and female students live there). Co-ed dorms were selected for the data collection because co-ed dorms were easier for both male and female students to come to participate in the experimental study compared with only male-allowed or only female-allowed dorms. Based on the availability of space, two co-ed dorms were selected, and one room in each dorm was reserved as experimental space for collecting data.

Before the data collection, a protocol submission package was sent to the Institutional Review Board for Research Involving Human Subjects (IRB) to gain approval for data collection. The advertisement shown in Appendix A was posted on the announcement boards in each dorm to recruit participants. The information of time and place of the experimental study was included in the advertisement. The contact information (i.e., name, e-mail) of the researcher was also be provided. In order to increase the participation rate, a drawing of 25 dollars for every 10 participants were be the compensation and also be announced in the advertisement. Participants who wanted to join the drawing were asked to leave their contact information on a drawing participation sheet, and a number from 1 to 10 was assigned on the sheet. Once the researcher received 10 drawing participation sheets, a drawing was conducted. The drawing method was using 10 table tennis balls with marked number 1 to 10 respectively to represent these 10 participants. These balls were collected in a big black box. To avoid disruption, the drawing was conducted outside the experiment room. If the winner was living in the dorm where the data collection was conducted, a friend of the researcher

delivered the \$25 winning prize to the room immediately. For the winners who could not be contacted immediately, they were contacted using the contact information that he or she left on the contact information sheet.

The data collection procedure was as following:

1. A consent form stating purpose of study, procedure of the study and the approximate time was prepared for the participant to sign (See Appendix G).
2. After the participant returned the signed consent form, he or she was randomly assigned to an experimental group (Group 1 to 4) based on a prepared random number sheet (Appendix I). The Microsoft Excel software was used to obtain the random number sheet.
3. After the participant was assigned to a group, a computer was provided for him or her. Instruction 1 (Appendix H.1 and H.2) was shown on the computer screen to describe the scenario and guide the participant to role-play the online shopping process step by step. Participants in all experimental groups received the same instruction. At the end of the instruction, the participant was asked to click on the link of “Enter the website” and started to examine the picture of the sweatshirt and read the information provided on the website (Appendix E). Groups 1 and 2 received the web pages that contained a brand with a higher level of brand image, and Groups 3 and 4 received the web pages and Instruction 1 that contained a brand with a lower level of brand image.
4. After the participant browsed the website, a copy of Questionnaire – Part I (Appendix F.1 and F.3) was given to the participant to answer. The version of questionnaires given was based on the experimental group, in which he/she was assigned. Groups 1 and 2 received the questionnaire containing a brand with a higher level of brand image, and Groups 3 and 4 received the questionnaire containing a brand with a lower level of brand image. The questionnaire was prepared in a hard copy.
5. After the participant completed Questionnaire – Part I, the participant was instructed by the researchers to click on the link of “Exit the website”, which linked to Instruction 2 (Appendix H.3 and H.4). Groups 1 and 2 received the instruction that contained a brand with a higher level of brand image, and Groups 3 and 4 received the instruction that contained a brand with a lower level of brand image. In Instruction 2, the participant was asked to let the researcher know which size that he

- or she would purchase. A sweatshirt with the selected size was given to the participant to try on. Groups 1 and 3 received the sweatshirt with a higher level of product performance, and Groups 2 and 4 received the sweatshirt with a lower level of product performance.
6. After trying on the sweatshirt, the participant was asked to remain wearing the sweatshirt and completed Questionnaire – Part II (Appendix F.2 and F.4). Groups 1 and 2 received the questionnaire that contained a brand with a higher level of brand image, and Groups 3 and 4 received the questionnaire that contained a brand with a lower level of brand image.
 7. After completing Part II of the questionnaire, the participant returned the questionnaire and the sweatshirt. If the participant would like to participate in the drawing, he or she was asked to leave the information (i.e., name, major, address, e-mail address, phone number). A drawing was conducted after every 10 participants who wanted to join in the drawing and had completed the data collection procedure.

Data Analysis

Both Statistical Package for the Social Sciences (SPSS) 15.0 and Analysis of Moment Structures (AMOS) 7.0 were used for the data analysis. Descriptive analysis (i.e. frequency, percentage) and chi-square tests were used to examine participants' demographic profiles, wardrobe expenditures and apparel online shopping experiences. The *t*-test was used to check if the two treatment variables (i.e., brand image and product performance) were successfully manipulated by brand name/logo and garments with different product quality. Confirmatory factor analysis was used to examine the construct of brand sensitivity, brand familiarity, brand self-congruity, perceived product performance and expectancy disconfirmation and Cronbach's alpha was calculated to examine the reliability of the construct.

For hypothesis testing, multiple regression analysis was used to examine Hypothesis 1 that which individual difference variables were significantly related to perceived brand image at purchase. Structural equations modeling (SEM) was conducted to test Hypothesis 2 to 13 in this study. SEM examines relationships of variables

simultaneously in the proposed research model. This analyzing skill provides a method to deal with multiple relationships and also provided high statistical efficiency (Hair, Tatham, Anderson & Black, 1998). The drop in chi-square value greater than 4.00 was used to remove any restriction and include new path between variables in the model. The reason of setting 4.00 as the criterion was because the critical value in the 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*, 2005).

To examine the model fit, both absolute indexes and comparative indexes of fit were used. Goodness of fit index (GFI) and adjusted goodness of fit index (AGFI) are classified as absolute indexes of fit because they compare the hypothesized model with no model (Hu & Bentler, 1995). These two indexes were used in this study because they are popular measures although Fan, Thompson, and Wang (1999) caution that GFI and AGFI values can be overly influenced by sample size. An index value of equal or greater than .90 was used as an indicator of acceptable fit (Byrne, 2001; *Structural Equation Modeling*, 2005). Comparative indexes of fit are based on a comparison of the hypothesized model against some standard (e.g., the independence model), which represents a baseline model. Among the comparative indexes of fit, the comparative fit index (CFI) and incremental fit index (IFI) were selected to be used because these indexes take sample size and degrees of freedom into account, which are considered to be better indexes. An index value closer to .95 was used as an indicator of good fit based on the suggestion of Hu and Bentler (1999). In addition to the four comparative indexes of fit, the root mean square error of approximation (RMSEA) was also used to examine the model fit because RMSEA has been recognized as one of the most informative criteria in covariance structure modeling (Byrne, 2001). It takes into account the error of approximation in the population. The index value less than .08 was used as an indicator of acceptable fit based on the suggestion of Browne and Cudeck (1993). To test the hypotheses, the standardized regression weight (i.e., a number between 0 and 1) will be reported and the *p*-value of the hypothesized relationship will be calculated to determine if the standardized regression weight is significantly different from 0. A level of significance of .05 will be used as the standard for rejecting or supporting the hypothesis.

CHAPTER IV

RESULTS

In this chapter, the results of the study were reported in the following sections based on the framework of consumer satisfaction/dissatisfaction (CS/D) with the purchased apparel product and the brand in an online shopping context proposed in Chapter III. First, participants' profiles were stated. The measurement reliability and manipulation check were in the second section. The results of hypothesis testing were reported in the third section.

Participants' Profiles

Participants' profiles were described in the following three sections. In the first section, participants' demographic characteristics were stated, including gender, age, major, class standing, personal income and annual household income. Participants' wardrobe expenditures and apparel online shopping experiences were described in the second section. In the third section, gender differences were compared and presented.

Demographic Characteristics

A total of 120 undergraduate students participated in this study, including 60 male and 60 female students. Demographic characteristics (i.e., gender, age, major, class standing, personal income, annual household income) of participants were listed in Table 4.1. Participants' ages ranged from 18 to 25 and most of them were 18 to 19 years old, 32.5% and 46.7%, respectively. The majority of the participants majored in Engineering (38.3%), followed by Business (19.2%) and Liberal Arts & Human Sciences (15.8%). Most of them were freshman and sophomore (44.2% and 39.2%). As for their personal income, most of the participants were not employed (50.0%) or their personal income

Table 4.1 Demographic characteristics of the participants

Variable	Description	Frequency	Percentage
Gender	Male	60	50.0%
	Female	60	50.0%
Age	18	39	32.5%
	19	56	46.7%
	20	13	10.8%
	21	5	4.2%
	22	5	4.2%
	25	2	1.7%
College	Agriculture & Life Sciences	9	7.5%
	Architecture & Urban Studies	3	2.5%
	Business	23	19.2%
	Engineering	46	38.3%
	Liberal Arts & Human Sciences	19	15.8%
	Natural Resources	1	0.8%
	Science	12	10.0%
	University Studies	7	5.8%
Class Standing	Freshman	53	44.2%
	Sophomore	47	39.2%
	Junior	14	11.7%
	Senior	6	5.0%
Personal Income	Not employed	60	50.0%
	Under \$ 10,000	53	44.2%
	\$ 10,000 – \$ 14,999	5	4.2%
	\$ 15,000 – \$ 19,999	0	0.0%
	\$ 20,000 – \$ 24,999	1	0.8%
	\$ 25,000 – \$ 34,999	1	0.8%
	\$ 35,000 – \$ 49,999	0	0.0%
	\$ 50,000 and more	0	0.0%
Annual Household Income	Under \$ 10,000	8	6.7%
	\$ 10,000 – \$ 14,999	2	1.7%
	\$ 15,000 – \$ 19,999	6	5.0%
	\$ 20,000 – \$ 24,999	6	5.0%
	\$ 25,000 – \$ 34,999	6	5.0%
	\$ 35,000 – \$ 49,999	13	10.8%
	\$ 50,000 – \$ 69,999	20	16.7%
	\$ 70,000 – \$ 89,999	55	45.8%
	\$ 90,000 and more	8	3.3%
	Missing data (Unwilling to answer)	4	6.7%

was under \$10,000 before tax for 2006 (44.2%). Most participants' annual household income was \$70,000 – \$89,999 (45.8%).

Wardrobe Expenditures and Apparel Online Shopping Experiences

Participants' wardrobe expenditures and apparel online shopping experiences were also investigated (See Table 4.2). More than half of the participants (58.3%) had an experience in purchasing apparel products online. Among these apparel online shoppers, most purchased apparel products every half year (60.0%), spent under \$100 or less (66.7%), and purchased one to three items in last six months (67.3%). Online shoppers and non-online shoppers were compared in money spent on the wardrobe last year. In chi-square test, the number in each cell should be at least five; therefore, the participants spending \$1,000 - \$1,499 and \$1,500 and more were combined. The results of chi-square test showed that there was a tendency for online shoppers to spend more than non-online shoppers on their wardrobe last year. However, the difference was not significant at the .05 level [$X^2(3) = 7.58, p = .06$].

Gender Differences

Gender differences of participants' wardrobe expenditures and apparel online shopping experiences were examined by chi-square tests. The results showed that there was a significant difference between male and female participants in money spent on the wardrobe last year [$X^2(4) = 33.71, p < .001$] (See Table 4.3). Almost three quarters of female participants (70.0%) spent \$200 to \$1,000 on their wardrobes last year, and more than one quarter of female participants (28.3%) spent above \$ 1,000 while most male participants spent either under \$200 (38.3%) or \$200 to \$ 499 (43.3%) on their wardrobes last year. Only 18.4% spent above \$500 on their wardrobes last year. The number of online shoppers and non-online shoppers between genders was compared and the results of chi-square test showed a significant difference [$X^2(1) = 4.94, p < .05$]. Significantly more female (58.6%) participants than male participants (41.4%) were apparel online shoppers.

The frequency of purchasing apparel products online was compared between genders and the results showed that female participants had a higher tendency to purchase

Table 4.2 Wardrobe expenditures and apparel online shopping experiences of the participants

Variable	Percentage of Total Participants	Percentage of Online Shoppers	Percentage of Non-Online Shoppers
Money spent on the wardrobe last year			
Under \$ 200	20.0%	14.3%	28.0%
\$ 200 – \$ 499	40.8%	44.3%	36.0%
\$ 500 – \$ 999	20.8%	17.1%	26.0%
\$ 1,000 – \$ 1,499	10.0%	11.4%	8.0%
\$ 1,500 and more	8.3%	12.9%	2.0%
Frequency of purchasing apparel products online			
None	41.7%	NA	58.3%
Every half year	35.0%	60.0%	NA
Every three months	11.7%	20.0%	NA
Once a month	7.5%	12.9%	NA
Twice a month and more	4.2%	7.1%	NA
Amount spent on apparel products online last six months			
None	50.0%	NA	50.0%
Under \$ 50	19.2%	38.4%	NA
\$ 51 – \$ 100	14.2%	28.3%	NA
\$ 101 – \$ 150	5.0%	10.0%	NA
\$ 151 – \$ 200	5.0%	10.0%	NA
\$ 201 and more	6.7%	13.3%	NA
Quantity of apparel products purchased online last six months			
None	51.7%	NA	48.3%
1 – 3 items	32.5%	67.3%	NA
4 – 6 items	10.8%	22.4%	NA
7 items and more	5.0%	10.3%	NA

Table 4.3 Gender differences in wardrobe expenditures and apparel online shopping experiences

Variable	Description	Male	Female	X ²
Money spent on the wardrobe last year	Under \$ 200	38.3%	1.7%	33.71**
	\$ 200 – \$ 499	43.3%	38.3%	
	\$ 500 – \$ 999	10.0%	31.7%	
	\$ 1,000 – \$ 1,499	5.0%	15.0%	
	\$ 1,500 and more	3.4%	13.3%	
Frequency of purchasing apparel products online	None	51.6%	31.6%	6.31
	Every half year	30.0%	40.0%	
	Every three months	11.7%	11.7%	
	Once a month	3.3%	11.7%	
	Twice a month and more	3.4%	5.0%	
Amount spent on apparel products online last six months	None	63.3%	36.7%	9.66*
	Under \$ 50	13.3%	25.0%	
	\$ 51 – \$ 100	13.3%	15.0%	
	\$ 101 – \$ 150	3.4%	6.6%	
	\$ 151 – \$ 200	5.0%	5.0%	
	\$ 201 and more	1.7%	11.7%	
Quantity of apparel products purchased online last six months	None	68.3%	35.0%	14.90**
	1 – 3 items	25.0%	40.0%	
	4 – 6 items	5.0%	16.7%	
	7 items and more	1.7%	8.3%	

* $p < .05$, ** $p < .001$

apparel products online more frequently. However, the difference between genders was not significant at the .05 level [$X^2 (3) = 6.31, p = .10$]. When the online shoppers between genders were compared, the results showed that there was no significant difference between male and female online shoppers in frequency of purchasing apparel products online. The most frequency of purchasing apparel products online was every half year for both male online shoppers (62.1%) and female online shoppers (58.5%).

Male and female participants were significantly different in amount of money spent on apparel products online last six months [$X^2 (3) = 9.66, p < .05$]. There were 63.3% of male participants who did not spend any money on apparel products online last six months; however, only 36.7% of female participants did not spend any money on

apparel products online last six months. Exactly 40.0% of female participants spent \$1 to \$100 and 23.3% spent above \$100 on apparel products online last six months while only 26.6% of male participants spent \$1 to \$100 and 10.1% of male participants spent above \$100. Among the participants who purchased apparel products online, female online shoppers spend sufficiently more than male online shoppers [$X^2(1) = 6.73, p < .01$]. More than one-third of female participants (34.1%) spent above \$100 on apparel products online last six months while only 17.2% male participants spend above \$100.

A significant difference between genders in the quantity of apparel items purchased last six months was found [$X^2(2) = 14.90, p < .001$]. More than two-third of male participants (68.3%) had not purchased any apparel products online, but only one-third of female participants (35.0%) had not purchased any apparel item online in the last six months. A significance was also found between male and female online shoppers [$X^2(2) = 10.06, p < .01$]. Among online shoppers, more than one-third of male participants (34.5%) had not purchased any apparel item online in the last six months while only 7.3% of female participants had not purchased any apparel item online in the last six months.

The gender differences in all 12 variables in the framework were examined with *t*-tests. These variables included brand sensitivity, brand familiarity, brand self-congruity, perceived brand image at purchase, product performance expectation, perceived product performance, expectancy disconfirmation, CS/D with the product, CS/D with the brand, perceived brand image at product-receiving, product return intention and repurchase intention. The results showed that gender difference existed only in participants' brand familiarity [$t(118) = -3.10, p < .01$; Male – $M = 3.32$, Female – $M = 4.04$] (See Table 4.4). Female participants were significantly more familiar with the brands shown in this study than male participants. Beside brand familiarity, no significant differences between genders were found in other variables.

Measure Reliability and Manipulation Check

In the study, five variables were measured with multi-items (i.e., brand sensitivity, brand familiarity, brand self-congruity, perceived product performance, expectancy

Table 4.4 Gender differences in variables measured in the framework

Variable	<i>M</i>		<i>t</i> -value
	Male	Female	
Brand Sensitivity	3.38	3.11	1.27
Brand Familiarity	3.32	4.04	-3.10*
Brand Self-Congruity	1.91	2.06	-.89
Perceived Brand Image at Purchase	3.62	3.63	-.07
Product Performance Expectation	3.82	3.53	1.51
Perceived Product Performance	4.04	3.81	1.52
Expectancy Disconfirmation	.28	.41	-.94
CS/D with the Product	33.35	32.61	.37
CS/D with the Brand	33.69	32.21	.73
Perceived Brand Image at Product-receiving	3.78	3.85	-.32
Product Return Intention	4.02	4.07	-.16
Repurchase Intention	3.07	3.37	-1.25

* $p < .01$

disconfirmation). Confirmatory factor analysis was used to examine if the items in each variable measured the same construct and Cronbach's alpha was calculated to examine the reliability of measure items in each construct. These results were reported in the first following section. The second section reports the results of manipulation check. In the study, perceived brand image was manipulated by two brand names/logos, and perceived product performance was manipulated by two levels of product performance. To examine if the treatments had successfully created significant different levels of perceived brand image and perceived product performance, the manipulation check was conducted.

Measure Reliability

Five variables were measured with multi-items (i.e., brand sensitivity, brand familiarity, brand self-congruity, perceived product performance, expectancy disconfirmation). Confirmatory factor analysis showed that except expectancy disconfirmation, all other four variables were extracted in only one factor, indicating the ratings measured by the items of each of the four variables were close to each other, revealing high reliability among the items. Therefore, the average score of the items measuring each variable of these four variables was calculated and used in the examination of hypothesis testing.

For expectancy disconfirmation, two factors were extracted. One was made up of two items which were related to the expectancy disconfirmation with the style and the color of the sweatshirt. Because participants could see the style and color of the sweatshirt in the picture posted on the web page, this factor was named as “visible attribute expectancy disconfirmation” (See Table 4.5) The other factor was composed of four items which were related to the expectancy disconfirmation with the fabric, fit, workmanship, and overall performance of the sweatshirt. These attributes could not be examined through the picture of the sweatshirt posted on the web page, and thus, this factor was named as “invisible attribute expectancy disconfirmation”. The average of the items in each factor was calculated and used in the hypothesis testing.

The Cronbach’s alpha of each construct was calculated (See Table 4.5). Except visible attribute expectancy disconfirmation, all other variable had Cronbach’s alpha of .77 or greater, indicating a fairly high reliability. However, the Cronbach’s alpha of visible attribute expectancy disconfirmation was .39, indicating that the consistency between the two measures items was low. Although style and color of the sweatshirt were both visible attributes could be examined on the web pages, it is very possible that participants had different degrees of expectation, evaluation, or tolerance to style and color, and thus, led to inconsistent ratings of disconfirmation for style and disconfirmation for color.

Manipulation Check

Two brand names/logos (i.e., Abercrombie & Fitch, Aéropostale) and Two levels of product performance (i.e., high, low) were used to create different levels of perceived brand image and perceived product performance of the sweatshirts. The *t*-test results showed that there was a significant difference between the two brand name/logo groups [$t(118) = 9.27, p < .001$]. Mean scores for the two groups were 4.43 and 2.82, respectively. Participants who saw the brand name of Abercrombie & Fitch on the web page perceived a significantly higher brand name of Abercrombie & Fitch on the web page perceived a significantly higher brand image than those who saw the brand name of Aéropostale. For product performance, the *t*-test results also indicated that there was a significant difference between the higher product performance group and the lower product

Table 4.5 Measure reliability

Item	Cronbach's alpha
Brand Sensitivity	
When making a purchase of apparel product, I always pay attention to the brand.	
In general, the brand of apparel tells a lot about its quality.	
Buying a brand name apparel product is important to me.	.92
When making a purchase of sweatshirt, I always pay attention to the brand.	
When I buy a sweatshirt, I prefer buying a well-known brand.	
I don't choose my sweatshirt according to the brand.	
In general, the brand of a sweatshirt tells a lot about its quality.	
Brand Familiarity	
Are you familiar with Abercrombie & Fitch/Aéropostale?	
How much do you know about Abercrombie & Fitch/Aéropostale?	.86
Do you have any previous experience with Abercrombie & Fitch/Aéropostale?	
Brand Self-Congruity	
Wearing Abercrombie & Fitch/Aéropostale products reflect who I am.	
People who wear Abercrombie & Fitch/Aéropostale are much more like me than people who use other brands.	
The image of Abercrombie & Fitch/Aéropostale fits how I see myself.	
Wearing Abercrombie & Fitch/Aéropostale products reflect who I would like to be.	.91
I would like to be perceived as similar to the typical consumer of Abercrombie & Fitch/Aéropostale.	
The image of Abercrombie & Fitch/Aéropostale fits how I would like to see myself.	
Perceived Product Performance	
I think this sweatshirt is _____. (Terrible/Excellent)	
I think the style of this sweatshirt is _____. (Terrible/Excellent)	
I think the color of this sweatshirt is _____. (Terrible/Excellent)	
I think the fabric of this sweatshirt is _____. (Terrible/Excellent)	.82
I think the fit of this sweatshirt is _____. (Terrible/Excellent)	
I think the workmanship of this sweatshirt is _____. (Terrible/Excellent)	
Expectancy Disconfirmation	
Visible Attribute Expectancy Disconfirmation	
The style of this sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	.39
The color of this sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	
Invisible Attribute Expectancy Disconfirmation	
This sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	
The fabric of this sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	.77
The fit of this sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	
The workmanship of this sweatshirt is _____. (Much worse than I expected/Just as I expected/Much better than I expected)	

performance group [$t(118) = 3.30, p < .001$]. The mean score for the higher performance group was 4.17 and for the lower performance group was 3.68. Participants who received a sweatshirt with a higher level of product performance perceived the sweatshirt with a significantly higher level of product performance than those who received a sweatshirt with a lower level of product performance. These results indicated that the two treatments had successfully manipulated and created significantly different levels of perception of brand image and product performance.

Results of Hypothesis Testing

The proposed 13 hypotheses based on the framework of CS/D with the purchased apparel product and with the brand in an online shopping context were examined. Multiple regression analysis was used to test Hypothesis 1 of the relationship between individual differences and participants' perceived brand image at purchase. Hypotheses 2 to 13 were examined by structural equation modeling. The results were reported in the following sections.

The Relationship between Individual Differences and Perceived Brand Image

There were seven individual difference variables proposed in the framework including brand sensitivity, brand familiarity, brand self-congruity, and four demographics (i.e., gender, age, personal income, household income). Multiple regression analysis was conducted to identify the individual difference variables that were significantly related to perceived brand image at purchase. In the multiple regression analysis, the dependent variable was perceived brand image at purchase and the independent variables included brand sensitivity, brand familiarity, brand self-congruity and four demographic characteristics (i.e., gender, age, personal income, annual household income).

