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Role of risk reduction strategies in shopping online for fashion products

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Abstract

Consumers' perception of risk plays a major role in how they make online purchase decisions. Since online shopping is perceived to be riskier than in-store shopping, consumers engage in a variety of risk reduction strategies such as searching online for alternative products and alternative e-tailers. This study examines the influence of risk involvement on risk reduction strategies and customer satisfaction. It discusses three aspects of risk reduction strategies: time spent in making a purchasing decision, searching for alternative e-tailers, and searching for alternative products. Data from 294 female shoppers who had experience in purchasing fashion products online was analyzed. This study found that risk involvement had a positive influence on the time spent in making decisions, while the influence of risk involvement on searching for alternative retailers and alternative products was not significant. However, consumer satisfaction was negatively related to search for alternative retailers and positively related to risk involvement. This study provides a better understanding of customers' risk involvement and risk reduction strategies in online shopping. This information would be beneficial for marketers and retailers to reduce customer perception of risks and to promote online sales.

Keywords: perceived risks, risk reduction, information search, satisfaction, online shopping

Ⅰ. Introduction

Because information technology and communication have made online shopping more convenient than ever, consumers are increasingly turning to Internet-based product information research on a variety of goods (Ratchford et al., 2003). According to the Korea National Statistical Office (2011), clothing and fashion-related goods account for 15.6% of e-commerce operations, and since 2006, they have accounted for the largest portion of Korea's e-commerce activity.

Previous studies on online shopping suggest that consumers' perceived risk of online shopping is negatively associated with their willingness to purchase online (Javenpaa et al., 2000). Common risks involved in online shopping are related to the issues of delivery, exchange/return, and security, which apply to most product categories. The increase in online shopping and consumers' willingness to shop online has reduced such risks over time (Yang & Choi, 2011). However, since customers are unable to experience the product directly or to have personal relationships with retailers, non-store-based shopping is generally perceived as

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more risky than in-store shopping (Van den Poel & Leunis, 1999). In particular, trying on clothes can be critical to shopping for apparel. Before making a final decision, consumers typically want to try on items of clothing to see how the product looks and fits. Furthermore, since apparel has been classified as hedonic and high-involvement products in previous studies (Hirschman & Holbrook, 1982; Kapferer & Laurent, 1985), these characteristics may cause the consumer to perceive higher risks when purchasing online. Colors and textures of the product do not appear the same in online environments as they do offline. E-tailers strive to add such features when presenting their products online by using technologies such as 3-D.

To overcome the risks associated with shopping online for apparel, consumers engage in risk reduction strategies. One of the widely used risk reduction strategies is to search for more information online (Taylor, 1974). Examples of such strategies include searching for alternative products or retailers while making online purchase decisions (Sitkin & Weingart, 1995). These risk reduction activities exert a significant positive influence on shopping satisfaction and intent to purchase (Shim, 2007).

This study aims to examine the influence of risk involvement on risk reduction strategies and the corresponding influence of risk reduction strategies on consumer satisfaction with online shopping. It provides a better understanding of customers' risk perceptions and how they can be reduced in the online shopping context. This information may benefit marketers and retailers in addressing the challenges of reducing customers' perceived risks and promoting online sales.

II. Research Background

1. Perceived risks

The literature indicates that perceived risks have been widely examined as negative factors in consumers' purchasing decisions (Bettman, 1973; Chaudhuri, 1997; Mitchell, 1999). Cox and Rich (1964) defined perceived risk as the amount of uncertainty that consumers feel in contemplating a particular purchasing decision. According to Arora (1982), involvement is present whenever an incorrect purchase decision can be made. Peter and Ryan (1976) argued that an overall perceived risk is determined by a combination of two components: probability of negative consequences and importance of negative consequences. Since risk involvement should be positively related to the importance of negative consequences, risk involvement increases the overall perceived risk. Some previous studies on online apparel shopping (e.g., Hong, 2004) reported that owing to risk perception, consumers avoid or postpone purchases even though they have invested significant time and effort in shopping online.

