A Study on the Relationship between Risk Dimensions of Apparel Involvement and Online Impulse Buying Behavior

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위험지각 측면에서의 의복관여와 온라인 총동구매행동의 상관관계에 관한 연구

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Abstract

Consumers nowadays spend more time using computers and are getting used to buying products through the Internet(Park, 2002), and therefore, understanding consumers’ impulse buying behavior in an online shopping context is also important for retailers. The purpose of this study was to examine the relationship between online apparel impulse buying behavior and the two risk dimensions of apparel involvement(i.e., risk importance, risk probability). The data were collected using an online survey with a structured questionnaire. A total of 339 college students were used in the study. The results of MANOVA showed that the impulse buyer group perceived the risk importance and risk probability of apparel involvement significantly lower. Based on the results, the two hypotheses were supported. From the results of the present study, it is concluded that the two risk dimensions of apparel involvement are negatively related to online impulse buying behavior of apparel products. From the results of the present study, it is concluded that the risk dimensions of apparel involvement are closely related to the online apparel impulse buying behavior.

Key words: Impulse buying, Apparel involvement, Risk; 총동구매, 의복관여, 위험지각

I. Introduction

Since the Internet is a growing method for shopping and can benefit both consumers and retailers, building and maintaining a consumer-friendly shopping site that triggers consumers’ purchase can be crucial for the retailer’s success. In this regard, retailers should understand what characteristics drive consumers’ purchases and impulse buying behavior in online shopping context. According to Rook and Fisher(1995), impulsivity had a positive relationship with the amount of risk taking. Along with this, Donthu and Garcia(1999) found that online shoppers were risk takers, venturesome, innovative, and impulsive, which can fit the profile of impulse buyers. Therefore, it is reasonable to expect that consumers who are more impulsive may perceive less risk when buying apparel through the Internet and may be willing to take risks associated with Internet shopping(Park, 2002). However, little studies were conducted in order to address consumers’ online apparel impulse buying behavior. The purpose of this study was to examine the relationship of apparel involvement, in terms of risk dimensions, and
apparel impulse buying behavior.

Although previous studies compared apparel impulse buying behavior between different consumers, not many studies were conducted based on the experience of online shopping context. In previous studies, apparel product was often recognized as a product that induced high involvement (Bloch, 1986; Kapferer & Laurent, 1985/86). Although apparel products are often recognized as products that induce high involvement, consumers may have various levels and types of involvement with different apparel items because apparel products have multifaceted features and characteristics that shape involvement (Kim et al., 2002). According to Lee (2000), apparel involvement consisted of five dimensions: sign value, pleasure value, perceived importance, risk importance, and risk probability.

Rhee (2007) conducted a study regarding the relationship between apparel involvement and online impulse buying behavior of apparel products and the results showed that online impulse buying behavior of apparel products could be related to the three dimensions of apparel involvement. Online buyers with higher degree of apparel involvement regarding the sign value, pleasure value, and interest purchased apparel products more on impulse. This indicates that if an individual believed apparel products as having sign value, pleasure value, and interest, it was likely that he would be highly involved with apparel products, and thus tended to purchase apparel products on impulse. Followed by Rhee (2007)'s study, this study intends to examine the relationship between impulse buying and apparel involvement, specifically the risk importance and risk probability dimensions of apparel involvement. Considering special characteristics of Internet shopping that accompanies consumers with many risk factors (Bhatnagar et al., 2000; Elliot & Fowell, 2000), impulse buying behavior, especially online impulse buying is expected to be closely related to the risk dimensions of apparel involvement. The purpose of this study was to find out the relationship between online impulse buying and risk dimensions of apparel involvement. The study was conducted by using online survey questionnaire to college stu-

dents in the U.S.