Hypothesis 1. There will be a significant relationship between perceived brand image at purchase and the proposed individual difference variables (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics).

The result of stepwise regression analysis revealed the equation for the predictor of perceived brand image at purchase as followed:

$$\text{Perceived Brand Image at Purchase} = 2.900 + .382 (\text{Brand Self-Congruity})$$

Among these seven variables related to individual differences, only one variable, brand self-congruity, was a significant predictor of perceived brand image at purchase. The F value showed that this regression model was significant in explaining consumers' perception of brand image [$F(1, 114) = 9.48, p < .01$]. However, the multiple correlation coefficient for this equation (R) was .277, and the square of the correlation coefficient (R^2) was .077, indicating that brand self-congruity only explained 7.7% of the variance in the perceived brand image at purchase. The results showed that there was a significant and positive relationship between participants' brand self-congruity and their perceived brand image at purchase. At the purchase stage, participants who perceived that the brand image at purchase was consistent with his or her self-image would perceive the image of the brand significantly better. Based on these results, Hypothesis 1 was partially supported.

Results of Structural Equation Modeling

The results of SEM were reported in this section. The processes of correcting and trimming the model were first stated. The results of hypothesis testing from Hypotheses 2 to 13 were addressed in the second section.

Processes of Correcting and Trimming the Model

AMOS 7.0 was used to conduct the SEM. In this study, Goodness-of-fit index (GFI) and Adjusted-goodness-of-fit-index (AGFI) equal or greater than .90 were used as indicators of acceptable fit based on the SPSS Amos Course Guide (*Structural Equation Modeling*, 2005). Comparative-fit-index (CFI) and Incremental-fit-index (IFI) close to .95 were used as indicators of good fit based on the suggestion of Hu and Bentler (1999). 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). The hypothesized model was as shown in Figure 4.1. Initially, 10 variables were

included in the hypothesized model. The fit indexes indicated that the original hypothesized model fit was poor (GFI = .88, AGFI = .75, CFI = .85, IFI = .85, RMSEA = .17). The standardized regression weight of each relationship in the hypothesized model was shown in Figure 4.2. Correlations between the 10 constructs for the model were presented in Table 4.6. The correlation matrix among constructs was positive definite, except product return intention because product return intention conveyed a negative meaning. If the participant's rating of product return intention was higher, the participant's intention to return the product was higher. The direction of the rating of product return intention was opposite to other variables. Thus, only the correlation coefficients of product return intention were negative.

A poor fit of the model can be improved by examining modification indices or the standard residuals (Hair et al., 1998). According to the modification indices, paths between variables which were related to larger reductions of chi-square were identified and added one by one. Consequently, three paths were added to improve the model fit to the data (See Table 4.7). The three paths were: (a) from perceived brand image at purchase to perceived brand image at product-receiving, (b) from perceived brand image at purchase to CS/D with the brand, and (c) from perceived product performance to perceived brand image at product-receiving. After adding the four paths between variables, the model fit became much better (GFI = .94, AGFI = .85, CFI = .96, IFI = .96, RMSEA = .09). The SEM model after adding paths was presented as Figure 4.3.

To examine if all parameters in the model were significantly different from 0 at a level of significance of .05, the *p*-value of all parameters were calculated. 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. After each removal of one parameter, the model fit was checked to examine if the removal of the parameter improved the fit of the model. According to this process, four paths were removed. They were the paths (a) from perceived brand image at purchase to perceived product performance at the product-receiving stage, (b) from product performance expectation to CS/D with the product, (c) from invisible attribute expectancy disconfirmation to CS/D with the product, and (d) CS/D with the brand to CS/D with the product. After trimming the four parameters that were not significant, all indexes, except AGFI, showed the fit of the final

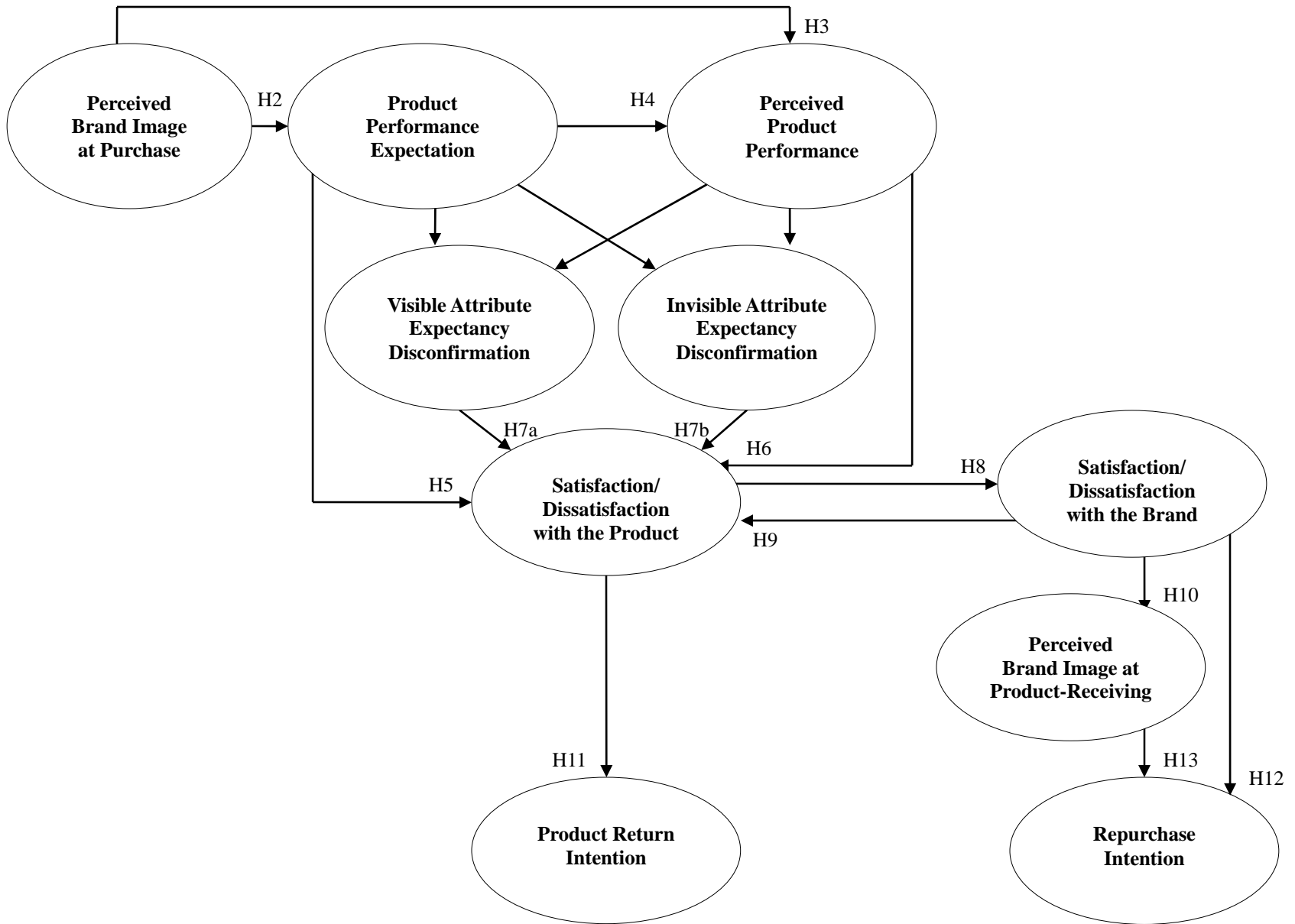


Figure 4.1 The hypothesized SEM model

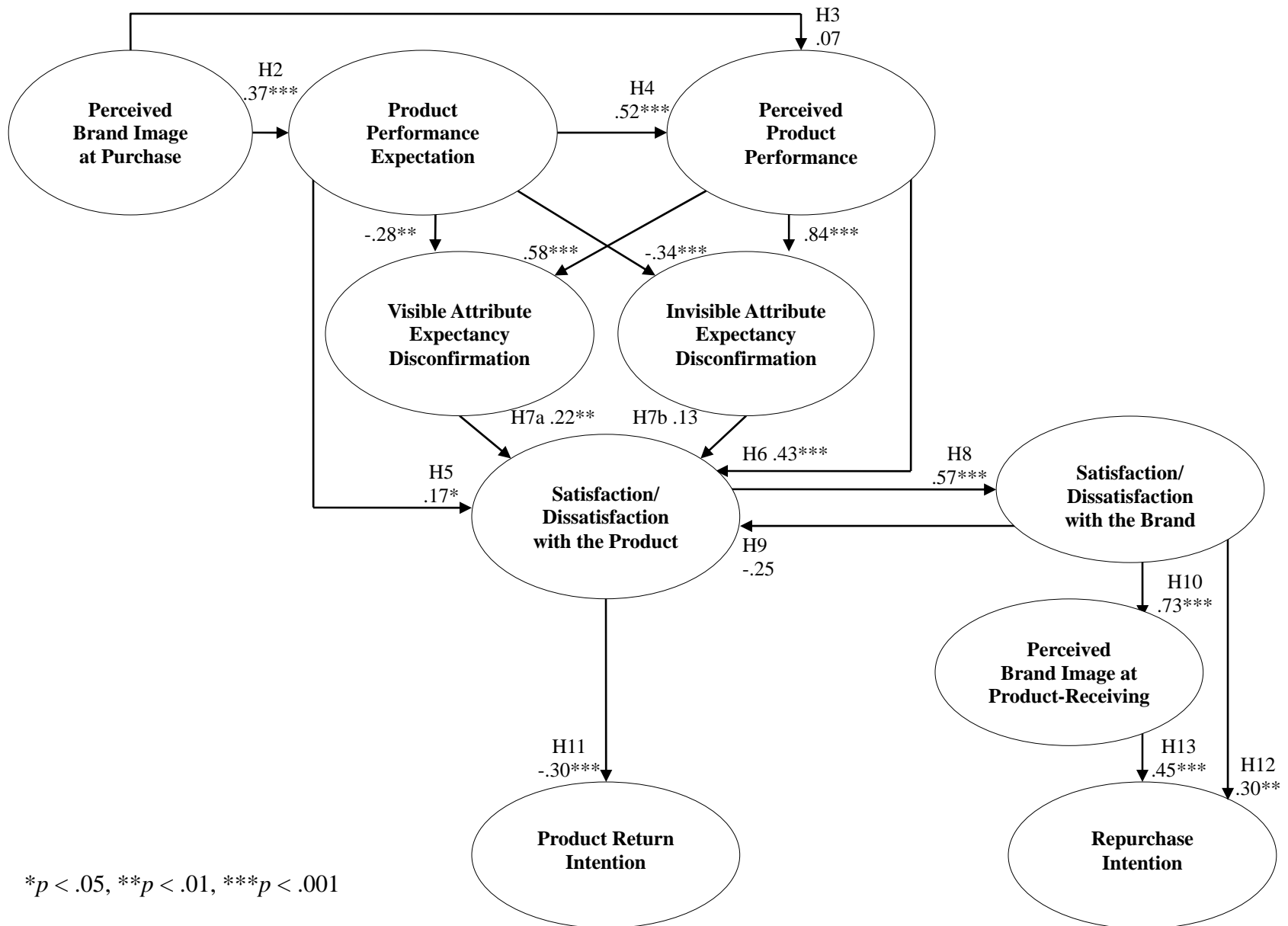


Figure 4.2 The results of the hypothesized SEM model

Table 4.6 Correlation matrix of model constructs

	Constructs Included in the Hypothesized Model									
	1	2	3	4	5	6	7	8	9	10
1. Perceived brand image at purchase	1.00									
2. Product performance expectation	.37	1.00								
3. Perceived product performance	.26	.55	1.00							
4. Invisible attribute expectancy disconfirmation	.10	.13	.66	1.00						
5. Visible attribute expectancy disconfirmation	.05	.04	.43	.35	1.00					
6. CS/D with the product	.20	.42	.70	.51	.45	1.00				
7. CS/D with the brand	.11	.24	.38	.27	.24	.55	1.00			
8. Perceived brand image at product-receiving	.08	.17	.28	.20	.18	.41	.73	1.00		
9. Repurchase intention	.07	.15	.24	.17	.15	.35	.62	.66	1.00	
10. Product return intention	-.06	-.13	-.21	-.15	-.14	-.30	-.17	-.12	-.10	1.00

Table 4.7 Added paths and hypothesis testing with SEM results

Paths	Standardized Regression Weight (β)
Added Paths	
Perceived brand image at purchase to perceived brand image at product-receiving	.30**
Perceived brand image at purchase to CS/D with the brand	.36**
Perceived product performance to perceived brand image at product-receiving	.19*
Hypothesized Paths	
H2: Perceived brand image at purchase and product performance expectation	.37**
H3: Perceived brand image at purchase to perceived product performance	.07
H4: Product performance expectation to perceived product performance	.55**
H5: Product performance expectation to CS/D with the product	.12
H6: Perceived product performance to CS/D with the product	.61**
H7a: Visible attribute expectancy disconfirmation to CS/D with the product	.20*
H7b: Invisible attribute expectancy disconfirmation to CS/D with the product	.16
H8: CS/D with the product to CS/D with the brand	.53**
H9: CS/D with the brand to CS/D with the product	-.25
H10: CS/D with the brand to perceived brand image at product-receiving	.53**
H11: CS/D with the product to product return intention	-.30**
H12: CS/D with the brand to repurchase intention	.30*
H13: Perceived brand image at product-receiving to repurchase intention	.45**

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

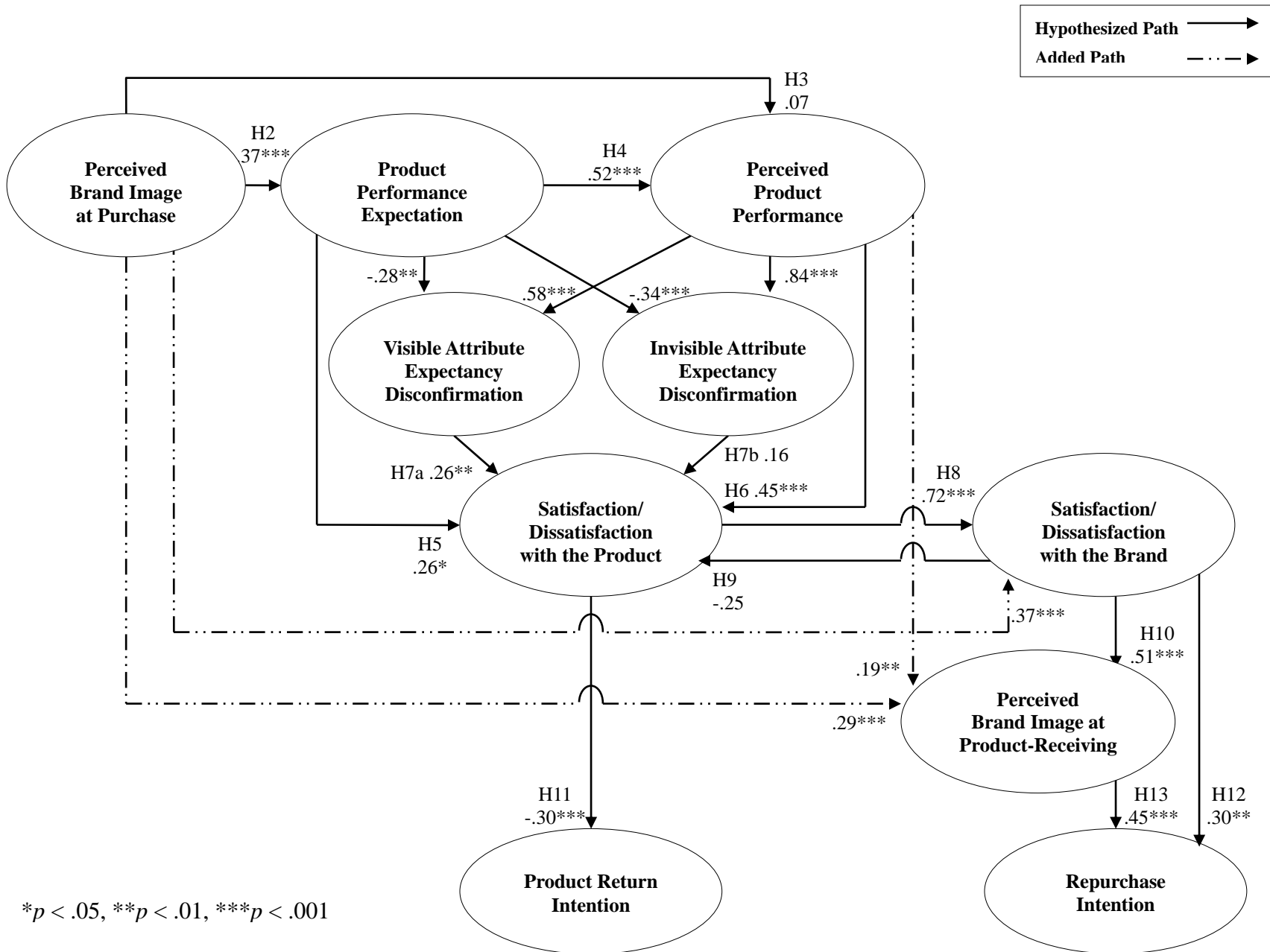


Figure 4.3 The SEM model with added paths

model was good (GFI = .93, AGFI = .86, CFI = .96, IFI = .96, RMSEA = .08). Both GFI and AGFI measure the difference between sample covariances and implied covariances, and the result can be overly influenced by sample size (Fan, Thompson, & Wang, 1999). Different from GFI, AGFI adjusts for the number of degrees of freedom in the model, which is even more sensitive to the sample size and the number of parameters included in the model. The final model was presented in Figure 4.4.

Hypothesis Testing with Structural Equation Modeling

Fourteen proposed hypotheses were examined. To test the hypotheses, the standardized regression weight (i.e., β , a number between 0 and 1) will be reported and the p -value of the hypothesized relationship will be calculated to determine if the standardized regression weight is significantly different from 0. A level of significance of .05 will be used as the standard for rejecting or supporting the hypothesis.

Hypothesis 2. There will be a significant relationship between participants' perceived brand image at purchase and their expectation for product performance.

Participants who perceive the brand with better image will have a higher level of expectation for product performance at the purchase stage.

The results indicated that there was a significant and positive relationship between participants' perceived brand image at purchase and their expectation for product performance ($\beta = .37, p < .001$). Participants who perceived the product with better brand image at the purchase stage had significantly higher expectation for the product performance. Based on these results, it was concluded that Hypothesis 2 was supported.

Hypothesis 3. There will be a significant relationship between participants' perceived brand image at purchase and their perceived product performance at the product-receiving stage. Participants who perceive the brand with better image at the purchase stage will perceive the product performance to be better at the product-receiving stage.

The results indicated that there was no significant relationship between participants' perceived brand image at purchase and their perception of product

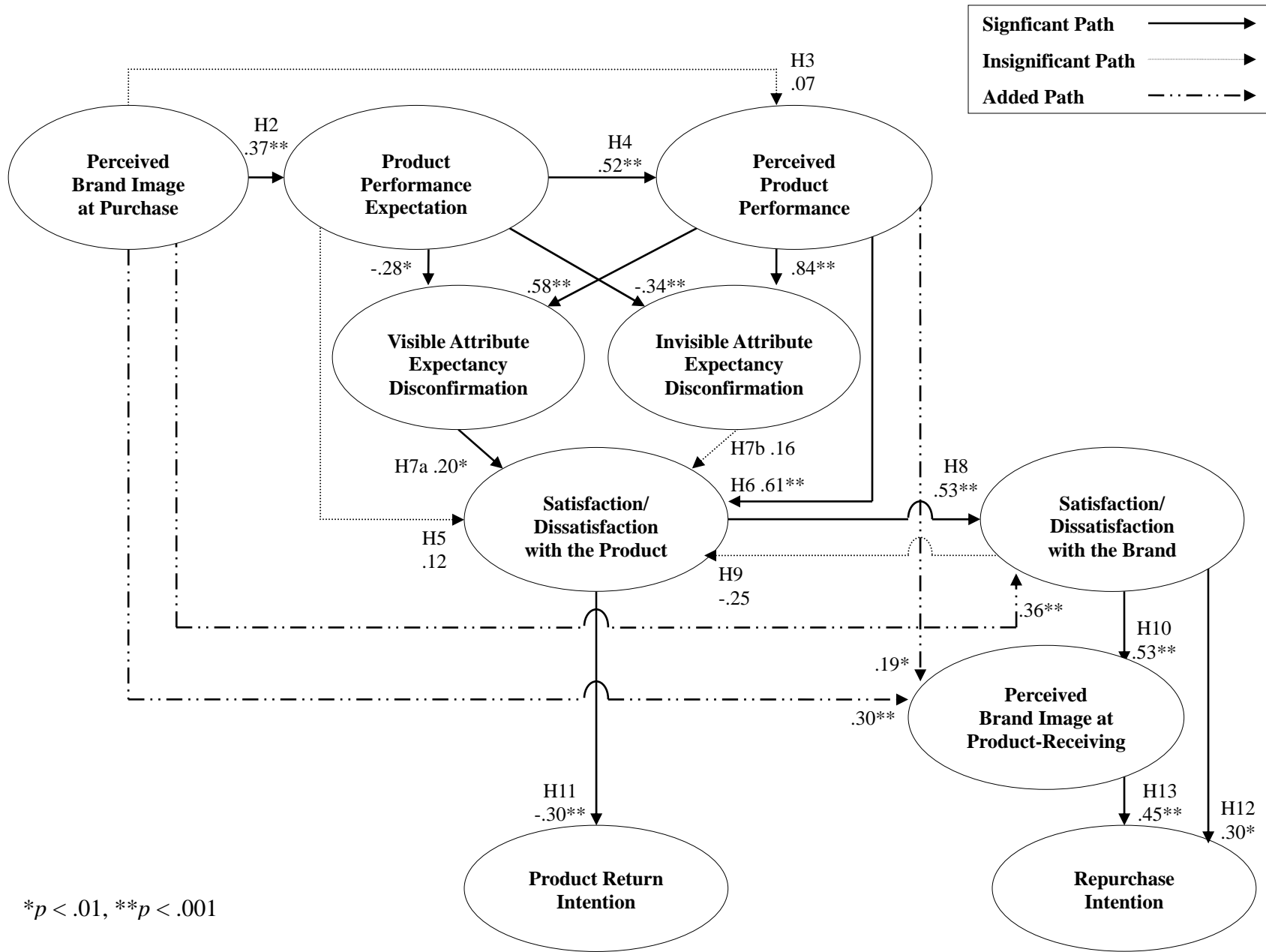


Figure 4.4 The final model of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context

performance at the product-receiving stage. Participants who perceived the product with better brand image at the purchase stage did not perceive that the product have a significantly better performance. Based on these results, Hypothesis 3 was not supported.

Hypothesis 4. There will be a significant relationship between participants' expectation for product performance at the purchase stage and their perceived performance at the product-receiving stage. Participants who have a higher level of expectation for product performance at the purchase stage will perceive the product performance to be better at the product-receiving stage.