Spence, Engel, and Blackwell (1970) found that consumers perceived a higher risk with mail order buying than retail store buying mainly because of the lack of opportunity to examine the products prior to purchase. Other researchers also showed that the perceived risks for online purchasing were related to uncertainty associated with online shopping (Furnell & Karweni, 1999; Keeney, 1999). Previous studies have consistently shown that customers perceive the risks for online shopping to be higher than that for in-store shopping because of the uncertainty of products and retailers online. Many studies have used perceived risk to explain consumers' reluctance to shop online (Bhatnagar & Ghose, 2004; Forsythe & Shi, 2003; Lee and Tan, 2003).

Most previous studies on the perceived risk in online shopping have investigated three types of risks: perceived product performance risk, perceived security risk, and perceived convenience risk (Bhatnagar & Ghose, 2004; Forsythe & Shi, 2003; Lee and Tan, 2003). Product performance risk indicates the concerns that consumers may have with product quality because of insufficient information about product quality. Insufficient experiential information as a result of,

for example, limits to inspections or trials of the product leads online customers to perceive a high product performance risk (Miyazaki & Fernandez, 2001; Lee & Tan, 2003). The second risk that online customers perceive is that of security, which refers to the possible misuse of credit card or personal information. Customers perceive a security risk with unfamiliar online retailers during the transaction or when the Internet is used as a medium for transactions (Internet Crime Complaint Center, 2011). Finally, customers also perceive a convenience risk in purchasing online due to the potential for non-delivery or damage of purchased goods and the potential difficulty in contacting customer service after making an online purchase (GVU, 1998; Miyazaki & Fernandez, 2001).

2. Risk reduction strategies

Since customers generally perceive a higher risk in online purchasing than in-store purchasing, they may employ strategies to reduce their risk perceptions. Perceived risk has two major components – uncertainty and a subjective feeling about unfavorable consequences (Cunningham, 1967); thus, perceived risk can be decreased by reducing those components to a tolerable level. Therefore, customers can reduce perceived risk by increasing their certainty that purchases will not fail or increasing their confidence that the consequences will be favorable.

The literature has investigated various risk reduction strategies such as asking family and friends to recommend retailers or products, purchasing a well-known brand or buying from a well-known retailer, getting advice from salespeople and spending more time in gathering information (McConnel, 1968; Boze, 1987; Mangold et al., 1987; Mitchell & Greatorex, 1989; Mitchell & McGoldrick, 1996). The classification of these risk reduction strategies is varied. In particular, Mitchell and McGoldrick (1996) discussed how risk reduction strategies can be classified as clarifiers and simplifiers. If a person buys a product of a popular brand, purchases from a well-known retailer, or buys an expensive product, he uses a simplifier strategy to reduce the perceived risk. By contrast, if an individual asks a salesperson for product information and then uses that information to clarify the purchasing goal, then he uses a clarifier strategy. However, the clarifier strategy also includes searching for information online or through television advertisements. Therefore, if a customer buys a product solely based on a salesperson's recommendation, this strategy would be classified as a simplifier strategy (Mitchell & McGoldrick, 1996).

Information search is one of the most common strategies for customers to reduce perceived risk, and previous studies have shown that perceived risk motivates customers' search behavior (Murry, 1991; Urbany et al., 1989). According to Urbany, Dickson and Wilkie (1989), choice uncertainty increases the extent of information search, including the number of different brands considered for appliance purchases, actual shopping time, and the number of different stores visited.

When customers perceive high risks during purchase decisions, they may search for more product information to reduce perceived risks. Owing to a high level of perceived risk regarding a product before making a purchase decision, consumers who had limited knowledge about the product or doubted their ability to make good decisions acquire more information about the product (Jacoby et al., 1978). Hence, high-risk involvement in online shopping would lead consumers to search for more information before purchasing a product. Therefore, the following two hypotheses were developed:

H_1: Customers with a high-risk involvement increase their search for alternative retailers when shopping online.

H_2: Customers with a high-risk involvement increase their search for alternative products when shopping online.