II. Literature Review

1. Impulse Buying

Jeon (1990) conducted a study to investigate the relationships of affective states, in-store browsing, and impulse buying. As a preliminary stage to develop an instrument to measure impulse buying behavior, the author developed a survey with open-ended and fixed-format questions to explore consumers' experiential episodes of impulse buying. At the beginning of the survey, Rook (1987)'s definition of impulse buying, "a sudden and strong urge to buy something you see in the store", was given. Then respondents were asked to recall their most recent impulse buying experience and explain: a) what item (s) they purchased on impulse, b) what caused them to purchase this item (these items) on impulse, and c) how they felt just before and after the impulse purchase. Additional questions addressed the respondents' frequency of impulse buying. Then respondents were provided with a list of 20 situational factors such as sale or discounts, extra money, friendly salesperson, time pressure, and store display, derived from past literature and were asked to check the items that tended to trigger their impulse buying. In order to determine respondents' degree of suddenness and perceived urgency involved in making the impulse purchase, the author used Rook (1987)'s and Rook and Hoch (1985)'s research on impulse buying to extract a pool of items (specific items are not mentioned in the article) and then refined the statements by a group of three academicians. The final scale included three items (i.e., I felt a spontaneous urge to buy the item, I felt I just had to have the item, I felt I wouldn't be able to get it off my mind until I bought it). A seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used to measure the degree of self-perceived impulsiveness of purchases. The author used 38 college students to test the three final impulsiveness items and the result showed a reliability coefficient alpha of .83. When they were used in the main sur-
vey, the three items showed a reliability coefficient alpha of .72.

Han et al.(1991) adopted 15 statements from Stern (1962)'s impulse buying scale to measure consumers' apparel impulse buying behavior and the degree of impulse buying. Each item was rated on a 7-point scale from 1(very seldom) to 7(very often). Prior to the actual survey, the impulse buying scales were pre-tested with 52 respondents, including both students and non-student consumers, selected on a convenience basis. The items with the highest item-scale correlations were selected to evaluate four types of buying proposed by Stern(i.e., planned buying, planned impulse buying, reminder impulse buying, pure impulse buying). Among the four types of buying, Han et al.(1991) considered only pure impulse buying to be impulse buying as Rook(1987) mentioned in his study. The definition of pure impulse buying is similar to that of Rook's definition(i.e., a sudden and strong urge to buy something you see in the store). The results of Han et al.(1991)'s study showed a reliability coefficient alpha of .89.

In 2002, Youn and Faber conducted a study that provides an integrative view of impulse buying behavior by combining affective and cognitive components. In the study, the authors developed the Consumer Buying Impulsivity(CBI) scale to assess the likelihood of engaging in impulse buying. Through series of empirical studies, the CBI was modified into two dimensions, affective and cognitive. The three sub-dimensions under the affective dimension were: irresistible urge to buy, positive buying emotions, and mood management. The three sub-dimensions under the cognitive dimensions were: low cognitive deliberation, disregard of the future, and unplanned buying behavior. The authors used the CBI scale to conduct two surveys and used the factor analysis to simplify the CBI scale from 140 items to 24 items. The results showed that the data had a good fit to the model(i.e., main and sub factors). Structural parameters were validated across two independent samples from the two surveys and the findings showed that the scale was valid for measuring consumer’s impulsiveness.

2. Apparel Involvement

1) Risk Importance of Apparel Involvement and Impulse Buying

According to Rodgers and Schneider(1993), the more complex a product is, the less certain consumers feel about the performance of the product. However, Rodgers and Schneider proposed that uncertainty may cause consumers to search for information, to elicit information from others, and to participate more in the decision-making process. Zimbardo (1960) first proposed perceived risk as one of the involvement dimensions. Arora(1982) also stated that involvement is present whenever an incorrect decision may occur, and the more a consumer is involved in a product and its expected performance, the more an individual perceives risks. Kapferer and Laurent (1985/86) divided the risk dimension of involvement into two parts: risk importance and risk probability. Risk importance is the negative consequences of a mispurchase and defined as “perceived importance of the negative consequences of mispurchase”(Kapferer & Laurent, 1985/86). According to Rook and Fisher (1995), impulsiveness had a positive relationship with the amount of risk taking. Along with this study, Park(2002) proposed that consumers who are more impulsive may perceive less risk and consider risk as less important when buying apparel through the Internet and may be willing to take risks associated with Internet shopping. Based on these studies, risk importance of apparel involvement was proposed to be negatively related to online impulse buying behavior of apparel products in H1.

H1: Impulsive online apparel buyers will have a lower degree of apparel involvement regarding the risk importance of apparel products than non-impulsive online apparel buyers.