The results showed that there was a significant and positive relationship between participants' expectation for product performance at the purchase stage and their perceived product performance at the product-receiving stage ($\beta = .52, p < .001$). Participants who had a higher level of expectation for product performance at the purchase stage perceived that the product had a significantly better performance at the product-receiving stage. Based on these results, Hypothesis 4 was supported.

Hypothesis 5. There will be a significant relationship between participants' expectation for product performance at the purchase stage and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who have a higher level of expectation for product performance at the purchase stage will have a higher level of satisfaction with the product.

The results indicated that there was no significant relationship between participants' expectation for product performance and CS/D with the product. Participants who had a higher level of expectation for product performance at the purchase stage did not have a significantly higher level of satisfaction with the product. Based on these results, Hypothesis 5 was not supported.

Hypothesis 6. There will be a significant relationship between participants' perceived product performance at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.

Participants who perceive the product with better performance will have a higher level of satisfaction with the product.

The results indicated that there was a significant and positive relationship between participants' perception of product performance and CS/D with the product ($\beta = .61, p < .001$). Participants who perceived the product with a higher level of performance had a significantly higher level of satisfaction with the product. Based on these results, Hypothesis 6 was supported

Hypothesis 7 examined the relationship between participants' expectancy disconfirmation and their satisfaction/dissatisfaction with the product at the product-receiving stage. The results of confirmatory factor analysis revealed two factors in expectancy disconfirmation (i.e., visible attribute expectancy disconfirmation, invisible attribute expectancy disconfirmation), and thus, two sub-hypothesis of Hypothesis 7, Hypothesis 7a and Hypothesis 7b, were developed to examine the relationship between participants' visible attribute expectancy disconfirmation and satisfaction/dissatisfaction with the product, and between invisible attribute expectancy disconfirmation and satisfaction/dissatisfaction with the product.

Hypothesis 7a. There will be a significant relationship between participants' visible attribute (i.e., style, color) expectancy disconfirmation and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who perceive that the product performance of visible attributes is better than what they expected will have a higher level of satisfaction with the product. Participants who perceive that the product performance of visible attributes is worse than what they expected will have a lower level of satisfaction with the product.

The results indicated that there was a significant and positive relationship between participants' visible attribute expectancy disconfirmation and CS/D with the product ($\beta = .20, p < .01$). Participants who perceived that style and color were better than what they expected had a higher level of satisfaction with the product.

Participants who perceived that style and color were worse than what they expected had a lower level of satisfaction with the product.

Hypothesis 7b. There will be a significant relationship between participants' invisible attribute (i.e., fabric, fit, workmanship, overall performance) expectancy disconfirmation and their satisfaction/dissatisfaction with the product at the product-receiving stage. Participants who perceive that the product performance of invisible attributes is better than what they expected will have a higher level of satisfaction with the product. Participants who perceive that the product performance of invisible attributes is worse than what they expected will have a lower level of satisfaction with the product.

The results showed that there was no significant relationship between participants' invisible attribute expectancy disconfirmation and CS/D with the product. Participants who perceived that the product performance of invisible attributes was better or worse than what they expected did not have a higher or lower level of satisfaction with the product.

Based on these results above, Hypothesis 7 was partially supported because only visible attribute expectancy disconfirmation had a significant relationship with CS/D with the product.

Hypothesis 8. Participants who have a higher level of satisfaction with the product will have a higher level of satisfaction with the brand.

The results showed that there was a significant and positive relationship between CS/D with the product and CS/D with the brand ($\beta = .53, p < .001$). Participants who had a higher level of satisfaction with the product had a significantly higher level of satisfaction with the brand. Based on these results, Hypothesis 8 was supported.

Hypothesis 9. Participants who have a higher level of satisfaction with the brand will have a higher level of satisfaction with the product.

The results showed that there was no significant relationship between CS/D with the brand and CS/D with the product. Participants who had a higher level of satisfaction with the brand did not have significantly a higher level of satisfaction with the product. Based on these results, Hypothesis 9 was not supported.

Hypothesis 10. There will be a significant relationship between participants' satisfaction/dissatisfaction with the brand and their perception of brand image at the product-receiving stage. Participants who have a higher level of satisfaction with the brand will perceive the brand with better image at the product-receiving stage.

The results showed that there was a significant and positive relationship between CS/D with the brand and perceived brand image at product-receiving ($\beta = .53, p < .001$). Participants who had a higher level of satisfaction with the brand significantly perceived the brand with better image at the product-receiving stage. Based on these results, Hypothesis 10 was supported.

Hypothesis 11. There will be a significant relationship between participants' satisfaction/dissatisfaction with the product at the product-receiving stage and their product return intention. Participants who have a higher level of satisfaction with the product will have a lower level of intention to return the product.

The results showed that there was a significant and negative relationship between CS/D with the product and product return intention ($\beta = -.30, p < .001$). Participants who had a higher level of satisfaction with the product had significantly a lower level of intention to return the product. Based on these results, Hypothesis 11 was supported.

Hypothesis 12. There will be a significant relationship between participants' satisfaction/dissatisfaction with the brand at the product-receiving stage and their intention to repurchase the products of the same brand. Participants who have a

higher level of satisfaction with the brand will have a higher level of repurchase intention.

The results showed that there was a significant and positive relationship between CS/D with the brand and repurchase intention ($\beta = .30, p < .01$). Participants who had a higher level of satisfaction with the brand had a significantly higher level of intention to repurchase the products of the brand. Based on these results, Hypothesis 12 was supported.

Hypothesis 13. There will be a significant relationship between participants' perception of brand image at the product-receiving stage and their intention to repurchase the product of the same brand. Participants who perceive the brand with better image at the product-receiving stage will have a higher level of repurchase intention.

The results showed that there was a significant and positive relationship between perceived brand image at product-receiving and repurchase intention ($\beta = .45, p < .001$). Participants who perceived the brand with better image at the product-receiving stage had a significantly higher level of intention to repurchase the products of the brand. Based on these results, Hypothesis 13 was supported.

CHAPTER V

SUMMARY, DISCUSSIONS, APPLICATIONS, LIMITATIONS, AND RECOMMENDATIONS

This chapter included four sections. The summary of the study was presented in the first section. In the second section, the discussions and applications of the findings were stated. Conclusion and suggestions for strategies in apparel online shopping was addressed in the third section. The limitations of the study and the recommendations for further researches were discussed in the last section of this chapter.

Summary of the Study

The purpose of the study was to examine the factors related to consumer satisfaction/dissatisfaction (CS/D) with the purchased product and with the brand in apparel online shopping at the product-receiving stage. The four objectives of the study were to examine (a) the relationships between consumers' individual differences (i.e., brand sensitivity, brand familiarity, brand self-congruity and demographics) and perceived brand image at the purchase stage, (b) the influence of consumers' perceived brand image at purchase on their expectation for product performance and on perceived product performance, (c) antecedences of CS/D with the product and CS/D with the brand, and (d) antecedences of product return intention and repurchase intention.

A model of CS/D with the purchased apparel product and the brand in an online shopping context was proposed as the framework of this study, which included three stages of apparel online shopping: the purchase stage, the product-receiving stage, and the product-consumption stage. Because no previous study has examined CS/D with the product and with the brand at the product-receiving stage in apparel online shopping, this study only focused on the product-receiving stage. Fifteen hypotheses were developed according to the relationships proposed in the framework in Chapter III.

A 2 X 2 between-subjects factorial experimental design was used as the research method for this study. Two levels of brand image at the purchase stage (i.e., higher, lower) were manipulated by two brand names and logos. Two levels of product performance at the product-receiving stage (i.e., higher, lower) were manipulated by two sweatshirts with different levels of quality. A website was developed by the researchers to simulate the apparel online shopping process, and a questionnaire was developed to measure the variables included in this study. Participants of this study were recruited from Virginia Tech undergraduate students, using the convenient sampling method. An advertisement regarding experiment time, place and the contact information of the researcher were announced on the announcement boards in each dorm on campus to recruit undergraduate students to participate in the study.

A total of 120 undergraduate students participated in this study, including 60 male and 60 female students. Participants' ages ranged from 18 to 25 and most of them were 18 to 19 years old (79.2%) and freshman and sophomore (83.4%). The majority of the participants majored in Engineering (38.3%), followed by Business (19.2%) and Liberal Arts & Human Sciences (15.8%). As for their personal income, most of the participants were not employed (50.0%) or their personal income was under \$10,000 before tax for 2006 (44.2%). Most participants' annual household income was \$70,000 – \$89,999 (45.8%). On the subject of participants' wardrobe expenditure and apparel online shopping experience, results showed that most participants spent \$200 to \$499 on their wardrobes last year (40.8%), and 58.3% of them had the experience of apparel online shopping. Among the online shoppers, two third of participants (66.7%) spent under \$100 last six months for purchasing apparel products online and one third of participants (33.3%) spent over \$100. For the quantity of apparel products that online shoppers purchased last six months, two third of participants (67.3%) purchased one to three items and one third of them (32.7%) purchased above four apparel items.

Multiple regression analysis was used to examine Hypothesis 1 that which individual difference variables were significantly related to perceived brand image at purchase. Structural equation modeling (SEM) was used for testing the rest of 12 hypotheses in this study. A hypothesized SEM model was developed, including 10 variables in the proposed framework. Hypotheses 1 to 13 were examined and the results

of hypotheses testing were listed in Table 5.1. The result model with hypothesis testing was showed in Figure 5.1.

Discussions and Applications of the Findings

The discussions and applications of the study findings were grouped in the following six sections. First, the study findings about participants' differences in gender, wardrobe expenditures and apparel online shopping experiences were discussed. The role of brand self-congruity in apparel online shopping was addressed in the second section. The relationships among perceived brand image at purchase, product performance expectation, and perceived product performance were followed in the third section. In the fourth section, the antecedent variables of CS/D with the product and CS/D with the brand were discussed. The variables influencing perceived brand image at the product-receiving stage were followed in the fifth section. The antecedences of product return intention and repurchase intention were addressed in the sixth section.

Participants' Differences in Gender, Wardrobe Expenditures and Apparel Online Shopping Experiences

The results of this study showed that gender was related to brand familiarity and apparel online shopping experiences but not related to other variables included in the study. Female participants were more familiar with apparel brands, spent more money on their wardrobe, and purchased more items and spent more money in apparel online shopping than male participants. These findings are consistent with previous studies, indicating that female consumers were more likely to be online apparel shoppers (Lee & Johnson, 2002; Rhee, 2006). According to these study results, e-tailers not only should provide more female apparel items on their websites, but also need to design the website more favorable for female consumers. Female consumers' preferences and behaviors may very different from male consumers. For example, a UK study found that for website design, female online shoppers preferred rounded forms, brighter and complex color schemes, and casual language and tone, while male online shoppers preferred straight lines and shapes, simple and darker colors, and formal or expert language with few

Table 5.1 Hypotheses and summary of the results

Hypothesis	Results
H1: There will be a significant relationship between perceived brand image at purchase and the proposed individual difference variables (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics).	Partially Supported
H2: There will be a significant and positive relationship between participants' perceived brand image at purchase and their expectation for product performance.	Supported
H3: There will be a significant and positive relationship between participants' perceived brand image at purchase and their perceived product performance at the product-receiving stage.	Not Supported
H4: There will be a significant and positive relationship between participants' expectation for product performance at purchase and their perceived performance at the product-receiving stage.	Supported
H5: There will be a significant and positive relationship between participants' expectation for product performance at the purchase stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.	Not Supported
H6: There will be a significant and positive relationship between participants' perceived product performance at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.	Supported
<p>H7: There will be a significant relationship between participants' expectancy disconfirmation at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.</p> <p>H7a: There will be a significant relationship between participants' invisible attribute expectancy disconfirmation at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.</p> <p>H7b: There will be a significant relationship between participants' visible attribute expectancy disconfirmation at the product-receiving stage and their satisfaction/dissatisfaction with the product at the product-receiving stage.</p>	<p>Partially Supported</p> <p>Supported</p> <p>Not Supported</p>
H8: There will be a significant and positive relationship between participants' satisfaction with the product and their satisfaction with the brand.	Supported
H9: There will be a significant and positive relationship between participants' satisfaction with the brand and their satisfaction with the product.	Not Supported
H10: There will be a significant and positive relationship between participants' satisfaction/dissatisfaction with the brand and their perception of brand image at the product-receiving stage.	Supported
H11: There will be a significant and negative relationship between participants' satisfaction/dissatisfaction with the product at the product-receiving stage and their product return intention.	Supported
H12: There will be a significant and positive relationship between participants' satisfaction/dissatisfaction with the brand at the product-receiving stage and their intention to repurchase the products of the same brand.	Supported
H13: There will be a significant and positive relationship between participants' perception of brand image at the product-receiving stage and their intention to repurchase the product of the same brand.	Supported

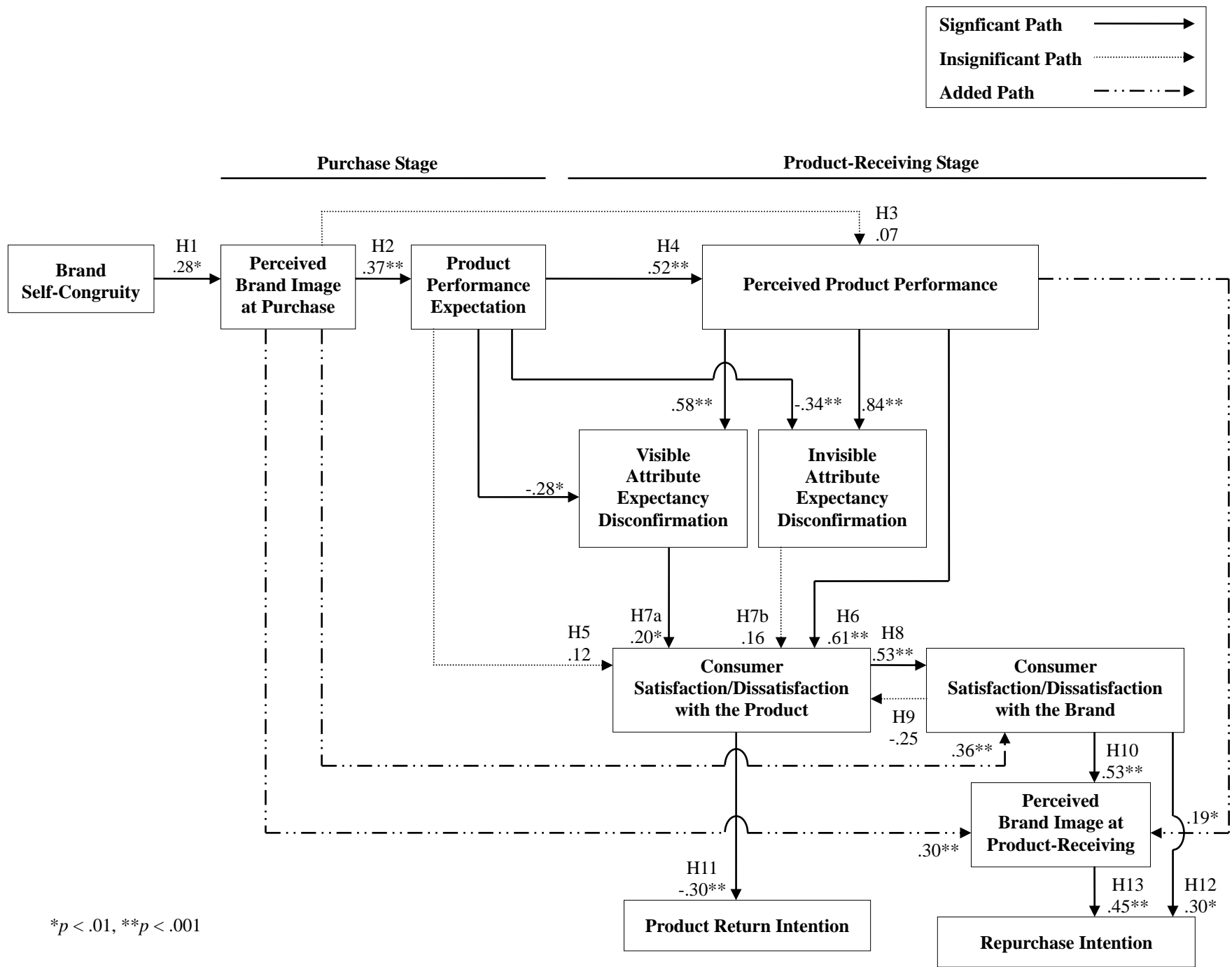


Figure 5.1 The result model of consumer satisfaction/dissatisfaction with the purchased apparel product and the brand in an online shopping context

abbreviations (Moss, Gunn & Heller, 2006). As for promotion sent by e-tailers, Phillip and Suri (2004) found that female online shoppers had a stronger preference for the coupon contained in the e-mail than male online shoppers did. These studies provide evidence for the importance in identifying gender differences in online shopping to better serve e-tailers' target customers. The current study results showed that female participants involved in apparel online shopping more than male participants; however, Smith (2008) reported that a new apparel online shopping pattern has emerged. Male consumers now become fast growing fashion online shoppers. They make quick purchase decision and return fewer products than female consumers. Thus, some e-tailers start to aim at male consumers by providing menswear sections on the website or launching shopping websites just for male consumers to make the apparel online shopping easier and faster for them.

Brand Self-Congruity and Perceived Brand Image at Purchase

Brand self-congruity was the only individual difference variable significantly related to participants' perception of brand image at the purchase stage in this study. The results indicated that at the purchase stage, brand self-congruity was positively related to participants' perceived brand image at purchase. The result is consistent with previous studies that consumers tended to link their self-image with the brand image (Ataman & Ulengin, 2003) and choose brands with the attributes that match some aspects of their selves (Onkvisit & Shaw, 1987). Clothing is a non-verbal communication of individual personality and self-image (Thomas, Cassill & Forsythe, 1991) and apparel brand often plays important symbolic, self-expression, and socialization roles (Shim & Koh, 1997). These may be the reasons why when the brand image of apparel products was more consistent with participants' self-image, they would be more likely to rate the brand image positively. This finding supports the proposition of Kressmann et. al (2006), suggesting that it is essential for e-tailers to identify the self-concept of their target consumers and build the brand image more compatible with the image that their target consumers would like to express because at the purchase stage, when consumers search for products and evaluate their alternatives, the brand matches their self-image will be perceived as having a better image.

Perceived Brand Image at Purchase, Product Performance Expectation, and Perceived Product Performance

Results showed that participants who perceived better brand image at the purchase stage had higher expectation for product performance. This result is consistent with the study results of O'Neal (1992) and Lennon and Fairhurst (1994), indicating that consumers would use brand name, brand image and store image to evaluate apparel product quality and form their expectation projecting the product performance. However, participants' perception of brand image at purchase did not directly influence their perception of product performance. It indirectly influenced perceived product performance through participants' expectation for product performance. Participants' perceived brand image would influence their expectation, and then their expectation, in turn, would influence their perception of product performance.

The above results showed a linkage among three variables (i.e., perceived brand image at purchase, product performance expectation, perceived product performance). Participants' perception of brand image at purchase would positively influence their expectation for product performance. When participants tried on the product and evaluated the product, their expectation for product performance formed at purchase would positively influence their perception of product performance. These findings provide evidence for the importance of brand image. In online shopping, consumers cannot physically examine the apparel product to ensure the product quality. Consumers would depend on brand image to create expectation about product performance. For a brand that consumers perceive to have a good brand image, consumers expect that they would receive a product with good quality. This expectation may increase the likelihood of purchasing the product and have a positive influence on consumers' evaluation of product performance when they receive and examine the product.

Antecedences of Consumer Satisfaction/Dissatisfaction with the Product and Consumer Satisfaction/Dissatisfaction with the Brand

The variables influencing CS/D with the product and the variables influencing CS/D with the brand were examined in this study. Two antecedents of CS/D with the product and two antecedents of CS/D with brand were found. Each relationship and the application were discussed in the following sections.

Consumer Satisfaction/Dissatisfaction with the Product

Results showed that two factors (i.e., perceived product performance, visible attribute expectancy disconfirmation) significantly influenced CS/D with the product. In these two variables, the standardized regression weight of perceived product performance was much greater than that of visible attribute expectancy disconfirmation, indicating that perceived product performance was a much more important factor influencing CS/D with the product. Participants who perceived a higher level of product performance had a higher level of satisfaction at the product-receiving stage. This result is consistent with the study finding of Tse and Wilton (1988). Whenever consumers perceived a product performing well, consumers would be satisfied. Chen-Yu et al. (1999) also found that product performance had a strong direct effect on CS/D.

The result that perceived product performance to be the most important factor on CS/D with the product suggests that to achieve a higher level of consumer satisfaction with the product at the product-receiving stage, providing apparel products with good product performance is most essential. In order to provide “good” product performance, e-tailers need to first understand what criteria that consumers use to evaluate the product performance at the product-receiving stage. In this study, the measure items of perceived product performance included style, color, fabric, fit, workmanship and overall performance of the sweatshirt. These measures of product performance are similar to the criteria that consumers use to evaluate a product at purchase in offline shopping. When consumers receive the product they ordered online, this is the first time they physically see the product, and therefore, they evaluate the product similar to how they evaluate a product at purchase in offline shopping. However, in offline shopping, consumers can examine and try on the apparel product they are interested in. If they do not like the

product, they can easily switch to another product. A product that does not match to customers' evaluation criteria may not influence their satisfaction. However, in online shopping, if consumers do not like the product they received, they cannot switch to another product right away. The product delivered to consumers must be very close to customers' evaluation criteria. Therefore, understanding target customers' evaluating criteria may be the most crucial task for e-tailers to increase customers' satisfaction with the product they purchased online.

Participants' expectation for product performance was hypothesized to be related to CS/D with the product; however, the results did not show a significant relationship. This result indicated that participants' expectation for product performance did not directly influence CS/D with the product; however, it indirectly influenced CS/D with the product through the visible attribute expectancy disconfirmation. Visible attribute expectancy disconfirmation was found to be an antecedence of CS/D with the product. Participants who perceived the product performance of style and color to be better than what they expected tended to have a higher level of satisfaction with the product. These results are consistent with the study of Chen-Yu et al. (1999), indicating that expectancy disconfirmation was a determinant of CS/D with the apparel product.

The results related to the visible attribute expectancy disconfirmation suggest that e-tailers need to help their customers to form accurate expectation that matches the actual product performance, especially in the attributes that consumers can observe on web pages. For example, if e-tailers use special effects to modify the photo to make the garment looks attractive but the photo does not truthfully illustrate the actual style or color, when consumers receive the product and find the style or color is not as they expected, they will be dissatisfied with the product, and this dissatisfaction may lead to their dissatisfaction with the brand. Thus, e-tailers should not only focus on the aesthetic aspect of product presentation but also pay attention to the accuracy of their communication. To help customers to form a correct expectation for product style, as suggested by Then and DeLong (1999), e-tailers could display their products in a variety of images, for example, showing the products in various angles such as front and back views. Currently, different e-tailers utilize different visual displays to present the product style, such as two-dimensional photos of their products, photos of the product on a

mannequin, and photos of the product worn by a model. A two-dimensional photo may not exactly reflect the style because it is hard for consumers to imagine the three-dimensional shape when the product is worn on the body. A photo of the product on a mannequin or worn by a model may provide better communication for product style, but may still have limitations in reflecting the actual look when customers wear the product because consumers' body shape may be very different from the mannequin or model, even if they wear the same size as the mannequin or model. The advantage of using a mannequin is that e-tailers can easily display garments on mannequins with various sizes. Links can be provided to allow customers to see the garment style on the mannequin in the same size as their own. While it is difficult to find models to represent the standard of each size, the shape of mannequin for each size can be kept the same and provides a consistent presentation when it displays various products. Further studies regarding product display may need to be conducted to examine which display method is a better way to communicate product style.