Online customers with more uncertainty seek additional information, thus taking more time to make a purchasing decision. A previous study reported that choice uncertainty increases shopping time (Urbany et al., 1989). Furthermore, Ben-Zur and Breznitz (1981) found that time pressure reduces the propensity to take risks. Thus, uncertainty may cause customers to spend more time on their purchasing decisions to evaluate whether or not they will take the risk. Therefore, this study proposes a third hypothesis:

H_3: Customers with a high-risk involvement increase the time spent in making a purchasing decision when shopping online.

3. Satisfaction

Consumer satisfaction characterizes a psychological state resulting from an evaluation of discrepancies between pre-purchase expectations and actual purchase experience (Oliver, 1997; Bolton & Drew, 1991). The expectancy disconfirmation theory has been widely accepted in the study of explaining and predicting consumer satisfaction. Various shopping experiences for products and services, including restaurants (Pizam & Milman, 1993), health care options (Gilbert et al., 1992), automobile purchases (Yoon & Kim, 2000), and electronic commerce services (Yen & Lu, 2008), have demonstrated this theory.

Furthermore, post-purchase satisfaction, as developed according to Oliver's (1980) expectancy disconfirmation theory, affects customer loyalty (e.g., repurchase intentions and willingness to provide positive word-of-mouth). Early studies argued that pre-purchase expectation and perceived performance affected customer satisfaction directly and indirectly through disconfirmation (Bolton & Drew, 1991). Depending on perceived performance, expectations could be positively disconfirmed (perceived performance exceeds expectations), confirmed (perceived performance equals expectations), or negatively disconfirmed (perceived performance falls short of expectations) depending on perceived performance. Therefore, satisfaction is increased as positive disconfirmation increases.

Recently, expectancy disconfirmation theory has been adapted to understand customers' intentions in the e-commerce context. Previous studies have found that disconfirmation affects satisfaction, which in turn influences continuance intention towards e-commerce (e.g., Wu et al., 2005). Thus, disconfirmation and performance are also important predictors to explain satisfaction in the online environment.

Through risk reduction strategies, customers may obtain enough information about alternative products and retailers to choose the best purchasing option. However, customers may increase their expectations prior to making an online purchase while also increasing their confidence in their choices. In addition, previous studies found a negative relationship between the number of choices and customer satisfaction. For example, according to Iyengar and Lepper (2000), when a large number of options were available, respondents were less satisfied with their final selection of a type of chocolate than when a selection was made from a smaller range of options. Several other studies have shown similar results in which the number of choices decreased customer satisfaction with their final selection of various products such as pens (Shah & Woldford, 2007) and coffee (Mongilner et al., 2006).

Although customers search for alternative products and retailers to reduce perceived risk, post-purchase satisfaction is expected to decrease when more options are available. In order to decrease the perceived risk level, consumers tend to pursue risk reduction activities, thus increasing purchasing intention (Kim & Rhee, 2005). Because the search for alternatives and the comparison of a large range of options increases customers' decision- making time, its influence on online post-purchase satisfaction may be negative. Thus, risk reduction strategies may decrease customer satisfaction with their purchasing decision. This study expects risk reduction strategies to have a

negative effect on customer satisfaction, as suggested in the following hypotheses:

H_4: Customers who increase their search for alternative retailers online are less likely to be satisfied with their purchase.

H_5: Customers who increase their search for alternative products online are less likely to be satisfied with their purchase.

H_6: Customers who increase their decision-making time for online purchases are less likely to be satisfied with their purchase.

Since perceived risk can be one of the components of pre-purchase expectations, high perceived risk may lead to low expectations from the product or retailer. Low expectations related to high risk may increase post-purchase customer satisfaction in online shopping. Therefore, this study expects high perceived risk to increase customer satisfaction.

H_7: Customers with high risk involvement are likely to be satisfied with their purchase when shopping online.

III. Methods

1. Measurements

A survey questionnaire was developed for the empirical study. A three-item scale was adopted from Kapferer and Laurent (1985) and modified to measure risk involvement. It included the statement, "It doesn't matter too much if I make a mistake in selecting the right product online." The answers for risk involvement were recorded on a 5-point Likert scale.