2) Risk Probability of Apparel Involvement and Impulse Buying

Risk probability is defined as “subjective probability of making a mispurchase(Kapferer & Laurent, 1985/86)”. Perceived risk and probability of making a mispurchase have been one of the frequent topics of research in the literature of apparel in-home shop-
ping (Kim & Lennon, 2000; Simpson & Lakner, 1993). In case of Internet shopping, security issues have challenged consumers’ confidence for shopping online (Murphy, 1998). Results from Booker (1995)’s study showed that the main reason why the majority of consumers who browsed or searched the Internet but did not make purchases was because of the security issue. Lee and Johnson (2002) found that compared with apparel browsers, Internet apparel buyers perceived Internet shopping as safer than non-buyers and agreed more on releasing credit card information. Consistently, Lee and Hong (1999) also found that Korean users of Internet were willing to use credit cards to pay for their apparel products online.

In case of buying apparel products through the Internet, the probability of making mispurchase (i.e., risk probability) is generally high due to the unique characteristics of apparel; for example, fashion products such as apparel and perfume can be considered as a greater risk than books and software because size or material inspection is hard to occur before purchasing online (Bhatnagar et al., 2000). A similar conclusion was also found in Korean users of the Internet who would only purchase online for items such as casual clothing and fashion goods that did not focus much on fit and styles (Lee & Hong, 1999). Questioning accuracy of apparel color on the screen can be another factor for consumers not buying apparel online. Sonnetech, Inc. (1999) reported that about 30% of Internet shoppers did not purchase apparel online because the color of the product was in question. Based on these studies, risk probability of apparel involvement was proposed to be negatively related to the online impulse buying behavior of apparel products in H2.

H2: Impulsive online apparel buyers will have a lower degree of apparel involvement regarding the risk probability of apparel products than non-impulsive online apparel buyers.

III. Methods

1. Subject Selection and Data Collection

The subjects of this study are college students, who have previous experience in buying apparel products online. Subjects of this study were selected from the student directory of University of North Texas. The systematic cluster sampling method was used to select participants from the student directory of University of North Texas. The data was collected using an online survey and e-mail was used to post the survey link to the sample students. E-mails announcing the survey and asking for participation were distributed twice. The initial e-mail included an explanation about the research and the link to the online questionnaire. Four days after the initial e-mail, a follow-up e-mail was sent to encourage those who had not yet completed the survey to fill out and submit the questionnaire soon.

2. Instrument Development

1) Measure of Apparel Involvement

To measure apparel involvement, items were adapted from Lee (2000)'s scale, incorporating two dimensions: four items measuring risk importance and three items measuring risk probability. The response format is a 5-point Likert type scale. <Table 1> shows the factor analysis results for the items of apparel involvement. According to the results, five items were included in the final questionnaire. Two items measured risk importance and three items measured risk probability. The Cronbach’s alpha was .83.

2) Measure of Impulse Buying Behavior

To measure respondents’ degree of impulsiveness, five statements were adapted from previous studies (Chen-Yu & Seock, 2002; Han et al., 1991; Jeon,
1990)(Table 1). The respondents were asked to reflect the last time they made a clothing/accessory purchase online and answer the five questions based on that particular purchase experience. The response format is a 5-point Likert type scale. The Cronbach’s alpha for the measure was .80.

Based on the measure of impulse buying behavior, respondents were divided into impulse buyer and non-impulse buyer groups. An average score higher than three were categorized as impulse buyers and those who had an average score lower than three were categorized as non-impulse buyers. The reason for using three as the criteria for dividing the impulse and non-impulse groups is because in the scale, three was indicated as neither disagree nor agree with the statement measuring respondents’ impulse buying behavior. An average score of three indicates that the respondent feels neutral regarding the impulse buying behavior.

3) Pilot Testing

Pilot testing of the measurement instruments was conducted. Preliminary questionnaires were first distributed to five faculty members, who were knowledgeable in marketing or had extended experiences in research methods. Following the revision using the faculty feedback, the questionnaire was first pilot tested in person with undergraduate students. According to the feedback from the first pilot test, the questionnaire was revised and changed to an online format and uploaded on the survey website. E-mails were sent to undergraduate students for the second pilot study. Factor analysis tests were conducted to confirm internal consistency with the proposed items. For the final questionnaire, an online questionnaire with an e-mail announcement was sent through e-mails to a systematic sample of 1,069 students and 339 responses were used in the analysis. The data gathered from the online survey was analyzed using the Statistical Package for the Social Sciences (SPSS), version 12.0. MONOVA was used to test H1 and H2, which examined whether impulsive and non-impulsive online apparel buyers differed in their apparel involvement. The independent variables were the two dimensions of apparel involvement: risk importance and risk probability. The dependent variables were the impulse buyer and non-impulse buyer groups. The dependent variables were fixed as impulse buyer groups because this study intended to investigate the relationship between risk dimensions of apparel involvement and impulse buying behavior.