In current websites, many e-tailers only show one garment in one color and then use color swatches to show other color choices, instead of providing photos of garments in all color selection. The current study results suggest that color is one of essential criteria that consumers use to evaluate product performance when they evaluate the product they ordered online. It is better that e-tailers create links to allow customers to assess to the pictures of the product with each color to help them accurately sense the appearance of the product with different colors. Communicating the true color of a product is a challenge for apparel e-tailers because even if e-tailers can accurately show the color of the product on the website, the color displayed on different computer monitors may demonstrate a different color. One way to better communicate the product color may be by sending loyal customers color swatches, which show the colors of most products in the season. Apparel design companies usually develop a color theme for each season and then develop various lines of products using the same color theme. Although computer techniques are very advanced in nowadays, design companies are still often used color swatches to communicate with manufactures to ensure that the color of the product they order can be delivered accurately. The same method may be used to

communicate with loyal online customers to provide a tool for them to identify the color they prefer and sense the color of the product more accurately.

The current study showed that the product performance expectation formed at purchase, expectancy disconfirmation of invisible attributes (i.e., fabric, fit, workmanship), and CS/D with the brand were not antecedences of CS/D with the product. CS/D with the product majorly was resulted in participants' evaluation of product performance. A possible reason why expectation for product performance did not play a significant role in determining CS/D with the product might be that insufficient information was provided on web pages about the invisible product attributes. Most current websites only provide fabric content to describe the fabric, use size charts to offer fit information, and rarely provide any information about workmanship. Similar to most current websites, in this study, only fabric content and size charts were provided. No description about the workmanship of the sweatshirt was provided. Because of the inadequate information about these product attributes, it is possible that participants could not have a clear base to form their expectation for the performance of the attributes such as fabric quality and garment workmanship and fit, and thus, they did not use the expectation formed at purchase as a comparison standard to determine their satisfaction.

Consumer Satisfaction/Dissatisfaction with the Brand

As for CS/D with the brand, perceived brand image at purchase and CS/D with the product were significant antecedences. Participants who perceived the brand with better brand image at purchase had a higher level of satisfaction with the brand at the product receiving stage. This result is consistent with the study result of Esch, Langner, Schmitt and Geus (2006), who found that brand image had a positive relationship with CS/D with the brand. The positive relationship found between CS/D with the product and CS/D with the brand is consistent with the study by Ha (2004), indicating that if consumers were dissatisfied with the product performance sold on a website, their satisfaction with the brand would be reduced. CS/D with the product and CS/D with the brand was hypothesized to be interrelated; however, the study results showed that the effect was only one direction from CS/D with the product to CS/D with the brand. CS/D with the product positively influenced CS/D with the brand, but CS/D with the brand did

not directly influence CS/D with the product. These results suggest that CS/D with the brand may be a cumulated outcome of CS/D with the product that consumers purchased. Each satisfaction or dissatisfaction with a product of the brand may build up or reduce consumers' satisfaction with the brand. As the proposition of Yi (1990) that CS/D is the result of the continuous purchase experience or service reception. To build up CS/D with a brand, e-tailers should ensure the image and quality to be consistent of all the products they carry. For example, many apparel companies offer apparel products including clothing, accessories and shoes or even household textiles such as bed sheets and comforters. To develop a high level of consumer satisfaction with the brand, e-tailers need to satisfy consumers in every single transaction.

Perceived Brand Image at the Product-Receiving Stage

Three antecedences (i.e., perceived brand image at purchase, perceived product performance, CS/D with the brand) were found to influence participants' perception of brand image at the product-receiving stage. It was not surprising to find that participants' initial perception of brand image formed at the purchase stage was significantly associated with their perception of brand image after they received the product. Participants' perception of product performance after they examined and tried on the product also influenced their perceived brand image at the product-receiving stage. However, among the three antecedences, CS/D with the brand was the most important factor influencing participants' perception of brand image at the product-receiving stage. These results showed that consumers may adjust their perception of brand image after they received the product according to their perception of brand image at the purchase stage and the quality of the product that they ordered online. More importantly, if consumers are satisfied with the brand, they might modify their perception of the brand to be a better image. These results further illustrate the importance of CS/D with the brand. Building up a good brand image is important. However, to maintain the good image, it is essential that target customers are satisfied with the brand, not only the product.

Product Return Intention and Repurchase Intention

When participants' product return intention was examined, results showed that there was a significant relationship between product return intention and CS/D with the product. Participants who had a lower level of satisfaction with the product had a significantly higher level of intention to return the product. This result is consistent with the study of Nitse et al., (2004), indicating that if consumers were dissatisfied with the product, they were more likely to return the product. These results suggest that e-tailers should make sure that their products can satisfy their consumers. The more their customers are satisfied with the product, the less likely they would return the product. O'Neill and Chu (2001) indicate that product return causes direct and indirect costs for e-tailers. The direct costs include inventory, product packaging and shipment from manufacturers, and indirect costs include communication service with customers and product return processing. Thus, reducing product return is essential for e-tailers. Understanding the reason why customers return the product may provide valuable information to prevent similar problem occurs, and thus, may reduce the product return rate in future. E-tailers may consider providing a short survey form in the shipping box or posting on the website for customers to download. If consumers would like to return the product, he or she may fill out the survey form and get a return shipping discount. This survey may help e-tailers to understand customers' shopping experience and their opinions on product performance, customer service quality, and other features regarding the website, the product, and service that the e-tailer provided. From the perspective of customer relationship, good return policy and service are crucial because they can improve customer's online shopping experience with the e-tailer even if they are not satisfaction with the product. The current study found a significant relationship between CS/D with the brand and repurchases intention. It is possible that if customers are satisfied with the e-tailer, their intention to repurchase products from the same website may be also increased.

When repurchase intention was examined, results showed that there were significant relationships between perceived brand image at the product-receiving stage and repurchase intention, and between CS/D with the brand and repurchase intention. Participants who perceived the brand with better image at the product-receiving stage had

a higher intention to repurchase the products of the brand. This result is consistent with previous study results (Grewal et.al, 1998), indicating that store image had a direct and positive relationship with consumers' purchase intention. These results further indicate the importance of brand image, which not only may influence customers' satisfaction but also their intention to repurchase the products of the same brand. These results suggest that when building up apparel brands, e-tailers should use easy-to-remember brand name and easy-to-recognized brand logo to help their customers to include their brand into their evoked set (i.e., the brands that can be activated from memory). To building up brand image, studies showed that advertising may be the most important factor to developing brand image (Lindsay, 1990). Advertisements carrying messages about the brand can help marketers to build up an image with a specific brand personality and also help to increase brand equity (i.e., the value of the brand in consumers' minds) (Meenaghan, 1995). To maintain the existing customers to repurchase the products of the same brand, e-tailers may periodically send out promotion e-mails with coupon codes to show their appreciation for the loyal customers and help consumers to recall their memory related to the brand.

Participants who had a higher level of satisfaction with the brand significantly had a higher intention to repurchase the products of the brand. This result is consistent with previous study results (Bennett & Rundle-Thiele, 2004; Jones & Suh, 2000; Kim, Ferrin & Rao, 2003), indicating that CS/D influenced consumers' repurchase intention. However, CS/D with the product had no significantly direct relationship with participants' intention to repurchase products of the same brand. It indirectly influenced repurchase intention through CS/D with the brand. These results suggest that to develop a long-term relationship with customers, it is important to increase customers' satisfaction with the brand, in addition to their satisfaction with the products. For example, e-tailers may provide prompt responses to consumers' questions, periodical greetings or birthday gift code to increase customers' satisfaction with the brand.

Conclusion and Suggestions for Strategies in Apparel Online Shopping

Although the results of this study cannot be generalized to the general population and the results need to be verified by other studies, this study provides some insights that may extend the understanding of consumer behavior in online shopping at the product-receiving stage. This study showed that more female participants are involved in apparel online shopping than male participants. In addition to providing more products to attract female online shoppers, e-tailers should also consider website design and provide the sales promotion more favorable for female consumers. For example, they might use colorful schemes on the website design or include coupons in the promotion e-mails. Affective advertisements (i.e., banners, pop-up messages) in special days (e.g., Valentine's Day, Anniversary) or celebrity advocates may be also effective ways to draw more female consumers browsing the website.

This current study showed that brand image played an essential role in apparel online shopping. Pitta and Kutsanis (1995) indicate that brand image can help e-tailers to position their products, differentiate themselves from other brands, create consumers' positive attitudes and emotions toward their brand, and help their target customers perceive a high level of benefits of purchasing or using their brand. The current study further reveals some insights in the effect of brand image in online shopping. Brand image at purchase could positively influence consumers' expectation for product performance, indirectly influence consumers' perception of product performance through product performance expectation, directly influence consumers' perceived brand image at the product-receiving stage, and directly affect satisfaction with the brand. In order to create a good brand image, this study suggests that e-tailers should identify the self-image of their target consumers, in order to develop a brand with an image that is consistent with the image of their target customers. The congruity between the image of the brand and customers' self-image can increase consumers' perception of the brand image at the purchase stage.

The current study suggests that e-tailers need to pay attention to the linkage among brand image, product performance expectation and product performance. Brand image played a significant role in influencing consumers' expectation for the product

performance. The perceived product performance directly influenced by expectation for product performance, and it would affect CS/D with the product. The current study showed that product performance was the most important direct factor related to consumers' satisfaction with the product that they order online. Hence, e-tailers need to provide products that fulfill customers' evaluation criteria. This study suggests that when consumers evaluate the performance of a sweatshirt, they evaluate product style, color, fabric, fit, and workmanship, similar to the evaluation of product at purchase in offline shopping.

This study also showed that visible attribute expectancy disconfirmation might influence CS/D with the product. To increase consumer satisfaction with the product at the product-receiving stage, it is important for e-tailers to help their customers to select the style and color that they desire and help them to form an accurate expectation for product performance. For example, they may provide more descriptions on style, consistently show their products on mannequins with standardized sizes, provide links to show garments in each color selection, send color swatches to loyal customers.

The current study showed that CS/D with the product directly influenced product return intention. Perceived brand image and CS/D with the brand directly influenced repurchase intention. These study results suggest that e-tailers have to pay attention to CS/D with the product in order to reduce the product return rate, and increase the rate of successful transaction in apparel online shopping. To maintain a good brand image and increase customers' brand loyalty, it is important to achieve a high level of consumer satisfaction with the brand by accumulating satisfaction with the product in each transaction.

Limitations of the Study and Recommendations for Future Researches

An experimental design was used in this study. A major advantage of experimental design is the existence of control condition that reduces the influences of exogenous variables, and therefore, increases the internal validity (Gray, 2004). The disadvantage of the experimental design, however, is the external validity may be low because the participants in the experimental study have to come to a specific controlled

environment to participate in the study. Because the great degree of control and the artificial environment, participants in an experimental design study may react differently from their behaviors in the real-world (Cooper & Emory, 1995). In this study, participants were asked to role-play a situation in an online shopping scenario. They pretended that they had found a product in the website of a particular brand and decided to purchase it. After the time they expected, they received the product. However, they did not really pay for the product or wait for the delivery time to receive the product. In addition, the researcher stayed beside the participant during the data collection, in case the participant needed any assistance in browsing the website or answering the question. The simulating experimental environment and artificial online shopping process may result in responses that differ from real-world behaviors. To verify the current study results, other research methods may be utilized in future research. For example, focus group interview can be conducted to investigate consumers' perception of brand image and product performance in a more detail way, understanding by which criteria they evaluate the image of apparel brands and the product performance in online shopping. A large scale survey can be conducted to examine if the current study results can be generalized to other populations.

University students were selected as the participants of the study because they are one of the major users of Internet (Pitkow & Kehoe, 1996). They search for product information on websites and spend a lot in online apparel shopping (Comegys & Brennan, 2003). However, university students have higher education, more experiences with computers and the Internet, and are in a similar age group. Their characteristics and behaviors may be different from other population groups. In addition, the sample size in an experimental design is usually small, and thus, the participants often cannot represent the general population and the result may not be able to generalize to a large population. In this study, only 120 undergraduate students from one university were recruited to participate in the study, and therefore, the results of the study may not be generalized to all college students. For future studies, a larger sample size and consumers from other population groups of different ages, education levels, and personal or household income can be used to verify the results of the current study.

Sweatshirts were chosen in this study as the garment sample. The advantage of selecting sweatshirts was the loose fit that participants' evaluation of product

performance would not be dominated by the fit. However, consumers' evaluating criteria of product performance may be varied for different product items. For example, future studies may utilize apparel products with various fit requirements (e.g., shirts, jeans) or for various occasions (e.g., formal party, interview, outdoor events, exercise) to examine if variables influence CS/D differ in various products with different fit requirements or for different occasions. Future researchers may also use accessories or shoes as samples to examine if the results will be consistent with the current study.

The relationship between invisible attribute expectancy disconfirmation and CS/D with the product was not significant. We suggest that the reasons may be the website in this study did not provide enough information about invisible attributes (i.e., fabric, fit, workmanship) for participants to form an accurate expectation at the purchase stage. Thus, the expectation could not be a significant comparison standard to determine satisfaction/dissatisfaction. Future researchers may need to investigate whether there is a significant relationship between invisible attribute expectancy disconfirmation and CS/D with the product if sufficient information about invisible attributes of the product provided.

This study emphasized on the relationships between brand image and CS/D with the product and with the brand in online shopping. However, CS/D at the product-receiving stage may also be influenced by the service of e-tailers (e.g., delivery time, customer service). Future studies of CS/D at the product-receiving stage in apparel online shopping may need to include the concepts of CS/D with the service to investigate the relationships between brand image and CS/D with the product, with the service, and with the brand.

REFERENCES

- Aaker, D. A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: The Free Press.
- Aaker, J. L. (1997). Dimension of brand personality. *Journal of Marketing Research*, 34(3), 347-356.
- Abercrombie and Fitch (n.d.). A & F Careers. Retrieved July 30, 2007, from <http://www.abercrombie.com>.
- Alba, J. W., & Hutchinson, J. W. (1987). Dimension of consumer expertise. *Journal of Consumer Research*, 13(1), 511-454.
- Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., & Wood, S. (1997). Interactive home shopping: Consumer, retailer, and manufacturer incentives to participate in electronic marketplaces. *Journal of Marketing*, 61(3), 38-53.
- Anderson, E. W., & Fornell, C. (1994). A customer satisfaction research prospectus. In R. T. Rust & Oliver, R. L. (Eds.), *Service quality: New directions in theory and practice* (pp.241-268). Thousand Oaks, CA: Sage Publications, Inc.
- Anderson, E. W., Fornell, C. & Lehman, D. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53-66.
- Anderson, R. E. (1973). Consumer dissatisfaction: The effects of disconfirmed expectancy on perceived product performance. *Journal of Marketing Research*, 10(1), 38-44.
- Ataman, B., & Ulengin, B. (2003). A note on the effect of brand image on sales. *Journal of Product and Brand Management*, 12(4), 237-250.
- Barksy, J. D. (1992). Customer satisfaction in the hotel industry: Meaning and measurement. *Hospitality Research Journal*, 16(1), 51-73.
- Baugh, D. F., & Davis, L. L. (1989). The effect of store image on consumers' perceptions of designer and private label clothing. *Clothing and Textiles Research Journal*, 7(3), 15-21.
- Berli, A., Martin, J. D., & Quintana, A. (2004). A model of customer loyalty in the retail banking market. *European Journal of Marketing*, 38(1/2), 253-275.

- Belleau, B. D., Summers, T. A., Xu, Y., & Pinel, R. (2007). Theory of reasoned action: Purchase intention of young consumers. *Clothing & Textiles Research Journal*, 25(3), 244-257.
- Bennett, R., & Rundle-Thiele, S. (2004). Customer satisfaction should not be the only goal. *Journal of Services Marketing*, 18(7), 514-523.
- Biel, A. L. (1992). How brand image drives brand equity. *Journal of Advertising Research*, 32(6), 6-13.
- Biel, A. L. (1993). Converting image into equity. In D. A. Aaker & Biel, A. (Eds.), *Brand equity and advertising*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-149.
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2001). *Consumer behavior* (9th ed.). New York: Harcourt College Publishers.
- Bloemer, J. M. M., & Kasper, H. D. P. (1995). The complex relationship between consumer satisfaction and brand loyalty. *Journal of Economic Psychology*, 16(2), 311-329.
- Blumberg, M. R. (2008, Jan/Feb), Reducing returns, maximizing loss prevention and validating warranty entitlement in the retail industry. *Reverse Logistics Magazine*, 9, 13.
- Bone, P. F., Shimp, T. A., & Sharma, S. (1990). Assimilation and contrast effects in product performance perceptions: Implications for public policy. *Journal of Public Policy and Marketing*, 9(1), 100-110.
- Bouchard, P. (2002, September 24). *Young female adolescents: Comeback of sex stereotypes*. Paper presented at the Chaire d'étude Claire-Bonenfant sur la condition féminine, Université Laval, Quebec City, Canada.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993). A dynamic process model of service quality: From expectations to behavior intensions. *Journal of Marketing Research*, 30(1), 7-27.
- Brown, P., & Rice, J. (1998). *Ready-to-wear apparel analysis*. Upper Saddle River, NJ: Merrill/Prentice Hall.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds), *Testing structural equation models* (pp. 445-455). Newbury Park, CA: Sage.

- Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Burke, R. R. (1997). Do you see what I see? The future of virtue shopping. *Journal of Academy of Marketing Science*, 25(4), 352-360.
- Burns, L. D., & Bryant, N. (1997). *The business of fashion*. New York: Fairchild.
- Carlsmith, J. M., & Aronson, E. (1963). Some hedonic consequences of the confirmation and disconfirmation of expectancies. *Journal of Abnormal and Social Psychology*, 66(2), 151-156.
- Chan, A. K. K., & Huang, Y. Y. (1997). Brand naming in China: A linguistic approach, *Marketing Intelligence & Planning*, 15(5), 227-234.
- Chen, J. S., & Ching, R. K. H. (2007). The effects of mobile customer relationship management on customer loyalty: Brand image does matter. *Proceedings of the 40th Hawaii International Conference on System Sciences*, Hawaii, 526, 151-160.
- Chen, Q., Clifford, S. J., & Wells, W. D. (2002). Attitude towards the site II: New information. *Journal of Advertising Research*, 42(2), 33-45.
- Chen-Yu, H. J. (1995). *Consumer satisfaction/dissatisfaction with the performance of ready-to-wear apparel products*. Unpublished doctoral dissertation, University of Minnesota, St. Paul.
- Chen-Yu, J., & Hong, K. (2006). How do dissatisfied apparel consumers respond? A comparison of college students in the U.S. and South Korea. *Journal of Family & Consumer Sciences*, 98(3), 20-25.
- Chen-Yu, J. H., Hong, K. H., & Lee, Y. (2001). A comparison of determinants of consumer satisfaction dissatisfaction with the performance of apparel products between South Korea and the United States. *International Journal of Consumer Studies*, 25(1), 62-71.
- Chen-Yu, H. J., Williams, G., & Kincade, D. H. (1999). Determinants of consumer satisfaction/dissatisfaction with the performance of apparel products. *Family and Consumer Sciences Research Journal*, 28(2), 167-192.
- Chung, J. E. (2002). *Modeling the differential effects of brand image and country-of-manufacture on Korean consumers' purchasing behavior of hybrid products*. Unpublished doctoral dissertation, Michigan State University, East Lansing.
- Churchill, G. A., Jr., & Suprenant, C. (1982). An investigation into the determinants of consumer satisfaction. *Journal of Marketing Research*, 19(4), 491-504.

- Comegys, C., & Brennan, M. L. (2003). Students' online shopping behavior: A dual-country perspective. *Journal of Internet Commerce* 2(2), 69-87.
- Cooper, D. R., & Emory, C. W. (1995). *Business research methods*. Homewood, IL: Richard D. Irwin.
- Corcoran, C. T. (2006, 10 July). Get your clicks - Shopping online is becoming easier, thanks to innovations in technology and consumer comfort levels. *Women's Wear Daily*, p.12B.
- Cox, J., & Dale, B. G. (2002). Key quality factors in Web site design and use: An examination. *International Journal of Quality & Reliability Management*, 19(6/7), 862-888.
- Cronin, J. J., & Taylor, S. A. (1992). Measuring service quality: A re-examination and extension. *Journal of Marketing*, 56(3), 56-68.
- Czepiel, J. A., Solomon, M. R., Suprenant, C. F., & Gutman, E. G. (1985). *Service encounters: An overview*. Lexington, MA: Lexington Books.
- d' Astous, A., & Saint-Louis, O. (2005). National versus store brand effects on consumer evaluation of a garment. *Journal of Fashion Marketing and Management*, 9(3), 306-317.
- Dagenais, D. L., & Duhaime, C. P. (1992). Estimating models of determination of consumer satisfaction: An alternative approach. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 5, 24-35.
- Danaher, P. J., & Mattsson, J. (1994). Customer satisfaction during the service delivery process. *European Journal of Marketing*, 28(5), 5-16.
- Day, R. L. (1982). The next step: Commonly accepted constructs in satisfaction and complaining research. In Ralph L. Day and H. Keith Hunt (Eds.), *International Fare in Consumer Satisfaction and Complaining Behavior* (pp.49-56). Bloomington, IN: School of Business, Indiana University.
- Degeratu, A. M., Rangaswamy, A., & Wu, J. (2000). Consumer choice behaviour in online and traditional supermarkets: The effects of brand name, price and other search attributes. *International Journal of Research in Marketing*, 17(1), 55-78.
- Dellaert, B., & Kahn, B. E. (1999). How tolerable is delay? Consumers' evaluations of Internet Web sites after waiting. *Journal of Interactive Marketing*, 13(1), 41-54.
- Ditcher, E. (1985). What's in an image? *Journal of Consumer Marketing*, 2(1), 75-81.

- Dobni, D., & Zinkhan, G. M. (1990). In search of brand image: A foundation analysis. *Advances in Consumer Research*, 17, 110-119.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307-319.
- Duhaime, C. (1988). Consumer satisfaction with distribution system for durable product. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 1, 53-60.
- Eckman, M., Damhorst, M. L., & Kadolph, S. J. (1990). Toward a model of the in-store purchase decision process: Consumer use of criteria for evaluating women's apparel. *Clothing and Textiles Research Journal*, 8(2), 13-22.
- Eighmey, J., & McCord, L. (1998). Adding value in the information age: Uses and gratifications of sites on the World Wide Web. *Journal of Business Research*, 41(3), 187-194.
- Ekinci, Y. (2002). A review of theoretical debates on the measurement of service quality: Implications for hospitality research. *Journal of Hospitality & Tourism Research*, 26(3), 199-216.
- Ekinci, Y. (2003). Which comparison standard should be used for service quality and customer satisfaction? *Journal of Quality Assurance in Hospitality & Tourism*, 4(3/4), 61-75.
- Engel, J. F., & Blackwell, R. D. (1982). *Consumer behavior* (4th ed.). New York: Dryden Press.
- Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1993). *Consumer behavior* (7th ed.). New York: Dryden Press.
- Engel, J., Blackwell, R. D., & Miniard, P. W. (1995). *Consumer behavior* (8th ed.). New York: Dryden Press.
- Esch, F. R., Langner, T., Schmitt, B. H., & Geus, P. (2006). Are brands forever? How brand knowledge and relationships affect current and future purchases. *Journal of Product & Brand Management*, 15(2), 98-105.
- Estelami, H., & Maeyer, P. D. (1997). A visual approach for identifying consumer satisfaction segments. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 10, 104-115.