This study developed a measurement for risk reduction strategies. To measure three risk reduction strategies－time spent in making a purchase decision, searching for alternative retailers, and searching for alternative products－the following three items were used: "How much time do you spend in making a purchase decision for a fashion product online?" (time spent in decision making); "How many online retailers do you visit before purchasing a fashion product online?" (alternative retailer search); and "How many products do you consider before purchasing a fashion product online?" (alternative product search). Participants answered open-ended questions for these items of risk reduction strategies. Since the measures were single behavioral variables, the items were not indexed but treated as individual direct measures of the variables.

Customer satisfaction was measured using four items, each of which was modified from Westbrook and Oliver's (1991) study. The satisfaction items included the statement, "I am satisfied with the fashion product that I purchased at the online store." Responses about satisfaction were recorded on a 5-point Likert scale.

2. Participant characteristics

Data were collected from 294 female consumers who had experience in shopping online for fashion products. The majorities of participants lives in metropolitan areas in Korea and have an average age of 24.5, with ages ranging from 18 to 42. Most of the respondents (96%) are not married and are college students (67%). Respondents were asked about their average spending on clothing per month, and the most common range is $100 - $300 (39%).

3. Analysis

AMOS 7.0 was used to conduct structural equation modeling (SEM). Data were analyzed using a two-step approach: a measurement model and a subsequent structural model (Anderson & Gerbing, 1988). First, a confirmatory factor analysis was conducted to determine whether the manifest variables reflected the latent variables. After validating the measurement model, SEM was used to examine the validity of the hypotheses. The conceptual model includes risk involvement and e-satisfaction as the endogenous

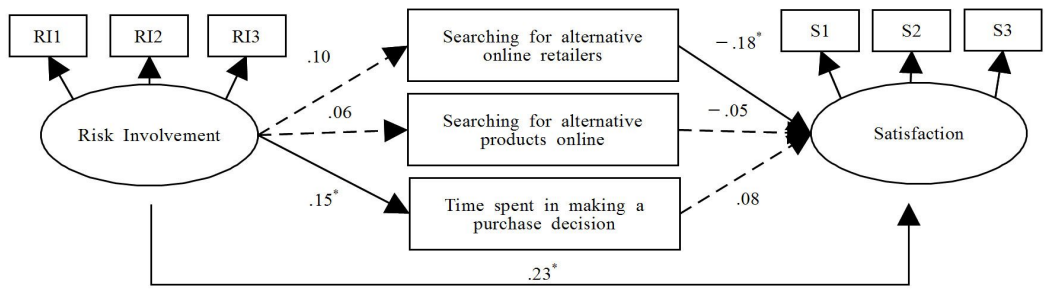
variables and risk reduction activities as the mediating variable. Three reduction activities were treated as single indicator variables in the model.

IV. Results

An analysis of simple descriptive statistics indicated that the average risk involvement was 3.96 out of 5 and average satisfaction was 3.05. This indicates that consumers perceive moderate to high risk in online shopping and that satisfaction with fashion products online is relatively low. On average, the respondents spent 76 minutes online for making a purchasing decision for a fashion product and searched about 2.7 stores and 3.4 alternative products before making the purchase.

Confirmatory factor analysis (CFA) with a maximum likelihood was conducted to analyze the measurement model. One satisfaction item was deleted due to low standardized factor loading (.47). The final CFA model yielded a goodness of fit to data (GFI = .99, AGFI = .98 and NFI = .98; as recommended in previous studies (Browne & Cudeck, 1992; Hu & Bentler, 1999).

After testing the CFA model, structural equation modeling (SEM) was used to test the hypotheses; the results are shown in 〈Table 1〉 and 〈Fig. 1〉. The overall SEM model showed a good fit to the data (GFI = .99, AGFI = .98 and NFI = .95). This study found that risk involvement had a positive influence on the time spent in making decisions (γ = .15, t = 2.10, p = .04). However, the influence of risk involve-



〈Fig. 1〉 Results of structural model.