IV. Results and Discussion

1. Construct of Apparel Involvement

Factor analysis was conducted to determine the constructs of apparel involvement (Table 2).

Factor 1(i.e., risk importance) consists of two items, which had a Cronbach’s alpha coefficient of .78 and explained 35.4% of the variance. The factor of risk importance of apparel involvement included items on determining whether one perceives negative consequences of a mispurchase and how important these consequences can be. The three items in Factor 2(i.e., risk probability) had an alpha coeffi-

<table>
<thead>
<tr>
<th>Table 2. Factor analysis results: Risk importance and risk probability construct</th>
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<tr>
<td><strong>Factor</strong></td>
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<tr>
<td><strong>Risk Importance</strong></td>
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<td></td>
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<td><strong>Risk Probability</strong></td>
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Table 3. MANOva results: Differences between the impulse buyer group and non-impulse buyer group in apparel involvement

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable Apparel Involvement Constructs</th>
<th>Group Means</th>
<th>F-value</th>
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</thead>
<tbody>
<tr>
<td>Impulse Buying Behavior</td>
<td>MANOVA-Pillai’s Trace criterion</td>
<td>Impulse Buyer Group</td>
<td>Non-Impulse Buyer Group</td>
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<td></td>
<td>Univariate F tests</td>
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<tr>
<td></td>
<td>Risk Importance</td>
<td>2.25</td>
<td>4.01</td>
</tr>
<tr>
<td></td>
<td>Risk Probability</td>
<td>2.78</td>
<td>3.47</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01

cient of .69 and explained 18.9% of the variance. The factor of risk probability of apparel involvement included items on determining whether one thinks choosing clothing/accessories is complicated and something to worry about. This factor is about the probability of making a mispurchase and uncertainty about making the right choice or not when buying clothing/accessories. The names given to the factors were based on the previous studies (Kapferer & Laurent, 1985/86; Lee, 2000).

2. Hypotheses Testings

MANOVA was used to test the main hypotheses H1 and H2. Before conducting MANOVA, the homogeneity of the variance-covariance matrices for the dependent variables was tested using Box’s Test of Equality of Covariance. If Box’s Test of Equality of Covariance is significant, then there may be severe distortion in the tests. In this case, only Pillai’s trace criterion should be used (Field, 2002). The result showed that Box’s Test of Equality of Covariance was significant, [F(36, 115.43)=1.521, p<.05], indicating that the observed covariance matrices were not equal, which violated the assumption of homogeneity of the variance-covariance matrices. Therefore, only Pillai’s trace criterion was used. The multivariate tests under Pillai’s trace criterion revealed that the main effect of independent variable on the dependent variables was significant, [F(1, 328)=3.14, p<.05](Table 3).

At least one of the mean scores of apparel involvement constructs was significantly different between the impulse buyer and non-impulse buyer groups. Based on the results, univariate F tests were conducted to test the hypotheses. The univariate F test indicated that the risk importance of apparel involvement differed significantly between the impulse buyer group and non-impulse buyer group(p<.01). The mean of risk importance was significantly lower in impulse buyer group than in non-impulse buyer group(M=2.25, 4.01, respectively). Impulse buyer group perceived apparel products as having lower risk importance than non-impulse buyer group did. Based on this result, H1 was supported. For H2, the univariate F test indicated that the risk probability of apparel involvement differed significantly between the impulse buyer group and non-impulse buyer group(p<.05). The mean of risk probability was significantly lower in impulse buyer group than in non-impulse buyer group(M=2.78, 3.47, respectively). Impulse buyer group perceived apparel products as having lower risk probability than non-impulse buyer group did. Based on this result, H2 was supported.

V. Conclusions and Recommendations

The results of H1 and H2 showed that the impulse buyer group had a lower degree of apparel involvement regarding the risk importance and risk probability of apparel products than non-impulse buyer group. Respondents who perceived the negative consequences of mispurchase and the probability of making a mispurchase as less important purchased apparel products more on impulse when shopping online. In the previous studies regarding perceived risk (Akaah & Korgaonkar, 1988; McCorkle, 1990), consumers were found to perceive higher level of risk with online shopping then with offline shop-
ping. Results from Booker(1995)’s study showed that the main reason why the majority of consumers who browsed or searched the Internet but did not make purchases was because of the security issue. In case of buying apparel products through the Internet, the probability of making mispurchase(i.e., risk probability) is generally high due to the unique characteristics of apparel. Being unable to touch or try on apparel before buying can be a big barrier for the consumers. Many studies reported that the majority of Internet shoppers(58%-85%) avoided purchasing apparel online because of the inability to see size or appearance, feel the fabric touch, and try on clothing(CyberAtlas Trends & Statistics, 2000; Elliot & Fowell, 2000).