- Faircloth, J. B., Capella, L. M., & Alford, B. L. (2001). The effect of brand attitude and brand image on brand equity. *Journal of Marketing Theory and Practice*, 9(3), 61-75.
- Fan, X. Thompson, B., & Wang, L. (1999). Effects of sample size, estimation methods, and model specification on structural equation modeling fit indexes. *Structural Equation modeling: A Multidisciplinary Journal*, 6(1), 56-83.
- Festinger, L. (1957). *A theory of cognitive dissonance* Stanford, CA: Stanford University Press.
- Festinger, L. (1962). Cognitive dissonance. *Scientific American*, 7(2), 93-102.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(1), 6-21.
- Forrester Research, Inc. (2006, October 12). *US eCommerce: Five-year forecast and data overview*. Retrieved September 9, 2007, from <http://www.forrester.com/Research/Document/Excerpt/0,7211,40248,00.html>.
- Forsythe, S. M. (1991). Effect of private, designer, and national brand names on shoppers' perception of apparel quality and price. *Clothing and Textiles Research Journal*, 9(2), 1-6.
- Fowler, D., & Clodfelter, R. (2001). A comparison of apparel quality: Outlet stores versus department stores. *Journal of Fashion Marketing and Management*, 5(1), 57-66.
- Fram, E. H., & Grady, D. B. (1995). Internet buyers: Will the surfers become buyers? *Direct Marketing*, 58(6), 63-65.
- French, T., & O'Cass, A. (2001). Internet users' adoption of Web retailing: User and product dimensions. *Journal of Product & Brand Management*, 10(6), 361-381.
- Gardner, B. B., & Levy, S. J. (1955). The product and the brand. *Harvard Business Review*, 33(2), 33-39.
- Ghose, S., & Dou, W. (1998). Interactive functions and their impacts on the appeal of Internet presence sites. *Journal of Advertising Research*, 38(2), 29-43.
- Giese, J., & Cate, A. (2000). Defining customer satisfaction. *Academy of Marketing Science Review*, 2000(1), 1-3.

- Gilly, M. C., Cron, W. L., & Barry, T. E. (1982). The expectations-performance comparison process: An investigation of expectation types. In R. L. Day & Hunt, H. K. (Eds.), *International Fare in Consumer Satisfaction and Complaining Behavior* (pp.10-16). Bloomington, IN: Indiana University.
- Goldsmith, R. E., & McGregor, S. (1999). Electronic commerce: An emerging issue in consumer education. *Journal of Consumer Studies and Home Economics*, 23(3), 197-206.
- Gommans, M., Krishnan, K. S., & Scheffold, K. B. (2001). From brand loyalty to e-loyalty: A conceptual framework. *Journal of Economic and Social Research*, 3(1), 43-58.
- Goode, M. M. H. (2001). Predicting consumer satisfaction from CD players. *Journal of Consumer Behaviour*, 1(4), 323-335.
- Govers, P.C.M., & Mugge, R. (2004), "I love my jeep, because it's tough like me": The effect of product-personality congruence on product attachment. *Proceedings of the Fourth International Conference on Design and Emotion*, Turkey, 4, 1-15.
- Govers, P. C. M., & Schoormans, F. P. L. (2005). Product personality and its influence on consumer preference. *Journal of Consumer Marketing*, 22(4), 189-197.
- Graeff, T. R. (1997). Consumption situations and the effects of brand image on consumers' brand evaluations. *Psychology and Marketing*, 14(1), 49-70.
- Gray, D. E. (2004). *Doing research in the real world*. Thousand Oaks, CA: Sage Publications, Inc.
- Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of Retailing*, 74(3), 331-352.
- Gupta, S., & Chatterjee, R. (1997). Consumer and corporate adoption of the World Wide Web as a commercial medium. In R. A. Peterson (Ed.), *Electronic marketing and the consumer* (pp.123-138). Thousand Oaks, CA: Sage Publications.
- Ha, H. Y. (2004). Factors influencing consumer perceptions of brand trust online. *Journal of Product & Brand Management*, 13(5), 329-342.
- Hair, J. F., Tatham, R. L., Anderson, R. E., & Black, W. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- Halliday, J. (1996). Chrysler brings out brand personalities with '97 ads. *Advertising Age*, 67(40), 3-6.

- Halstead, D., Hartmann, D., & Schmidt, S. L. (1994). Multisource effects on the satisfaction process. *Journal of Academy of Marketing Science*, 22(2), 114-129.
- Han, J. W. (2006). *The impact of self-concept/product-image congruity and functional congruity on brand preference: Three product categories*. Unpublished doctoral dissertation, Tallahassee, Florida State University.
- Harris, F., & Chernatony, L. d. (2001). Corporate branding and corporate brand performance. *European Journal of Marketing*, 35(3/4), 441-456.
- Hatch, K. L., & Roberts, J. A. (1985). Use of intrinsic and extrinsic cues to access textile product quality. *Journal of Consumer Studies and Home Economics*, 9(4), 341-357.
- Hausknecht, D. R. (1990). Measurement scales in consumer satisfaction/dissatisfaction. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 3, 1-11.
- Heiman, A., & Muller, E. (1996). Using demonstration to increase new product acceptance: Controlling demonstration time. *Journal of Marketing Research*, 33(4), 422-430.
- Heisey, F. L. (1990). Perceived quality and predicted price: Use of the minimum information environment in evaluating apparel *Clothing & Textiles Research Journal*, 8(4), 22-28.
- Helgeson, J. G., & Supphellen, M. (2004). A conceptual and measurement comparison of self-congruity and brand personality: The impact of socially desirable responding. *International Journal of Market Research*, 46(2), 205-237.
- Hem, L. E., & Iversen, N. M. (2004). How to develop a destination brand logo: A qualitative and quantitative approach. *Scandinavian Journal of Hospitality and Tourism*, 4(2), 83-106.
- Herzog, H. (1963). Behavioral science concepts for analyzing the consumer. In P. Bliss (Ed.), *Marketing and the behavioral sciences* (pp.76-86). Boston: Allyn and Bacon.
- Hill, N., Brierley, J., & MacDougall, R. (2003). *How to measure customer satisfaction* (2nd ed.). Hampshire, UK: Gower Publishing, Ltd.
- Ho, C., & Wu, W. (1999). Antecedents of customer satisfaction on the Internet: An empirical study of online shopping. *Proceedings of the Thirty-Second Hawaii International Conference on System Sciences, USA*, 5, 5027-5035.

- Hogg, M. K., Bruce, M., & Hill, A. J. (1998). Fashion brand preferences among young consumers. *International Journal of Retail and Distribution Management*, 26(8), 293-300.
- Hogg, M. K., & Savolainen, M. H. (1999). Exploring the impact of public and private contexts on self-image and product/brand-image congruity. *New Product Development and Innovation Management*, 1(2), 155-166.
- Holak, S. L., Lehmann, D. R., & Sultan, F. (1987). The role of expectations in the adoption of innovative consumer durables: Some preliminary evidence. *Journal of Retailing*, 63(3), 243-259.
- Holden, S. J. S., & Vanhuele, M. (1999). Know the name, forget the exposure: Brand familiarity versus memory of exposure context. *Psychology & Marketing*, 16(6), 479-496.
- Holstius, K., & Paltschik, M. (1983). Brand names and perceived value. *European Research*, 11(4), 151-156.
- Hong, K., & Rucker, M. (1995). The role of product type and consumer fashion involvement in clothing satisfaction. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 8, 198-207.
- Hou, Y. (2005). *Service quality of online apparel retailers and its impact on customer satisfaction, customer trust and customer loyalty*. Unpublished doctoral dissertation, University of North Carolina, Greensboro.
- Howard, J. A., & Sheth, J. N. (1969). *The theory of buyer behavior*. New York: John Wiley & Sons, Inc.
- Hoyer, W. D., & Brown, S. P. (1990). Effects of brand awareness on the choice for a common, repeat-purchase product. *Journal of Consumer Research*, 17(2), 141-148.
- Hu, L. T., & Bentler, P. M. (1995). *Evaluating model fit*. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp.76-99). Thousand Oaks, CA: Sage.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Hui, M. K., Thakor, M. V., & Gill, R. (1998). The effect of delay type and service stage on consumers' reactions to waiting. *Journal of Consumer Research*, 24(4), 469-479.

- Hui, M. K., & Zhou, L. (1996). How does waiting duration information influence customers' reactions to waiting for services? *Journal of Applied Social Psychology, 26*(19), 1702-1717.
- Jamal, A., & Goode, M. H. (2001). Consumer and brands: A study of the impact of self-image congruence on brand preference and satisfaction. *Marketing Intelligence and Planning, 19*(7), 482-492.
- Jang, N., Dickerson, K. G., & Hawley, J. M. (2005). Apparel product development: Measures of apparel product success and failure. *Journal of Fashion Marketing and Management, 9*(2), 195-206.
- Janiszewski, C., & van Osselaer, S. M. J. (2000). A connectionist model of brand-quality associations. *Journal of Marketing Research, 37*(3), 331-350.
- Jarvenpaa, S. L., & Todd, P. A. (1997). Consumer reactions to electronic shopping on the World Wide Web. *International Journal of Electronic Commerce, 1*(2), 59-88.
- Jeffrey, D. (1999). Study says 2 of 3 consumers still leery of Web purchasing. *Billboard, 111*(36), 85.
- Jiang, P., & Rosenbloom, B. (2005). Customer intention to return online: Price perception, attribute-level performance, and satisfaction unfolding over time. *European Journal of Marketing, 39*(1/2), 150-174.
- Jones, M. A., & Suh, J. (2000). Transaction-specific satisfaction and overall satisfaction: An empirical analysis. *Journal of Services Marketing, 14*(2), 147-159.
- Jun, M., Yang, Z., & Kim, D. (2004). Customers' perceptions of online retailing service quality and their satisfaction. *International Journal of Quality & Reliability Management, 21*(6), 817-840.
- Kalwani, M. U., & Yim, C. K. (1992). Consumer price and promotion expectations: An experimental study. *Journal of Marketing Research, 29*(1), 90-100.
- Kapferer, J. N. (1991). *Brand, capital or firms*. Paris: Les Editions d'Organisation.
- Kapferer, J. N. (1992). *Strategic brand management: New approaches to creating and evaluating brand equity*. New York: The Free Press.
- Kapferer, J. N., & Laurent, G. (1983). Brand sensitivity. *Adolescence, 18*(71), 659-674.
- Kapferer, J. N., & Laurent, G. (1992). *Brand sensitivity*. Paris: Les Editions d'Organisation.

- Kasten, R., & Weintraub, Z. (1999). Rating errors and rating accuracy: A field experiment. *Human Performance*, 12(2), 137-153.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1-22.
- Keller, K. L. (1998). *Strategic brand management, in building, measuring and managing brand equity* (1st ed.). Upper Saddle River, NJ: Prentice Hall, Pearson Education, Inc.
- Keller, K. L. (2003). *Strategic brand management, in building, measuring and managing brand equity* (2nd ed.). Upper Saddle River, NJ: Prentice Hall, Pearson Education, Inc.
- Kennedy, J. R., & Thirkell, P. C. (1988). An extended perspective on the antecedents of satisfaction. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 1, 2-9.
- Kent, R. J., & Allen, C. T. (1994). Competitive interference effects in consumer memory for advertising: The role of brand familiarity. *Journal of Marketing*, 58(3), 97-105.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2003). A study of the effect of consumer trust on consumer expectations and satisfaction: the Korean experience. *Proceedings of the 5th ACM International Conference on Electronic Commerce*, Pittsburgh, Pennsylvania, 50, 310-315.
- Kim, M., Kim, J., & Lennon, S. J. (2006). Online service attributes available on apparel retail web sites: An E-S-QUAL approach. *Managing Service Quality*, 16(1), 51-77.
- Kolter, P. (1988). *Marketing management: Analysis, planning and control*. Englewood Cliffs, NJ: Prentice Hall.
- Kressmann, F., Sirgy, M. J., Herrmann, A., Huber, F., Huber, S., & Lee, D. J. (2006). Direct and indirect effects of self-image congruence on brand loyalty. *Journal of Business Research*, 59(2006), 955-964.
- Lachance, M. J., Beaudoin, P., & Robitaille, J. (2003). Adolescents' brand sensitivity in apparel: Influence of three socialization agents. *International Journal of Consumer Studies*, 27(1), 47-57.
- Laforet, S. (2007). British grocers' brand extension in financial services. *Journal of Product & Brand Management*, 16(2), 82-97.

- Lam, J. C. Y., & Lee, M. K. O. (1999). A model of Internet consumer satisfaction: Focusing on the Website design. *Proceedings of the Fifth Americas Conference on Information Systems, USA, 1999*, 526-529.
- Lee, H. H. (2004). *Antecedents and consequences of satisfaction with a mass customized Internet apparel shopping site*. Unpublished doctoral dissertation, Iowa State University, Ames.
- Lee, M., & Johnson, K. P. (2002). Exploring differences between Internet apparel purchasers, browsers, and non-purchasers. *Journal of Fashion Marketing and Management*, 6(2), 146-157.
- Lennon, S. J., & Fairhurst, A. E. (1994). Categorization of the quality concept. *Home Economics Research Journal*, 22(3), 267-285.
- Li, X. (2004). *How brand knowledge influences consumers' purchase intentions*. Unpublished doctoral dissertation, Auburn University, Auburn.
- Liechty, M., & Churchill, G.A. (1979). Conceptual insights into consumer satisfaction with services. *Educator's Conference Proceedings*, Chicago: American Marketing Association, USA, 94, 509-515.
- Liljander, V., & Strandvik, T. (1993). Estimating zones of tolerance in perceived service quality and perceived service value. *International Journal of Service Industry Management*, 4(2), 6-28.
- Lim, H., & Dubinsky, A. J. (2004). Consumers' perceptions of e-shopping characteristics: An expectancy-value approach. *Journal of Service Marketing*, 18(7), 500-513.
- Lindsay, M. (1990). Establish brand equity through advertising. *Marketing News*, 24(2), 16.
- Liskey-Fitzwater, M., Moore, C. L., & Gurel, L. M. (1993). Clothing importance and self-perception of female adolescents with and without scoliosis. *Clothing and Textiles Research Journal*, 11(3), 16-22.
- Lo, Z. W. (2001). *The study of the impact of product categories, price discount and brand awareness on consumers' brand evaluation and repurchase intention*. Unpublished master thesis. Business Administration and Graduate institute of Management, Providence University, Taiwan.
- Lohse, G. L., & Spiller, P. (1998). Electronic shopping: Designing online stores with effective customer interfaces has a critical influence on traffic and sales. *Communications of the ACM*, 41(7), 81-87.

- Ludvigson, S. C. (2004). Consumer confidence and consumer spending. *Journal of Economic Perspectives*, 18(2), 29-50.
- Lynch, J. G., & Ariely, D. (2000). Wine online: Search cost affect competition on price, quality, and distribution. *Marketing Science*, 19(1), 83-103.
- MacInnis, D. J., Moorman, C., & Jaworski, B. J. (1991). Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads. *Journal of Marketing*, 55(4), 32-53.
- Madu, C. N., & Madu, A. A. (2002). Dimensions of e-quality. *International Journal of Quality & Reliability Management*, 19(3), 246-258.
- Malhotra, N. K. (1988). Self-concept and product choice: An integrated perspective. *Journal of Economic Psychology*, 9(1), 1-28.
- Maloney, D. (2001). Achieve new balance. *Modern Material Handling*, 56(11), 38-41.
- Manes, S. (1997). Web sites: Slow by design? *Informationweek*, 4(642), 124.
- McLean, F. P., Roper, L. L., & Smothers, R. (1986). Imported versus domestic blouses: Women's preferences and purchase motives. *Home Economics Research Journal*, 14(3), 306-313.
- Meenaghan, T. (1995). The role of advertising in brand image development. *Journal of Product & Brand Management*, 4(4), 23-34.
- Merriam-Webster Dictionary Online (n.d.). Online Search. Retrieved March 15, 2008, from <http://www.merriam-webster.com>.
- Miller, J. A. (1977). Studying satisfaction, modifying models, eliciting expectations, posing problems, and making meaningful measurements. In H. K. Hunt (Ed.), *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction* (pp.72-91). Bloomington, IN: School of Business, Indiana University.
- Moss, G., Gunn, R., & Heller, J. (2006). Some men like it black, some women like it pink: Consumer implications of differences in male and female website design. *Journal of Consumer Behaviour*, 5(4), 328-341.
- Murray, D., & Howat, G. (2002). The relationships among service quality, value, satisfaction, and future intentions of customers at an Australian sports and leisure centre. *Sport Management Review*, 5(1), 25-43.
- Nandan, S. (2005). An exploration of the brand identity-brand image linkage: A communications perspective. *Journal of Brand Management*, 12(4), 264-278.

- Neal, W. D., & Bathe, S. (1997). Using the value equation to evaluate campaign effectiveness. *Journal of Advertising Research*, 37(3), 80-85.
- Nelson, M. R., & Devanathan, N. (2006). Brand placements Bollywood style. *Journal of Consumer Behaviour*, 5(3), 211-221.
- Nitse, P. S., Parker, K. R., Krumwiede, D., & Ottaway, T. (2004). The impact of color in the e-commerce marketing of fashions: An exploratory study. *European Journal of Marketing*, 38(7), 898-915.
- Oliver, R. L. (1976). Hedonic reactions to the disconfirmation of product performance expectations: Some moderating conditions. *Journal of Applied Psychology*, 61(2), 246-250.
- Oliver, R. L. (1980a). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17(4), 460-469.
- Oliver, R. L. (1980b). Theoretical bases of consumer satisfaction research: Review, critique, and future direction. In C.W. Jr Lamb & Dunne, P.M. (Eds.), *Theoretical Developments in Marketing*, (pp.206-210), American Marketing Association, Chicago, IL.
- Oliver, R. L. (1981). Measurement and evaluation of satisfaction processes in retail settings. *Journal of Retailing*, 57(3), 25-48.
- Oliver, R. L. (1993). Cognitive, affective, and attribute bases of the satisfaction response. *Journal of Consumer Research*, 20(3), 418-430.
- Oliver, R. L. (1997). *Satisfaction: A behavior perspective on the consumer*. New York: McGraw-Hill.
- Oliver, R. L., & DeSarbo, W. S. (1988). Response determinants in customers satisfaction judgments. *Journal of Consumer Research*, 14(4), 495-507.
- O'Neal, G. S. (1992). A conceptual model of consumer perception of apparel quality. *Journal of Theory in Home Economics*, 2(1), 1-25.
- O'Neill, S., & Chu, J. (2001). Online returns management strategies. *Executive Strategy Report*, IBM Corporation.
- Onkvisit, S., & Shaw, J. (1987). Self-concept and image congruence: Some research and managerial implications. *Journal of Consumer Marketing*, 4(1), 13-23.
- Page, C., & Lepkowska-White, E. (2002). Web equity: A framework for building consumer value in online companies. *Journal of Consumer Marketing*, 19(2), 231-248.

- Park, C. W., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *Journal of Marketing*, 50(4), 621-635.
- Park, J., & Kim, J. (2007). The importance of perceived consumption delay in Internet shopping: Time-related information, time risk, attitude, and purchase intention. *Clothing & Textiles Research Journal*, 25(1), 24-41.
- Park, J., & Stoel, L. (2002). Apparel shopping on the Internet: Information availability on US apparel merchant Web sites. *Journal of Fashion Marketing and Management*, 6(2), 158-176.
- Park, J., & Stoel, L. (2005). Effect of brand familiarity, experience and information on online apparel purchase. *International Journal of Retail & Distribution Management*, 33(2), 148-160.
- Parker, C., & Mathews, B. P. (2001). Customer satisfaction: Contrasting academic and consumers' interpretations. *Marketing Intelligence & Planning*, 19(1), 38-44.
- Peter, J. P., & Olson, J. C. (2005). *Consumer behavior & marketing strategy* (7th ed.). NY: McGraw-Hill/Irwin.
- Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the implication of the Internet for consumer marketing. *Journal of Academy of Marketing Science*, 25(4), 429-346.
- Peterson, R. A., & Jolibert, A. J. P. (1995). A meta-analysis of country-of-origin effects. *Journal of International Business Studies*, 26(4), 883-896.
- Pitkow, J. E., & Kehoe, C. M. (1996). Emerging trends in the www user population. *Communications of the ACM*, 39(6), 106-108.
- Pitta, D. A., & Kutsanis, L. P. (1995). Understanding brand equity for successful brand extension. *Journal of Consumer Marketing*, 12(4), 51-64.
- Phillip, M. V., & Suri, R. (2004). Impact of gender differences on the evaluation of promotional emails. *Journal of Advertising Research*, 44(4), 360-368.
- Prakash, V. (1984). Validity and reliability of the confirmation of expectations paradigm as a determinant of consumer satisfaction. *Journal of the Academy of Marketing Science*, 12(4), 63-76.
- Pritchard, M. P., Havitz, M. E., & Howard, D. R. (1999). Analyzing the commitment-loyalty link in service contexts. *Journal of the Academy of Marketing Science*, 27(3), 333-348.

- Randall, T., Ulrich, K., & Reibstein, D. (1998). Brand equity and vertical product line extent. *Marketing Science*, 17(4), 356-379.
- Rao, A. R., & Ruekert, R. W. (1994). Brand alliances as signals of product quality. *Sloan Management Review*, 4(1), 87-97.
- Render, B., & O'Connor, T. S. (1976). The influence of price, store name, and brand name on perception of product quality. *Journal of the Academy of Marketing Science*, 4(4), 722-730.
- Rhee, Y. J. (2006). *Online impulse buying behavior with apparel products: Relationships with apparel involvement, website attributes, and product category/price*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg, VA.
- Russell-Bennett, R., McColl-Kennedy, J. R., & Coote, L. V. (2007). Involvement, satisfaction, and brand loyalty in a small business services setting. *Journal of Business Research*, 60(2007), 1253-1260.
- Rust, R. T. & Zahorik, A. J. (1993). Customer satisfaction, customer retention and market share. *Journal of Retailing*, 69(2), 193-215.
- Roos, M. W. M. (2005). TV weather forecast or look through the window? Expert and consumer expectations about macroeconomic conditions. *International Review for Social Sciences*, 58(3), 415-437.
- Sahdev, A., & Gautama, P. (2007). Are consumer perceptions of brand affected by materialism? *Proceedings of International Conference on Marketing and Society*, India, Indian Institute of Management Kozhikode, 6, 459-462.
- Santos, J., & Boote, J. (2003). A theoretical exploration and model of consumer expectations, post-purchase affective states and affective behaviour. *Journal of Consumer Behaviour*, 3(2), 142-156.
- Schiffman, L. G., & Kanuk, L. L. (1983). *Consumer behavior*. NJ: Prentice-Hall.
- Schommer, J. C. (1996). Roles of normative and predictive expectations in evaluation of pharmacist consultation services. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 9, 86-94.
- Selz, D., & Schubert, P. (1998). Web assessment: A model for the evaluation and the assessment of successful electronic commerce applications. *Proceedings of the Thirty-First Hawaii International Conference on System Sciences, USA*, 4, 222-231.