〈Table 1〉 Structural parameter estimates

Hypothesized path	Std path coefficients	*t*-value
H_1: Risk involvement → Searching for alternative online retailers	.10	1.45
H_2: Risk involvement → Searching for alternative products online	.06	.82
H_3: Risk involvement → Time spent making purchase decisions	.15	2.10*
H_4: Searching for alternative online retailers → Satisfaction	− .18	− 2.42*
H_5: Searching for alternative products online → Satisfaction	− .05	− .69
H_6: Time spent making decisions → Satisfaction	.08	1.06
H_7: Risk involvement → Satisfaction	.23	2.46*
	GFI = .99 AGFI = .98 NFI = .95	

Note. GFI, goodness-of-fit index; AGFI, adjusted goodness-of-fit index; NFI, normed fit index.
***$p \leq .001$, **$p \leq .01$, *$p \leq .05$

ment on alternative retailer search (γ = .10, t = 1.45, p = .15) and alternative product search (γ = .06, t = .82, p = .41) was not significant. Therefore, Hypothesis 3 was supported. However, Hypothesis 1 and Hypothesis 2 were not supported.

This study also found that searching for alternative retailers had a significantly negative effect on consumer satisfaction (β = −.18, t = −2.42, p = .02). The other two risk reduction strategies (i.e., searching for alternative products online and time spent in making decisions) did not have a significant impact on customer satisfaction. Thus, Hypothesis 4 was supported, while Hypothesis 5 and Hypothesis 6 were not supported.

Risk involvement demonstrated a significant positive influence on satisfaction (γ = .23, t = 2.46, p = .01). Therefore, this result supported Hypothesis 7.

V. Discussion

The results indicate that online customers are likely to spend more time in making purchasing decisions for fashion products when they are more involved with risks; by spending more time, they may be able to reduce perceived risks. This study's results were similar to that of previous studies that also indicated a positive relationship between perceived risk (choice uncertainty) and risk reduction activities like shopping for a certain length of time (Ben-Zur & Breznitz, 1981; Hong, 2004; Urbany et al., 1989).

However, in the context of fashion products, alternative store or product searches were found to be ineffective risk reduction strategies for shopping online; this result is contrary to that of previous studies (Cox, 1967; Urbany et al., 1989). Differences in product characteristics might account for this different result. This study investigated the purchase of fashion products online, while Urbany, Dickson and Wilkie (1989) examined the purchase of household appliances including refrigerators, washers, or dryers. Since fashion products are hedonic rather than utilitarian, customers may have strong preferences on the style, brand, and/or retailer. Thus, customers may not use searching for alternative retailers or products as their risk reduction strategy.

Second, this study found a negative relationship between searching for alternative online retailers and customer satisfaction. As we expected, similar to previous studies, this study showed that a large number of purchasing options decreases customers' post-purchase satisfaction for fashion products. Furthermore, since alternative e-tailer search is negatively related to e-tailer loyalty, consumers who are less likely to search for alternative retailers may have a reason to be loyal to a certain retailer. Therefore, customers may experience higher satisfaction when purchasing from preferred retailers.

Finally, this study found a positive relationship between risk involvement and customers' post-purchase satisfaction. This may partly explain the relationship between risk involvement and customers' post-purchase satisfaction and supports the expectancy disconfirmation theory (Oliver, 1980), where perceived risk plays a vital role in customers' pre-purchase expectations. In other words, perceived risks appear to decrease customers' pre-purchase expectations, while low expectations appear to increase post-purchase satisfaction. However, this relationship merits further investigation.

Although shopping online for fashion products is prevalent among young consumers in Korea, online shoppers still perceive high levels of risk in the decision-making process. Since spending more time in making a decision is used as risk reduction strategy, e-tailers should provide sufficient time for customers to make a purchase decision. For high-risk products, limited time offers such as pop-up sales would eliminate an important risk reduction strategy for shoppers. Online retailers should consider avoiding time-limited offers for high-risk products. Moreover, for customers who delay decision making, e-tailers should make their website more convenient by providing, for example, a method for saving items for later or extending the

maximum duration of items in shopping carts.

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