However, this study shows that the perceived risk for online apparel buying can differ depending on the impulsiveness of online apparel buyers. Compared to impulse buyers, non-impulse buyers tended to show negative emotions if the apparel products they purchased did not show the quality they expected and if their choice proved to be poor. Impulse buyers were found to perceive less risk and consider risk as less important when buying apparel through the Internet and may be willing to take risks associated with Internet shopping. Thus, for online apparel marketers, attracting impulse buyers is advantageous because with impulse buyers, marketers may not have to worry about risks associated with selling products online and how to resolve the problems of perceive risks. However, marketers also need to consider a way to attract non-impulse buyers. Akaah and Korgaonkar(1988) found that to minimize the risk associated with online shopping, consumers rely on risk-reduction methods such as information seeking, purchase of products/brands with high quality image, repeat purchase of a brand, purchase of the most expensive product/brand available. Among the risk-reduction methods, the authors found that the most importance risk reliever was offering a money-back guarantee. Therefore, when targeting non-impulse buyers who were found to perceive higher risk importance and risk probability, online apparel marketers should offer money-back guarantees, warranties, and pre-purchase trial as one of the risk reduction methods as well as provide consumers with more sufficient information and high quality image to reduce perceived risk of non-impulse buyers.

Studies showed that consumers perceived a higher level of risk with online shopping than with offline shopping, especially in security issues(Lee & Johnson, 2002; McCorkle, 1990; Murphy, 1998). Adapting a software that protects consumers’ personal information to prevent identity theft and providing clear information about the safety system and policy of the website may reduce consumers’ fears in buying online. For apparel products, prior studies indicated that the inability to feel the fabric and examine the size or appearance of the products before purchasing online were the main risks perceived by apparel consumers(Bhatnagar et al., 2000; CyberAtlas Trends & Statistics, 2000). For new customers, online marketers may want to offer discount code or coupons to encourage them to try their products. Moreover, although this study focused on the students in the United States, it is assumed that Korean apparel websites would show a similar problems and risk factors as stated in the results of this paper. Other than the strategies mentioned above, Korean online apparel marketers use risk-reduction methods such as money-back guarantees, warranties, and free samples or pre-purchase trials. Based on the results of this study, the following limitations and suggestions for further research are proposed.

First, the sample of the study was limited to college students. The results of this study cannot be generalized to other populations. Future study should be expanded to include online apparel buyers of different ages and in different universities or to compare Korean and American students by using more samples from each university. Second, the demographic profiles of this study showed that there is possibility of a difference in online buying behavior regarding gender, age, student status, and clothing expenditure. Further study is recommended to focus on above demographic profiles to investigate online apparel buying behavior. Third, since this study focused on online impulse buying behavior, future study is recommended to investigate the risk dimensions of apparel involvement for impulse buying.
behavior in offline context and compare the results with online shopping context.

References


of Consumer Research, 7, 23–27.

요 약
본 연구의 목적은 위험지각 측면에서의 의복관여도와 의류판매 웹사이트 상에서의 충동구매행동간의 관계를 알아보기 위한 것이다. 인터넷 설문지를 사용한 데이타 수집을 통해 339명이 본 연구에 사용되었 다. 가설검증 전에 의복관여 요인을 분류하기 위해 요인분석을 실시한 결과 위험지각 측면에서의 의복관 여가 두가지 요인으로 분류되었다. 첫번째 요인은 risk importance이고 두번째는 risk probability로 분류되 었다. MANOVA를 통한 통계분석 결과 충동구매집단이 비충동구매집단보다 의복관여의 risk importance와 risk probability의 측면 모두에서 유의하게 낮게 나타났고 충동구매집단의 충동구매정향과 의복관여도의 두가지 측면이 모두 부적인 상관관계를 가지는 것으로 나타났다. 그 결과 가설 1, 2 모두가 검증되었다.