- Sen, S., & Johnson, E. J. (1997). Mere-possession effects without possession in consumer choice. *Journal of Consumer Research*, 24(2), 105-117.
- Shankar, V., Rangaswamy, A., & Pusateri, M. (2001). The online medium and price sensitivity. Unpublished manuscript, University of Maryland at College Park, MD.
- Shim, S., & Koh, A. (1997). Profiling adolescent consumer decision-making styles: Effects of socialization agents and social structural variables. *Clothing and Textiles Research Journal*, 15(1), 50-59.
- Shim, S., & Mahoney, M. Y. (1992). Differentiation of satisfied users and dissatisfied users of in-home electronic shopping mode: An exploratory study. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 5, 192-200.
- Sirgy, M. J. (1982). Self-concept in consumer behavior: A critical review. *Journal of Consumer Research*, 9(3), 287-300.
- Sirgy, M. J., Grewal, D., Mangleburg, T., Park, J., Chon, K., Claiborne, C. B., Johar, J. S., & Berkman, H. (1997). Assessing the predictive validity of two methods of self-image congruence. *Journal of the Academy of Marketing Science*, 25(3), 229-241.
- Smith, R. A. (2008, March 13). Fashion online: Retailers tackle the gender gap. *The Wall Street Journal*. New York: NY, D.1.
- Smith, R. E., & Swinyard, W. R. (1988). Cognitive response to advertising and trial: Belief strength, belief confidence and product curiosity. *Journal of Advertising*, 17(3), 3-14.
- Spreng, R. A., & Chiou, J. S. (2002). A cross-cultural assessment of the satisfaction formation process. *European Journal of Marketing*, 36(7/8), 829-955.
- Spreng, R. A., MacKenzie, S. B., & Olshavsky, R. W. (1996). A reexamination of the determinants of consumer satisfaction. *Journal of Marketing*, 60(3), 15-32.
- Spreng, R. A., & Mackoy, R. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, 72(2), 201-214.
- Spreng, R. A., & Page, T. J. (2001). The impact of confidence in expectations on consumer satisfaction. *Psychology & Marketing*, 18(11), 1187-1204.
- Spreng, R. A., & Page, T. J. (2003). A Test of Alternative Measures of Disconfirmation. *Decision Sciences*, 34(1), 31-62.
- Structural Equation Modeling with Amos* (2005). Chicago, IL: SPSS, Inc.

- Summers, J. O. & Granbois, D. H. (1977). Predictive and normative expectations in consumer dissatisfaction and complaining behavior. *Advances in Consumer Research*, 4, 155-158.
- Swan, J. E., & Combs, L. J. (1976). Product performance and consumer satisfaction: A new concept. *Journal of Marketing*, 40(2), 25-33.
- Swan, J. E., & Trawick, I. F. (1980). Satisfaction related to predictive vs. desired expectations. In R. L. Day & Hunt, K. (Eds.), *Refining Concepts and Measures of Consumer Satisfaction and Complaining Behavior*, (pp.7-12). Bloomington, IN: Indiana University.
- Swan, J. E., Trawick, I. F., & Carroll, M. G. (1981). Satisfaction related to predictive, desired expectations: A field study. In R. L. Day & Hunt, H. K. (Eds.), *New Findings on Consumer Satisfaction and Complaining* (pp.15-22). Bloomington, IN: Indiana University Press.
- Sweeney-MacGillivray, M. S., & Wilson, J. D. (1997). Clothing and appearance among early, middle and late adolescents. *Clothing and Textiles Research Journal*, 15(1), 43-49.
- Swinker, M. E., & Hines, J. D. (2006). Understanding consumers' perception of clothing quality: A multidimensional approach. *International Journal of Consumer Studies*, 30(2), 218-223.
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction an initial examination. *Journal of Retailing*, 76(3), 309-322.
- Taylor, S. (1995). The effects of filled waiting time and service provider control over the delay on evaluations of service. *Journal of the Academy of Marketing Science*, 23(1), 38-48.
- Then, N. K., & DeLong, M. R. (1999). Apparel shopping on the Web. *Journal of Family and Consumer Sciences*, 91(3), 65-68.
- Thomas, J. B., Cassill, N. L., & Forsythe, S. M. (1991). Underlying dimensions of apparel involvement in consumers' purchase decisions. *Clothing & Textiles Research Journal*, 9(3), 45-48.
- Tse, D. K., & Wilton, P. C. (1988). Models of consumer satisfaction formation: An extension. *Journal of Marketing Research*, 25(2), 204-212.
- Van Gelder, S. (2003). *Global brand strategy: Unlocking brand potential across countries, culture and market*. London: Kogan Page.

- Van Riel, A. C. R., Liljander, V., & Jurriens, P. (2001). Exploring consumer evaluations of e-services: A portal site. *International Journal of Service Industry Management*, 12(4), 359-377.
- Wang, S., Wang, S., & Wang, M. T. (2006). Shopping online or not? Cognition and personality matters. *Journal of Theoretical and Applied Electronic Commerce Research*, 1(3), 68-80.
- Ward, M. R., & Lee, M. J. (2000). Internet shopping, consumer search and product branding. *Journal of Product & Brand Management*, 9(1), 6-18.
- Weinberg, B. D. (2000). Don't keep your Internet customers waiting too long at the (virtual) front door. *Journal of Interactive Marketing*, 14(1), 30-38.
- Westbrook, R. A. & Oliver, R. L. (1981). Developing better measures of consumer satisfaction: Some preliminary results. *Advances in Consumer Research*, 8, 94-99.
- Wilkie, W., & Pesssmier, E. (1973). Issues in marketing's use of multi-attribute models. *Journal of Marketing*, 10(4), 428-441.
- Wilson, J. D., & Sweeney-MacGillivray, M. S. (1998). Self-perceived influences of family, friends, and media on adolescent clothing choice. *Family and Consumer Sciences Research Journal*, 26(4), 425-443.
- Woodruff, R. B., Cadotte, E. R., & Jenkins, R. L. (1983). Modeling consumer satisfaction processes using experience-based norms. *Journal of Marketing Research*, 20(3), 296-304.
- Workman, J. E. (1990). Effects of fiber content labeling on perception of apparel characteristics. *Clothing and Textiles Research Journal*, 8(3), 19-24.
- Xu, Y., & Paulins, V. A. (2005). College students' attitudes toward shopping online for apparel products: Exploring a rural versus urban campus. *Journal of Fashion Marketing and Management*, 9(4), 420-433.
- Yang, C. C. (2003). *A study of product innovation, brand image, price impact on perceived value in woman's underwear market*. Unpublished master thesis. Department of Textiles and Clothing, Fu Jen Catholic University, Taiwan.
- Yang, Z., Peterson, R. T., & Huang, L. (2001). Taking the pulse of Internet pharmacies. *Marketing Health Services*, 21(2), 5-10.
- Yi, Y. (1990). *A critical review of consumer satisfaction*. Chicago, IL: American Marketing Association.

- Yoo, B., & Donthu, N. (2001). Developing a scale to measure the perceived quality of Internet shopping sites (SITEQUAL). *Quarterly Journal of Electronic Commerce*, 2(1), 31-47.
- Yoon, T., & Ekinici, Y. (2003). An examination of the SERVQUAL dimensions using the Guttman scaling procedure. *Journal of Hospitality & Tourism Research*, 27(1), 3-23.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1993). The nature and determinants of customer expectations of service. *Journal of the Academy of Marketing Science*, 21(1), 1-12.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.
- Zeithaml, V. A., & Bitner, M. J. (2000). *Service marketing: Integrating customer focus across the firm*. Boston, MA: McGraw-Hill.
- Zinkhan, G. M., & Martin, C. R. J. (1987). Brand names and inferential beliefs: Some insights on naming new products. *Journal of Business Research*, 15(2), 157-172.
- Zinkhan, G. M., & Prenshaw, P. J. (1994). Good life images and brand name associations: Evidence from Asia, America, and Europe. *Advances in Consumer Research*, 21, 496-500.

APPENDIXES

Research Participants Needed!!

Purpose of Study:

To examine the role of brand image in consumer satisfaction with apparel online shopping



- ❖ **Just browse a website, try on a sweatshirt and complete a questionnaire, you have the chance to win 25 dollars**
- ❖ **Every 10 participants have a drawing**
- ❖ **Make an appointment RIGHTNOW!!**

Celine Lin
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Appendix B -- Survey for Choosing Brand Names to Create Different Levels of Brand Image

This is a research about consumers' perception of apparel brand image.

Please evaluate the following brands by circling the number from 1 to 6 that best reflects your evaluation of brand image (“1” for the lowest brand image and “6” for the highest brand image).

If you do not know the brand, you can circle the number of “0”.

	Don't Know	Low		High
Abercrombie & Fitch -----	0	1	2 3 4	5 6
Adidas -----	0	1	2 3 4	5 6
Aéropostale -----	0	1	2 3 4	5 6
American Eagle -----	0	1	2 3 4	5 6
Armani Exchange -----	0	1	2 3 4	5 6
=====				
Champion -----	0	1	2 3 4	5 6
Forever 21 -----	0	1	2 3 4	5 6
Gap -----	0	1	2 3 4	5 6
Hanes -----	0	1	2 3 4	5 6
Hollister Co.-----	0	1	2 3 4	5 6
=====				
J. Crew -----	0	1	2 3 4	5 6
Land's End -----	0	1	2 3 4	5 6
Nike -----	0	1	2 3 4	5 6
Old Navy -----	0	1	2 3 4	5 6
Reebok -----	0	1	2 3 4	5 6

Appendix C -- Survey for Choosing Sweatshirts to Create Different Levels of Product Performance

This research is about consumers' evaluations of sweatshirts. The brand name/logo is intentionally taken off to avoid influencing your evaluation. Please omit the torn label or stickers on the garment. Please examine the garment and answer the question by circling the number that reflecting your evaluation. There is no right or wrong answer, please **DO NOT DISCUSS** your evaluation with others. It is your opinion that is important to us.

Thank you for your participation!

Hsiao-Ling (Celine) Lin
Dr. Jessie Chen-Yu

Sweatshirt
80 % Cotton, 20% Polyester
Machine Wash

Question:

My evaluation of this sweatshirt is ____.

			Terrible						Excellent
			1	2	3	4	5	6	

Appendix D -- Size Charts for Sample Sweatshirts

A. Men's Sweatshirts

High-quality Sweatshirts (Saddlebred)				
Size	Chest	Sleeve	Body	Quantity
M	38-40	34-35	25	1
L	42-44	35-36	26	2
XL	46-48	36-37	27	2
XXL	50-52	37-38	28	1

Low-quality Sweatshirts (Jerzees)				
Size	Chest	Sleeve	Body	Quantity
M	38-40	33-34	23	1
L	42-44	34-35	24	2
XL	46-48	35-36	25	2
XXL	50-52	36-37	26	1

B. Women's Sweatshirts

High-quality Sweatshirts (Kim Rogers)				
Size	Chest	Sleeve	Body	Quantity
M	34-36	31-32	23	1
L	38-40	33-34	24	2
XL	42-44	35-36	25	2
XXL	46-48	37-38	26	1

Low-quality Sweatshirts (Jerzees)				
Size	Chest	Sleeve	Body	Quantity
M	34-36	30-31	22	1
L	38-40	32-33	23	2
XL	42-44	34-35	24	2
XXL	46-48	36-37	25	1

Appendix E.1 -- Web Page for Higher Brand Image Group (Men's Sweatshirt)

Main Page

The screenshot shows a Microsoft Internet Explorer browser window displaying the Abercrombie & Fitch website. The browser's address bar shows the URL <http://www.abcrombieandfitch.com/>. The website has a yellow background. At the top left, the Abercrombie & Fitch logo is displayed. Below the logo, the text "Crewneck Sweatshirt" is centered. To the right of this text is a photograph of a dark gray crewneck sweatshirt. Below the photograph is a link that says "View a large image". To the right of the product details is a vertical list of links: "Ethics Policy", "Ordering & Delivery Process", "Shipping & Return Policy", and "Customer Service".

Abercrombie & Fitch

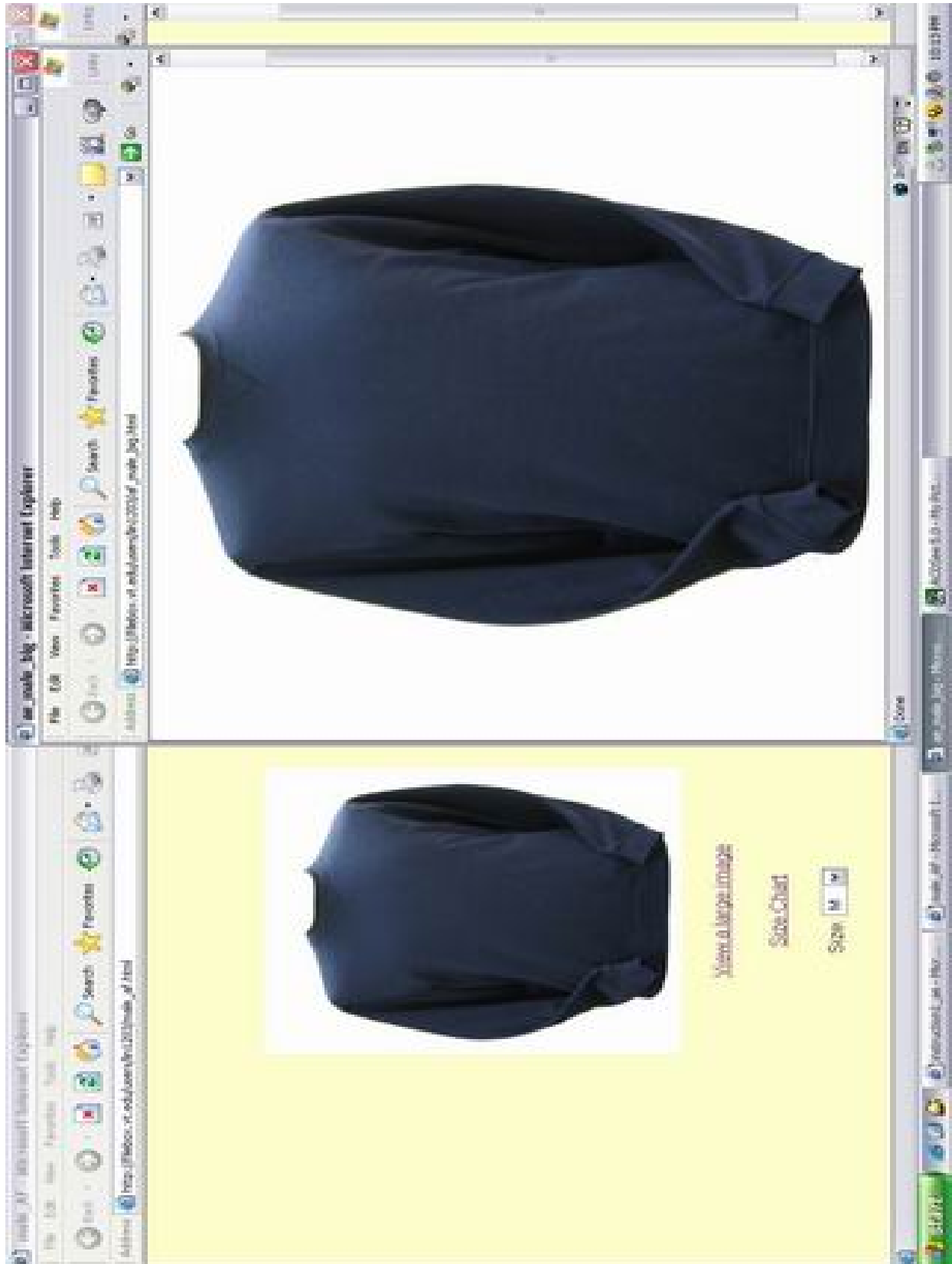
Crewneck Sweatshirt

80% Cotton, 20% Polyester
Machine Wash
Color: Gray
Long Sleeves
Soft cotton/poly blend outside
Fleece inside to keep warm
Cozy stretch ribbed neck, cuffs and waistband

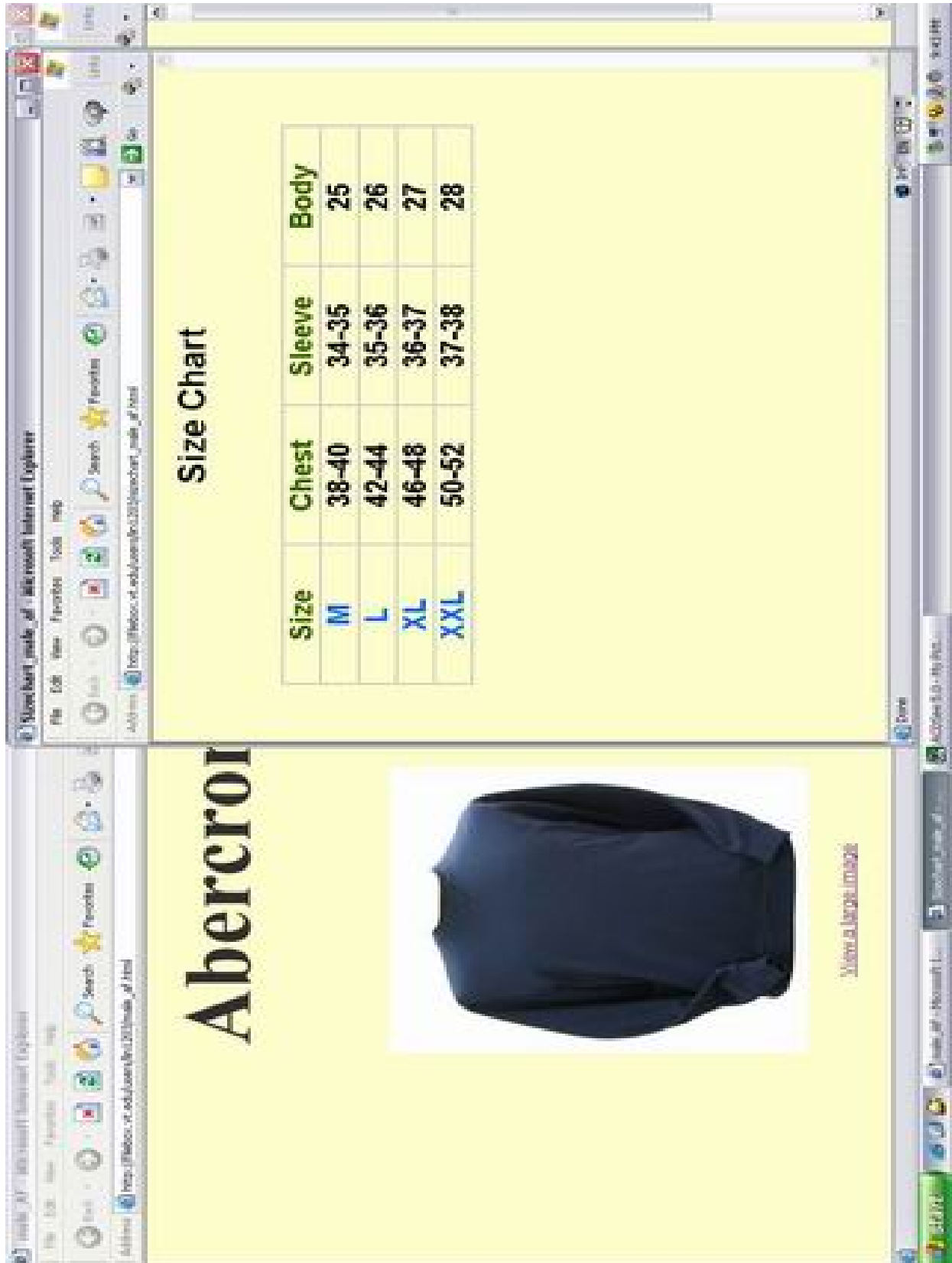
[View a large image](#)

[Ethics Policy](#)
[Ordering & Delivery Process](#)
[Shipping & Return Policy](#)
[Customer Service](#)

Enlarge Garment



Size Chart



The image shows a screenshot of a web browser displaying the Abercrombie & Fitch website. The page is divided into two main sections. The left section features the brand name "Abercrombie" in a large, bold, serif font. Below the name is a photograph of a dark blue t-shirt. To the right of the t-shirt, there is a small text link that says "View a larger image". The right section of the page is titled "Size Chart" and contains a table with four columns: "Size", "Chest", "Sleeve", and "Body". The table lists four size options: M, L, XL, and XXL, with their corresponding measurements in inches.

Size	Chest	Sleeve	Body
M	38-40	34-35	25
L	42-44	35-36	26
XL	46-48	36-37	27
XXL	50-52	37-38	28

Privacy Policy

Privacy Policy

The Abercrombie & Fitch takes the protection and proper use of your personal information seriously. We respect your privacy, and take great care to safeguard information in our possession. Your preferences for use of your information are our highest priority.

AF does not share customer information (including e-mail addresses) unless it is necessary to provide you with products or services available from AF. We may also disclose information when you tell us to do so, to identify or contact you, to protect your rights or the rights of AF or as required by law.

We restrict access to your information to those individuals who need it to provide you with products or services available from AF. Any third-party companies we use to provide you with products or services are required to keep your information secure and confidential.

AF is happy to provide further details of our privacy policies. For information regarding our online privacy policy, e-mail privacy, cookies and other Internet or direct mail related considerations, please call us at 1-800-372-5476.

Ordering & Delivery Process

Purchasing & payment options

Credit Cards.
We accept the following methods of payment: Visa, MasterCard, American Express, Discover, and AF gift cards. Items are charged to your credit card when they ship. If an item is on backorder, you will not be charged until the backordered item ships. Your shipping & handling charge will be pro-rated to the value of the shipment.

If you are using an AF gift card and the amount of your order exceeds the amount of your gift card, please add a second form of payment to your order at checkout. It will only be charged if the order total exceeds the amount on your gift card, and will only be charged the outstanding order balance. The information on your credit card will not be used for any other purpose.

Sales Tax.
The Federal Government requires that we collect tax for items shipped to a state where AF maintains a physical presence. A physical presence can be a store, warehouse, contact center, etc.

Ordering & Delivery Process

Address: <http://afinfo.af.mil/afinfo/afinfo.html>

with products or services are required to keep your information secure and confidential.

AF is happy to provide further details of our privacy policies. For information regarding our online privacy policy, e-mail privacy, cookies and other Internet or direct mail related considerations, please call us at 1-800-312-5476.

Ordering & Delivery Process

Purchasing & payment options

Credit Cards.
We accept the following methods of payment: Visa, MasterCard, American Express, Discover, and AF gift cards. Items are charged to your credit card when they ship. If an item is on backorder, you will not be charged until the backordered item ships. Your shipping & handling charge will be pro-rated to the value of the shipment.

If you are using an AF gift card and the amount of your order exceeds the amount of your gift card, please add a second form of payment to your order at checkout. It will only be charged if the order total exceeds the amount on your gift card, and will only be charged the outstanding order balance. The information on your credit card will not be used for any other purpose.

Sales Tax.
The Federal Government requires that we collect tax for items shipped to a state where AF maintains a physical presence. A physical presence can be a store, warehouse, contact center, etc.

Check order status

E-mail address:

Order number:

Done

Shipping & Return Policy

Address: http://hiboss.us.edu/zoom/fin1203of_information.html#01

Shipping & Return Policy

Shipping & handling

Shipping Charges.
Please use the chart below to estimate the standard shipping charge for your order.

For orders of	Shipping Charge
Up to \$25.00	\$5.95
\$25.01 - \$49.99	\$6.95
\$50.00 - \$74.99	\$8.95
\$75.00 - \$99.99	\$10.95
\$100.00 - \$124.99	\$11.95
\$125.00 and above	\$12.95

Express shipping charges.
For an additional \$10 we offer Express shipping (2-3 business days). Your order must be placed before 10 a.m. EST.
For an additional \$15 we offer overnight delivery. For this option, your order must be placed before 10 a.m. EST, Monday - Thursday.

Shipping to Canada.
All orders shipped to Canada will be assessed the standard shipping charge based on the amount of the purchase plus an additional \$30 for customs.

Returns & exchanges

Your refund will be credited back to the original method of payment. If you paid with a gift card, a new gift card will be issued for the amount of the credit and mailed to your billing address. A credit will post to your account approximately two days after the date of processing. It may take up to two billing cycles for the credit to appear on your monthly credit card statement.

We offer three methods:

1. SmartLabel - We're pleased to offer a more convenient way to return merchandise with a pre-paid, pre-addressed SmartLabel included on the front of your packing list. No postage is required, the cost of return shipping is \$5.95 and will be deducted from your refund or credit. Easy drop-off at any U.S. mail location.

Customer Service

Address: http://f1600a.af.mil/af_information.html#01

will post to your account approximately two days after the date of processing. It may take up to two billing cycles for the credit to appear on your monthly credit card statement.

We offer three methods:

1. SmartLabel – We're pleased to offer a more convenient way to return merchandise with a pre-paid, pre-addressed SmartLabel included on the front of your packing list. No postage is required, the cost of return shipping is \$5.95 and will be deducted from your refund or credit. Easy drop-off at any U.S. mail location.

To use your SmartLabel, follow the four steps (a-d) below: a. Complete and enclose the Return & Exchange Form with your return merchandise. b. Securely package the return. c. Affix the pre-paid, pre-addressed SmartLabel to your package. Cover or remove original shipping label. d. Drop your package in the U.S. mail – at home, at work, or at the Post Office.

2. Alternatively, use your own trackable and insured shipping method* and mail to:
AF
Attn: Returns Department
30 AF Rd, Blacksburg, VA 24060
Order # _____
*The cost of return shipping must be prepaid at the point of return.
3. Merchandise can also be returned at any AF store location with the original packing list. Please bring return items in original product packaging to help expedite the return or exchange process.

Customer Service

Contact Us

To Contact Us By Phone:
Toll free: 800-313-5476
Open from 9am - 6pm, EST, 7 days a week.

To Contact Us By Fax:
1-800-313-5476

To Contact Us By Mail:
AF
30 AF Rd, Blacksburg, VA 24060
Attn: Customer Service

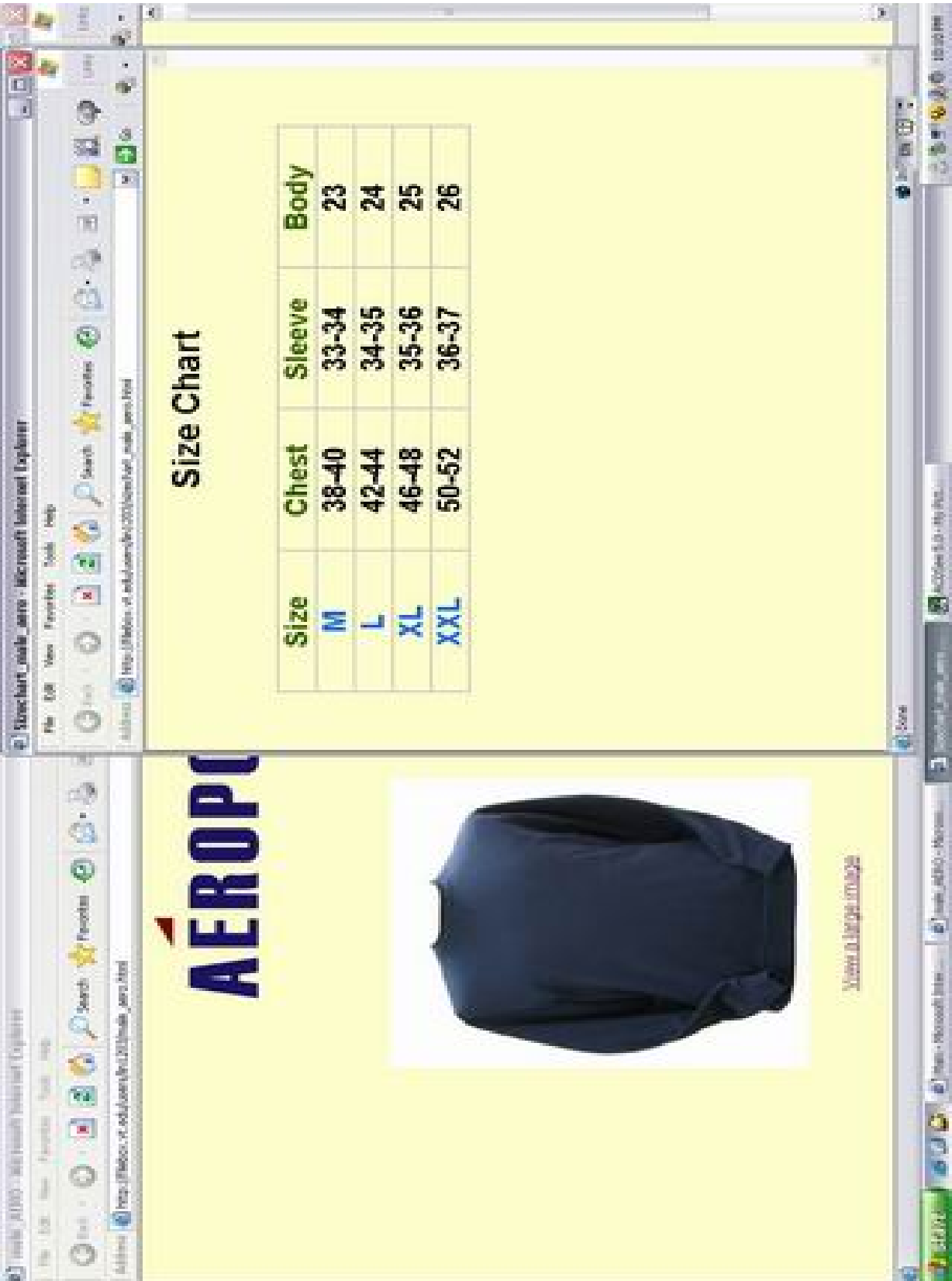
Done

Appendix E.2 -- Web Page for Lower Brand Image Group (Men's Sweatshirt)

Main Page



Size Chart



The image shows a screenshot of a web browser displaying a product page for AÉROPC. The page is split into two main sections. The top section features the brand name "AÉROPC" in a large, bold, blue font. Below the name is a photograph of a dark blue t-shirt. To the right of the t-shirt image is a link that says "View a large image". The bottom section of the page is titled "Size Chart" and contains a table with the following data:

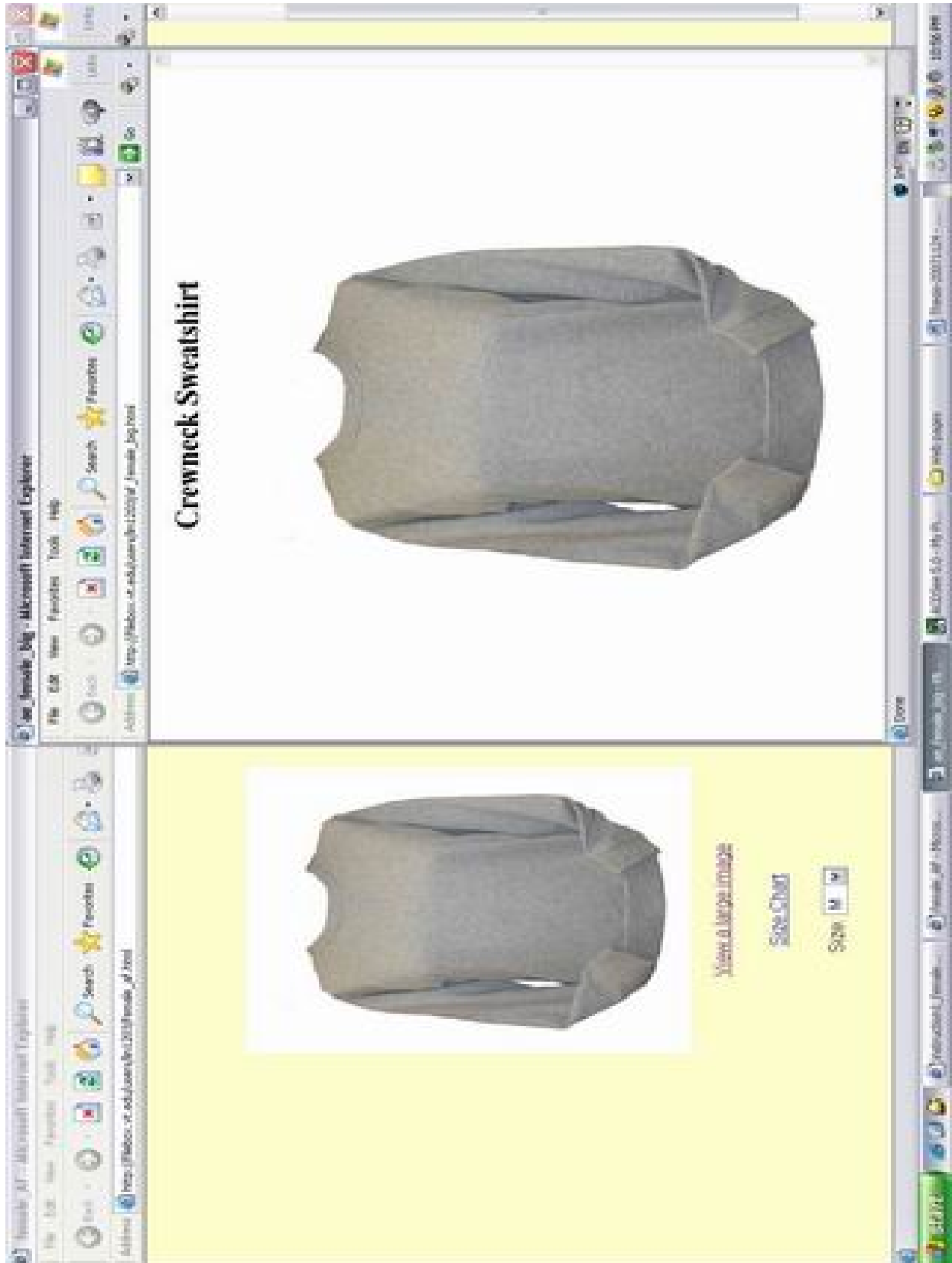
Size	Chest	Sleeve	Body
M	38-40	33-34	23
L	42-44	34-35	24
XL	46-48	35-36	25
XXL	50-52	36-37	26

Appendix E.3 -- Web Page for Higher Brand Image Group (Women's Sweatshirt)

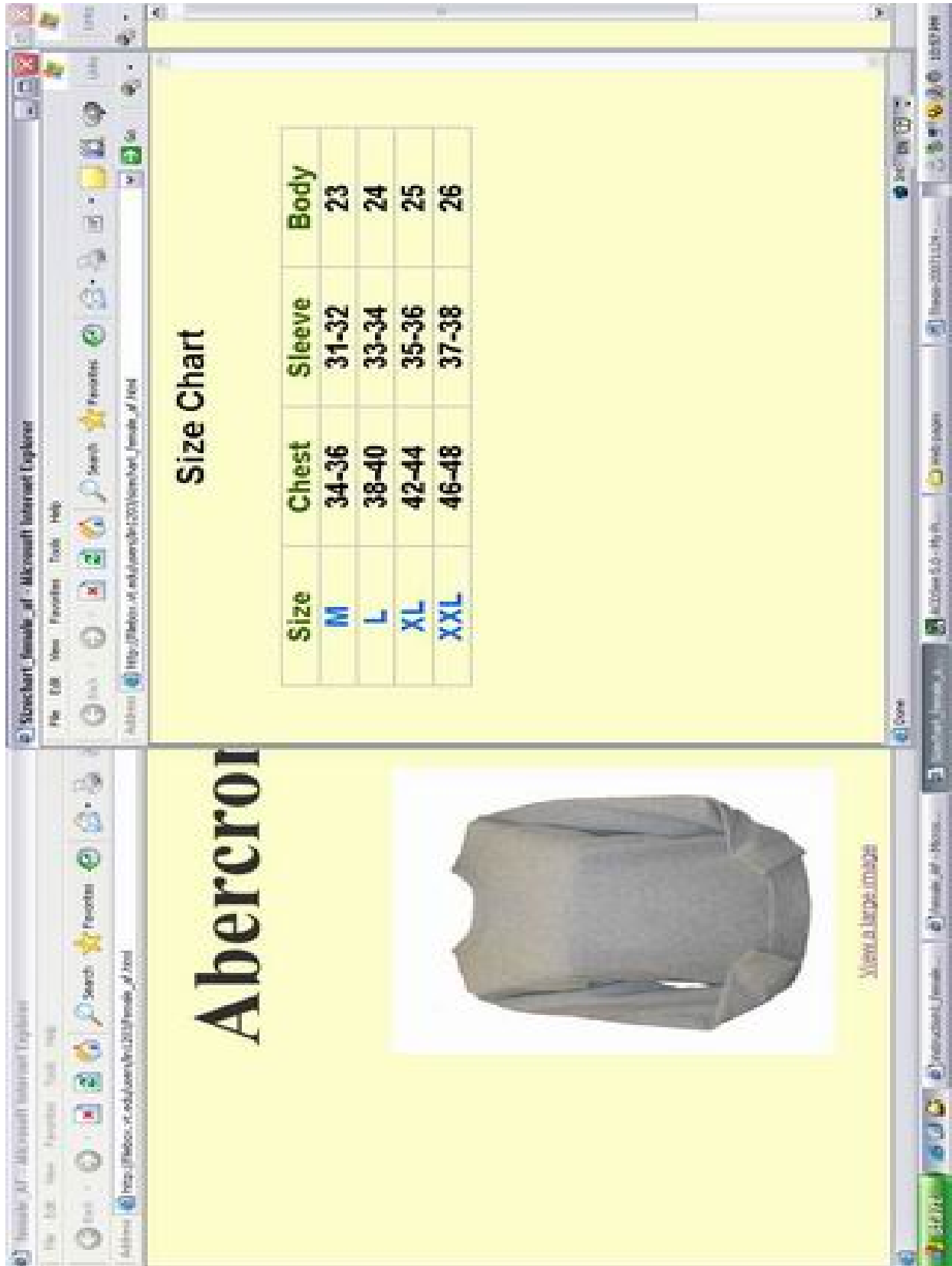
Main Page

The image is a screenshot of a web browser displaying the Abercrombie & Fitch website. The browser's address bar shows the URL http://www.abercrombie.com/abcf/Products_of.html. The website has a yellow background. At the top left, the Abercrombie & Fitch logo is displayed, featuring the brand name in a large, black, serif font and a silhouette of a moose to the right. Below the logo, the text "Crewneck Sweatshirt" is centered. To the right of this text is a vertical list of links: [Privacy Policy](#), [Ordering & Delivery Process](#), [Shipping & Return Policy](#), and [Customer Service](#). In the center of the page is a photograph of a gray crewneck sweatshirt laid flat. To the right of the photograph is a link that says "View a large image". Below the photograph, the following specifications are listed: "80% Cotton, 20% Polyester", "Machine Wash", "Color: Gray", and "Long Sleeves". To the right of these specifications, there are three lines of descriptive text: "Soft cotton/poly blend outside", "Fleece inside to keep warm", and "Cozy stretch ribbed neck, cuffs and waistband".

Enlarge Garment



Size Chart



The image shows a screenshot of a web browser displaying the Abercrombie & Fitch website. The page is divided into two main sections. The top section features the brand name "Abercrombie" in a large, bold, black serif font. Below the name is a photograph of a grey t-shirt laid flat. To the right of the t-shirt image is a link that says "View a large image". The bottom section of the page is a yellow background with the title "Size Chart" in a bold, black sans-serif font. Below the title is a table with four columns: "Size", "Chest", "Sleeve", and "Body". The table lists four size options: M, L, XL, and XXL, with their corresponding measurements in inches.

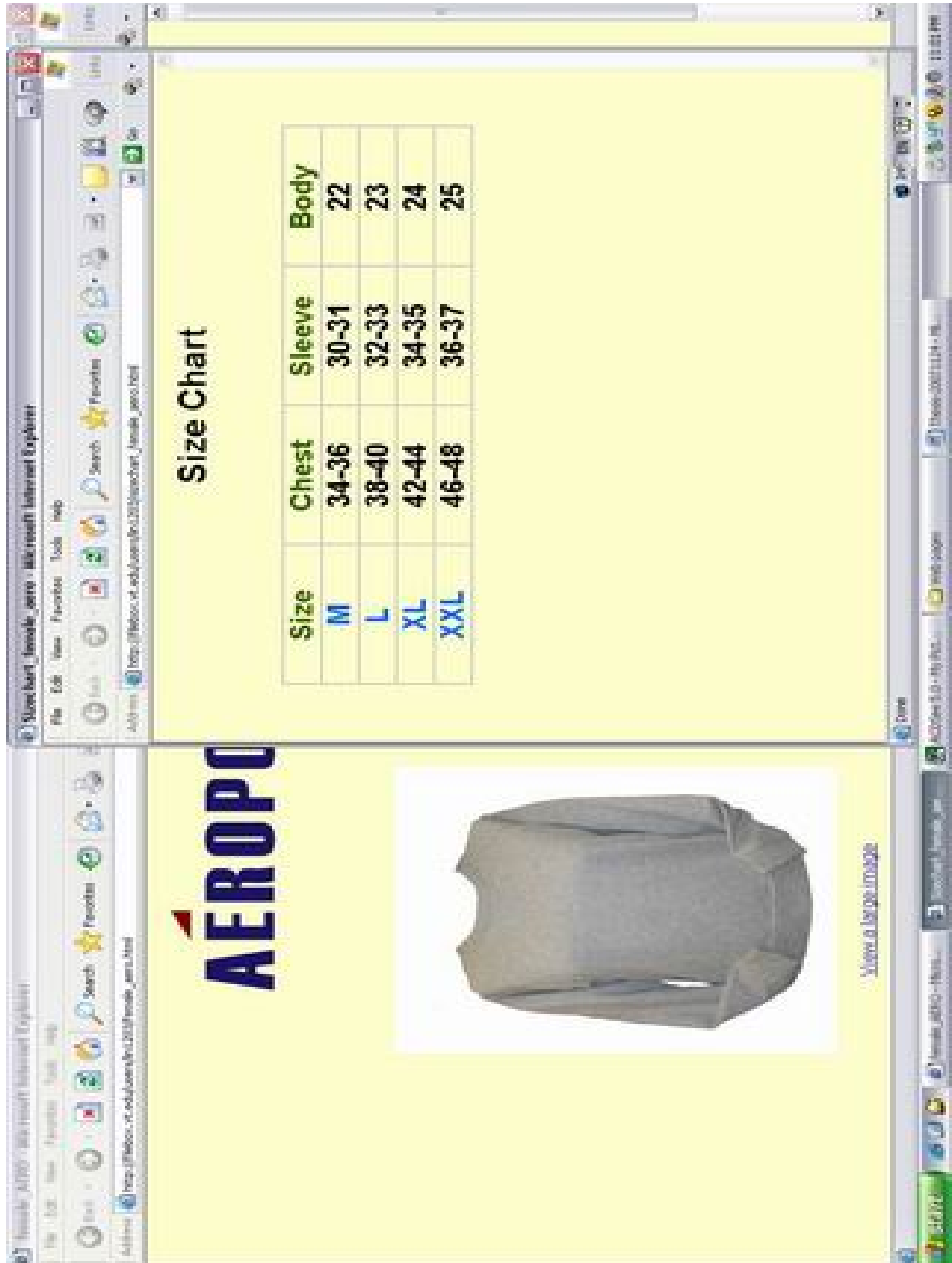
Size	Chest	Sleeve	Body
M	34-36	31-32	23
L	38-40	33-34	24
XL	42-44	35-36	25
XXL	46-48	37-38	26

Appendix E.4 -- Web Page for Lower Brand Image Group (Women's Sweatshirt)

Main Page



Size Chart



The image shows a screenshot of a web browser displaying a product page for 'AÉROPO'. The page is divided into two main sections. The top section features the brand name 'AÉROPO' in large, bold, blue letters. Below the name is a photograph of a grey, long-sleeved t-shirt laid flat. To the right of the image is a link that says 'View a large image'. The bottom section of the page is titled 'Size Chart' and contains a table with four columns: 'Size', 'Chest', 'Sleeve', and 'Body'. The table lists four size options: M, L, XL, and XXL, with their corresponding measurements in inches.

Size	Chest	Sleeve	Body
M	34-36	30-31	22
L	38-40	32-33	23
XL	42-44	34-35	24
XXL	46-48	36-37	25

Appendix F.1 -- Questionnaire for Higher Brand Image Group – Part I

Questionnaire – Part I

After you browsing the website, please respond to this part of questionnaire.

	Terrible					Excellent
1. What is your general impression of <u>Abercrombie & Fitch</u> ? -----	1	2	3	4	5	6

	Terrible					Excellent
2. Based on the picture and information shown on the web pages, I expect this sweatshirt will be _____.	1	2	3	4	5	6

Please wait for the instruction of the researcher!

Appendix F.2 -- Questionnaire for Higher Brand Image Group – Part II

Questionnaire – Part II

After you try on the sweatshirt, please respond to this part of questionnaire.

(I. Evaluation)

Please answer the following questions based on your evaluation of the sweatshirt.

	Terrible					Excellent
1. I think this sweatshirt is _____. -----	1	2	3	4	5	6
2. I think the <u>style</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
3. I think the <u>color</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
4. I think the <u>fabric</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
5. I think the <u>fit</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
6. I think the <u>workmanship</u> of this sweatshirt is _____. -----	1	2	3	4	5	6

(II. Disconfirmation)

	Much Worse Than I Expected				Just as I Expected				Much Better Than I Expected
1. This sweatshirt is _____.	-3	-2	-1	0	1	2	3		
2. The <u>style</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
3. The <u>color</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
4. The <u>fabric</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
5. The <u>fit</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
6. The <u>workmanship</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		

(III. Satisfaction, return intention and repurchase intention)

Please answer the following questions based on your satisfaction/dissatisfaction.

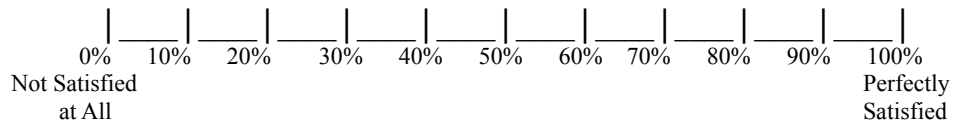
1. What is your general impression of Abercrombie & Fitch? -----

	Terrible					Excellent
	1	2	3	4	5	6

2. My degree of satisfaction with Abercrombie & Fitch is _____.

	Very Low		Neutral		Very High		
	-3	-2	-1	0	1	2	3

3. Please refer to the scale below and **write down** the percent of satisfaction that you have with Abercrombie & Fitch.

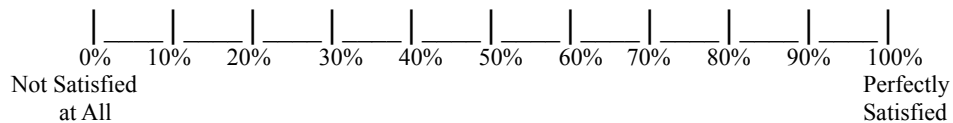


I am _____ % satisfied with Abercrombie & Fitch.

4. My degree of satisfaction with this sweatshirt is _____.

	Very Low		Neutral		Very High		
	-3	-2	-1	0	1	2	3

5. Please refer to the scale below and **write down** the percent of satisfaction that you have with the performance of the sweatshirt.



I am _____ % satisfied with the sweatshirt.

6. Please explain why you are satisfied or dissatisfied with this sweatshirt?

7. How likely would you be to return this sweatshirt if the price of the sweatshirt is \$60. -----

	Very Unlikely					Very Likely
	1	2	3	4	5	6

8. How likely would you to be buy products of Abercrombie & Fitch? 1 2 3 4 5 6

(IV. Brand sensitivity)

Please answer the following questions based on your perception about brand.

	Strongly Disagree			Strongly Agree		
1. When making a purchase of apparel product, I always pay attention to the brand. -----	1	2	3	4	5	6
2. In general, the brand of apparel tells a lot about its quality. -----	1	2	3	4	5	6
3. Buying a brand name apparel product is important to me. -----	1	2	3	4	5	6
4. When making a purchase of sweatshirt, I always pay attention to the brand. -----	1	2	3	4	5	6
5. When I buy a sweatshirt, I prefer buying a well-known brand. -----	1	2	3	4	5	6
6. I don't choose my sweatshirt according to the brand. -----	1	2	3	4	5	6
7. In general, the brand of a sweatshirt tells a lot about its quality. -----	1	2	3	4	5	6

(V. Brand familiarity)

	Very Unfamiliar			Very Familiar			
1. Are you familiar with Abercrombie & Fitch ? -----	1	2	3	4	5	6	
	Not Knowledgeable			Very Knowledgeable			
2. How much do you know about Abercrombie & Fitch ? -----	1	2	3	4	5	6	
	No Experience			A lot of Experiences			
3. Do you have any previous experience with Abercrombie & Fitch ? -----	0	1	2	3	4	5	6

(VI. Brand self-congruity)

	Strongly Disagree			Strongly Agree		
1. Wearing Abercrombie & Fitch products reflect who I am. -----	1	2	3	4	5	6
2. People who wear Abercrombie & Fitch are much more like me than people who use other brands. -----	1	2	3	4	5	6
3. The image of Abercrombie & Fitch fits how I see myself. -----	1	2	3	4	5	6
4. Wearing Abercrombie & Fitch products reflect who I <u>would like to be</u> . -----	1	2	3	4	5	6
5. I <u>would like to</u> be perceived as similar to the typical consumer of Abercrombie & Fitch . -----	1	2	3	4	5	6
6. The image of Abercrombie & Fitch fits how I <u>would like to</u> see myself. -----	1	2	3	4	5	6

(VII. Wardrobe expenditure and experiences in apparel products online shopping)
Please answer the following questions based on your apparel shopping experience.

1. How much money did you spend on your wardrobe last year?

- Under \$ 200
- \$ 200 – \$ 499
- \$ 500 – \$ 999
- \$ 1,000 – \$ 1,499
- \$ 1,500 – \$ 1,999
- \$ 2,000 – \$ 2,499
- \$ 2,500 – \$ 2,999
- \$ 3,000 and more (Please specify _____)

2. How often do you purchase apparel products online?

- None
- Every half year
- Every three months
- Once a month
- Twice a month
- 3 - 4 times a month
- 5 - 6 times a month
- 6 times a month and more (Please specify _____)

3. How much have you spent on apparel products online in the last six months?

- None
- Under \$ 50
- \$ 51 – \$ 100
- \$ 101 – \$ 150
- \$ 151 – \$ 200
- \$ 201 – \$ 250
- \$ 251 – \$ 500
- \$ 501 – \$ 1,000
- \$ 1,001 and more (Please specify _____)

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

- None
- 1 – 3 items
- 4 – 6 items
- 7 – 9 items
- 10 items and more (Please specify _____)

5. How similar was the sweatshirt you just tried on to the picture you saw on the website?

- Exactly the same
- Little difference
- Much difference
- Completely different

6. If you thought they were different, briefly explain how.

(VIII. Demographic information)

Please answer the following questions or check the item that best describe you.

1. Your gender is:

- Male
 Female

2. Your age is _____.

3. Your major is _____.

4. Your class standing is:

- Freshman
 Sophomore
 Junior
 Senior

5. If you are employed, how much you earned before tax for 2006?

- I'm not employed.
 Under \$ 10,000
 \$ 10,000 – \$ 14,999
 \$ 15,000 – \$ 19,999
 \$ 20,000 – \$ 24,999
 \$ 25,000 – \$ 34,999
 \$ 35,000 – \$ 49,999
 \$ 50,000 and more

6. Your annual household income (includes all family members) before tax for 2006 is:

- Under \$ 10,000
 \$ 10,000 – \$ 14,999
 \$ 15,000 – \$ 19,999
 \$ 20,000 – \$ 24,999
 \$ 25,000 – \$ 34,999
 \$ 35,000 – \$ 49,999
 \$ 50,000 – \$ 69,999
 \$ 70,000 – \$ 89,999
 \$ 90,000 and more

Thank you for your participation in this study!

Appendix F.3 -- Questionnaire for Lower Brand Image Group – Part I

Questionnaire – Part I

After you browsing the website, please respond to this part of questionnaire.

	Terrible					Excellent
1. What is your general impression of <u>Aéropostale</u> ? -----	1	2	3	4	5	6

	Terrible					Excellent
2. Based on the picture and information shown on the web pages, I expect this sweatshirt will be _____. -----	1	2	3	4	5	6

Please wait for the instruction of the researcher!

Appendix F.4 -- Questionnaire for Lower Brand Image Group – Part II

Questionnaire – Part II

After you try on the sweatshirt, please respond to this part of questionnaire.

(I. Evaluation)

Please answer the following questions based on your evaluation of the sweatshirt.

	Terrible					Excellent
1. I think this sweatshirt is _____. -----	1	2	3	4	5	6
2. I think the <u>style</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
3. I think the <u>color</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
4. I think the <u>fabric</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
5. I think the <u>fit</u> of this sweatshirt is _____. -----	1	2	3	4	5	6
6. I think the <u>workmanship</u> of this sweatshirt is _____. -----	1	2	3	4	5	6

(II. Disconfirmation)

	Much Worse Than I Expected				Just as I Expected				Much Better Than I Expected
1. This sweatshirt is _____.	-3	-2	-1	0	1	2	3		
2. The <u>style</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
3. The <u>color</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
4. The <u>fabric</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
5. The <u>fit</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		
6. The <u>workmanship</u> of this sweatshirt is _____. -----	-3	-2	-1	0	1	2	3		

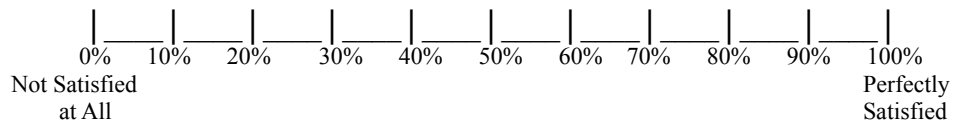
(III. Satisfaction, return intention and repurchase intention)

Please answer the following questions based on your satisfaction/dissatisfaction.

	Terrible					Excellent
1. What is your general impression of <u>Aéropostale</u> ? -----	1	2	3	4	5	6

	Very Low		Neutral		Very High		
2. My degree of satisfaction with <u>Aéropostale</u> is _____.	-3	-2	-1	0	1	2	3

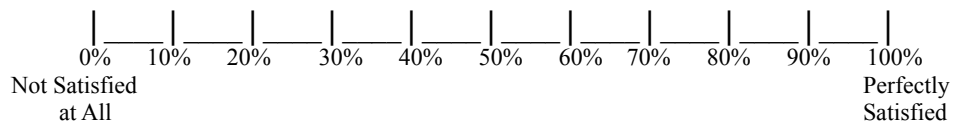
3. Please refer to the scale below and **write down the percent of satisfaction that you have with Aéropostale.**



I am _____ % satisfied with Aéropostale.

	Very Low		Neutral		Very High		
4. My degree of satisfaction with this sweatshirt is _____.	-3	-2	-1	0	1	2	3

5. Please refer to the scale below and **write down the percent of satisfaction that you have with the performance of the sweatshirt.**



I am _____ % satisfied with the sweatshirt.

6. Please explain why you are satisfied or dissatisfied with this sweatshirt?

	Very Unlikely					Very Likely
7. How likely would you be to return this sweatshirt if the price of the sweatshirt is \$25. -----	1	2	3	4	5	6

8. How likely would you to be buy products of Aéropostale? -----

1	2	3	4	5	6
---	---	---	---	---	---

(IV. Brand sensitivity)

Please answer the following questions based on your perception about brand.

	Strongly Disagree			Strongly Agree		
1. When making a purchase of apparel product, I always pay attention to the brand. -----	1	2	3	4	5	6
2. In general, the brand of apparel tells a lot about its quality. -----	1	2	3	4	5	6
3. Buying a brand name apparel product is important to me. -----	1	2	3	4	5	6
4. When making a purchase of sweatshirt, I always pay attention to the brand. -----	1	2	3	4	5	6
5. When I buy a sweatshirt, I prefer buying a well-known brand. -----	1	2	3	4	5	6
6. I don't choose my sweatshirt according to the brand. -----	1	2	3	4	5	6
7. In general, the brand of a sweatshirt tells a lot about its quality. -----	1	2	3	4	5	6

(V. Brand familiarity)

	Very Unfamiliar			Very Familiar			
1. Are you familiar with Aéropostale ? -----	1	2	3	4	5	6	
	Not Knowledgeable			Very Knowledgeable			
2. How much do you know about Aéropostale ? -----	1	2	3	4	5	6	
	No Experience			A lot of Experiences			
3. Do you have any previous experience with Aéropostale ? -----	0	1	2	3	4	5	6

(VI. Brand self-congruity)

	Strongly Disagree			Strongly Agree		
1. Wearing Aéropostale products reflect who I am. -----	1	2	3	4	5	6
2. People who wear Aéropostale are much more like me than people who use other brands. -----	1	2	3	4	5	6
3. The image of Aéropostale fits how I see myself. -----	1	2	3	4	5	6
4. Wearing Aéropostale products reflect who I <u>would like to be</u> . -----	1	2	3	4	5	6
5. I <u>would like to</u> be perceived as similar to the typical consumer of Aéropostale . -----	1	2	3	4	5	6
6. The image of Aéropostale fits how I <u>would like to</u> see myself. -----	1	2	3	4	5	6

(VII. Wardrobe expenditure and experiences in apparel products online shopping)
Please answer the following questions based on your apparel shopping experience.

1. How much money did you spend on your wardrobe last year?

- Under \$ 200
- \$ 200 – \$ 499
- \$ 500 – \$ 999
- \$ 1,000 – \$ 1,499
- \$ 1,500 – \$ 1,999
- \$ 2,000 – \$ 2,499
- \$ 2,500 – \$ 2,999
- \$ 3,000 and more (Please specify _____)

2. How often do you purchase apparel products online?

- None
- Every half year
- Every three months
- Once a month
- Twice a month
- 3 - 4 times a month
- 5 - 6 times a month
- 6 times a month and more (Please specify _____)

3. How much have you spent on apparel products online in the last six months?

- None
- Under \$ 50
- \$ 51 – \$ 100
- \$ 101 – \$ 150
- \$ 151 – \$ 200
- \$ 201 – \$ 250
- \$ 251 – \$ 500
- \$ 501 – \$ 1,000
- \$ 1,001 and more (Please specify _____)

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

- None
- 1 – 3 items
- 4 – 6 items
- 7 – 9 items
- 10 items and more (Please specify _____)

5. How similar was the sweatshirt you just tried on to the picture you saw on the website?

- Exactly the same
- Little difference
- Much difference
- Completely different

6. If you thought they were different, briefly explain how.

(VIII. Demographic information)

Please answer the following questions or check the item that best describe you.

1. Your gender is:

- Male
 Female

2. Your age is _____.

3. Your major is _____.

4. Your class standing is:

- Freshman
 Sophomore
 Junior
 Senior

5. If you are employed, how much you earned before tax for 2006?

- I'm not employed.
 Under \$ 10,000
 \$ 10,000 – \$ 14,999
 \$ 15,000 – \$ 19,999
 \$ 20,000 – \$ 24,999
 \$ 25,000 – \$ 34,999
 \$ 35,000 – \$ 49,999
 \$ 50,000 and more

6. Your annual household income (includes all family members) before tax for 2006 is:

- Under \$ 10,000
 \$ 10,000 – \$ 14,999
 \$ 15,000 – \$ 19,999
 \$ 20,000 – \$ 24,999
 \$ 25,000 – \$ 34,999
 \$ 35,000 – \$ 49,999
 \$ 50,000 – \$ 69,999
 \$ 70,000 – \$ 89,999
 \$ 90,000 and more

Thank you for your participation in this study!

Appendix G -- Informed Consent for Participants

Informed Consent for Participants in Research Projects Involving Human Subjects

Title of Project: Consumer Satisfaction/Dissatisfaction in Apparel Online Shopping at the Product Receiving Stage: The Effects of Brand Image and Product Performance

Investigator(s): Dr. Chen-Yu and Hsiao-Ling Lin

I. Purpose of this Research/Project

The purpose of the study is to examine consumer satisfaction/dissatisfaction (CS/D) with the product and the brand that they purchase online at the product-receiving stage. The four objectives of the study are to examine (a) the relationships between consumers' individual differences (i.e., brand sensitivity, brand familiarity, brand self-congruity, demographics) and perceived brand image at purchase, (b) the relationships between consumers' perceived brand image and expectation, and between perceived brand image and perceived product performance, (c) the effects of the three variables (i.e., consumer expectation, perceived performance, expectancy disconfirmation) on CS/D with the product and CS/D with the brand at the product-receiving stage, and (d) the relationship between CS/D with the product/brand and purchase intention. The 2 X 2 between-subjects factorial experimental design is used as research method. 120 participants will be recruited in the survey. The qualified participants are students enrolled in Virginia Tech and above 18 years old, both males and females.

II. Procedures

There are two parts in this survey. First, you have to follow Instruction 1 shown on the computer screen to role-play an online purchase with a sweatshirt. In the meantime, the mock website selling a sweatshirt will be accessed on the computer. After you browse the website, please complete Part I of the questionnaire. Instruction 2 will be followed to be shown on the computer screen to inform you that you are going to receive the sweatshirt you just buy on the website. After getting the sweatshirt from the investigator, please try it on and remain wearing it to complete Part II of the questionnaire. After returning the sweatshirt to the investigator, the whole survey procedure is done. The total time for this experiment is estimated 10 to 15 minutes.

III. Risks

There is no known risk to you. The personal information for the compensation drawing and individual results of this study will be held confidential by the investigators.

IV. Benefits

The first benefit of this research is that the results may contribute to the brand management for apparel e-tailers. Marketers can have more insights into the role of brand image in CS/D, especially with online shopping. The second benefit is for further consumer researchers that they can explore more in CS/D with the product and with the brand. They can also conduct further researches by using other research methods (e.g., survey, focus group interview) to verify the results of this study.

V. Extent of Anonymity and Confidentiality

The confidentiality of all participants involved in this study will be ensured by the investigators and the IRB. Anonymity is promised in the questionnaire of this study that you only have to answer demographics including gender, age, major, class standing, personal income and annual household income. No names, identification numbers or social security numbers will be asked to reveal in this survey. However, for the compensation drawing, you will be asked to leave your personal information (i.e., name, major, address, phone number, e-mail address) for further contact. The personal information will be promised to be confidential by the investigators and the IRB. Moreover, at no time will the investigators release the results of the study to anyone other than individuals working on the project without your written consent.

VI. Compensation

A drawing of 25 dollars cash for every 10 participants will be conducted. You are asked to leave their contact information (i.e., name, major, address, phone number, e-mail address) on the contact information sheet that the investigator prepared after you finish the whole survey. After the data of every 10 participants are collected, the investigator will draw a winner. The drawing method is using 10 table tennis balls marked the number 1 to 10 respectively to represent these 10 participants on the contact information sheet orderly. These 10 balls will be put into a big black box. The investigator will draw one ball from the box and the number corresponds to the winner. The winners will be contacted through the contact information they leave and further make an appointment with the investigator to get the 25 dollars cash compensation. The winners have to sign a form to verify that they have got the compensation.

VII. Freedom to Withdraw

You are free to withdraw from this study at any time. You are free not to answer any questions, or not to respond to experimental situations that you choose without any penalty.

VIII. Subject's Responsibilities

I voluntarily agree to participate in this study. I have the following responsibilities:

- a) Follow the instructions of the investigator during the procedure,
- b) Stay in the survey room until the survey is done,
- c) Return the sweatshirt back to the investigators after the survey is done.

X. Subject's Permission

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

_____ Date _____
Subject signature

Should I have any pertinent questions about this research or its conduct, and research subjects' rights, and whom to contact in the event of a research-related injury to the subject, I may contact:

Hsiao-Ling Lin
248 Wallace Hall
Virginia Tech
Blacksburg, VA 24060
(540) 231-6832
lin1203@vt.edu

Dr. Chen-Yu
115 Wallace Hall
Virginia Tech
Blacksburg, VA 24060
(540) 231-6216
chenyu@vt.edu

If you have any questions about the protection of human research participants regarding this study, you may contact Dr. David Moore, Chair Virginia Tech Institutional Review Board for the Protection of Human Subjects, telephone: (540) 231-4991; email: moored@vt.edu; address: Research Compliance Office, 2000 Kraft Drive, Suite 2000 (0497), Blacksburg, VA 24060.



DATE: November 2, 2007

MEMORANDUM

TO: Hsiu I. Chen-Yu
Hsiao-Ling Lin

FROM: David M. Moore 

Approval date: 11/2/2007
Continuing Review Due Date: 10/18/2008
Expiration Date: 11/1/2008

SUBJECT: **IRB Expedited Approval:** "Consumer Satisfaction/Dissatisfaction in Apparel Online Shopping At the Product Receiving Stage: The Effects of Brand Image and Product Performance", IRB # 07-515

This memo is regarding the above-mentioned protocol. The proposed research is eligible for expedited review according to the specifications authorized by 45 CFR 46.110 and 21 CFR 56.110. As Chair of the Virginia Tech Institutional Review Board, I have granted approval to the study for a period of 12 months, effective November 2, 2007.

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.
3. Report promptly to the IRB of the study's closing (i.e., data collecting and data analysis complete at Virginia Tech). If the study is to continue past the expiration date (listed above), investigators must submit a request for continuing review prior to the continuing review due date (listed above). It is the researcher's responsibility to obtain re-approval from the IRB before the study's expiration date.
4. If re-approval is not obtained (unless the study has been reported to the IRB as closed) prior to the expiration date, all activities involving human subjects and data analysis must cease immediately, except where necessary to eliminate apparent immediate hazards to the subjects.

Important:

If you are conducting **federally funded non-exempt research**, this approval letter must state that the IRB has compared the OSP grant application and IRB application and found the documents to be consistent. Otherwise, this approval letter is invalid for OSP to release funds. Visit our website at <http://www.irb.vt.edu/pages/newstudy.htm#OSP> for further information.

cc: File

Instruction 1

Please carefully read through the following instruction.

- 1. Please put yourself in the following scenario and role-play that you are doing an online shopping for a sweatshirt.**
- 2. You will see a sweatshirt in the website of Abercrombie & Fitch.**
- 3. Please hit “Enter the website” and you will see the website of Abercrombie & Fitch. Please start to examine the picture of the sweatshirt and read the information provided on the website.**

Instruction 1

Please carefully read through the following instruction.

- 1. Please put yourself in the following scenario and role-play that you are doing an online shopping for a sweatshirt.**
- 2. You will see a sweatshirt in the website of Aéropostale.**
- 3. Please hit “Enter the website” and you will see the website of Aéropostale. Please start to examine the picture of the sweatshirt and read the information provided on the website.**

Instruction 2

- 1. Please assume that you like the color, style and price of the sweatshirt, and decide to purchase it.**
- 2. Please select a size that you would purchase and let the investigator know. If you want to know the information about size, please see the size chart.**
- 3. You role-play that you purchased this sweatshirt from Abercrombie & Fitch and it arrived as the time you expected.**
- 4. Please try on the sweatshirt and then answer the questions in Part II of the questionnaire.**

Instruction 2

- 1. Please assume that you like the color, style and price of the sweatshirt, and decide to purchase it.**
- 2. Please select a size that you would purchase and let the investigator know. If you want to know the information about size, please see the size chart.**
- 3. You role-play that you purchased this sweatshirt from Aéropostale and it arrived as the time you expected.**
- 4. Please try on the sweatshirt and then answer the questions in Part II of the questionnaire.**

Appendix I -- Random Number Sheet for Assigning Participants into Experimental Groups

Participant	Assigned Group			
1 (Male)	3	2	1	4
2 (Female)	2	1	4	3
3 (M)	2	3	1	4
4 (F)	2	3	1	4
5 (M)	3	2	4	1
6 (F)	1	2	3	4
7 (M)	2	4	3	1
8 (F)	2	3	1	4
9 (M)	3	4	2	1
10 (F)	3	1	2	4
11 (M)	4	2	1	3
12 (F)	4	3	2	1
13 (M)	3	1	2	4
14 (F)	3	4	2	1
15 (M)	2	3	1	4
16 (F)	4	3	2	1
17 (M)	3	2	1	4
18 (F)	3	4	2	1
19 (M)	1	3	2	4
20 (F)	3	4	2	1
21 (M)	1	3	2	4
22 (F)	4	2	3	1
23 (M)	3	4	2	1
24 (F)	2	1	3	4
25 (M)	1	4	2	3
26 (F)	3	1	2	4
27 (M)	3	1	4	2
28 (F)	2	1	3	4
29 (M)	2	3	1	4
30 (F)	2	3	4	1