

The Impacts of Consumer Perceptions of Product Reviews Posted on Online Stores on Perceptions of Online Shopping and Online Purchase Intention

온라인 점포의 상품구매후기에 대한 소비자 지각이
온라인 쇼핑에 대한 지각과 온라인 구매의도에 미치는 영향

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As an increasing number of US online shoppers rely on online reviews to make their purchase decisions, scholars have conducted considerable research to identify characteristics of useful and credible online reviews. However little research exists that uses attitudinal data to examine how shoppers' perceptions of online reviews influence their online purchase decisions. A research model was developed based on previous studies that proposed the causal relationships among consumer perceptions of online product reviews, perceptions of online shopping, and the shoppers' intention to purchase online. A total of 293 college students enrolled at a southeastern university in the United States participated in the study and the research hypotheses were examined using a structural equation model analysis. Results indicated that consumers' perceived usefulness of online reviews enhanced their perceptions of online shopping usefulness, which in turn, increased intention to purchase products online. Further, the results showed that consumers' skepticism toward online reviews significantly increased consumers' perception of online shopping risk, which subsequently lowered consumers' perceived usefulness of online shopping. In this study, consumers' skepticism towards online reviews negatively and indirectly influenced their intention to purchase online through the mediating variables of perceived risk and usefulness of online shopping. The results of this study suggest that consumers' perceptions of online product reviews (including both skepticism toward and perceived usefulness of online product reviews) are critical cues that affect their trust in online shopping as well as their purchase intent from the online store. Online retailers need to establish mechanisms or programs to increase consumers' perception of review usefulness through the improved quality and credibility of review information and thus, in turn, reduce skepticism toward the reviews and enhance perceived usefulness of consumer reviews.

Key words: Online review, Skepticism, Perceived risk, Perceived usefulness, Online shopping

1. Introduction

As an increasing number of consumers use the Internet to communicate with others about their product experience and rely on online reviews for making purchases, online product reviews have become an important form of electronic word-of-mouth communication (Jiménez and Mendoza, 2013). According to one recent survey, 78% of US online consumers agreed that online reviews influenced their purchases and results of another survey revealed that an overwhelming 98% of respondents found user-generated reviews helpful when researching holiday shopping (Marketing Charts, 2012). The power of electronic word-of-mouth has been extensively discussed in both business and academic communities: online product reviews, in particular, have received much attention from businesses which recognize the potential marketing opportunities and risks such reviews present (Bambauer-Sachse and Mangold, 2013). Online product reviews have become an important asset for retailers not only because they attract customers who want to make informed decisions and trust user-supplied reviews, but also because quality reviews bolster product sales (Cui et al., 2012; Siering and Muntermann, 2013). Additionally, online product reviews allow companies to monitor consumer attitudes toward their products and adapt their marketing and production strategies accordingly (Dellarocas et al., 2007).

However, the difficulty in controlling the quality and the content of information shared in the virtual environment makes it a major challenge for companies to develop appropriate marketing strategies associated with online customer reviews.

Although consumers tend to consider user-supplied product reviews to be more trustworthy and persuasive than product information provided by companies (Bambauer-Sachse and Mangold, 2013), consumers' awareness that some online reviews are not being written by genuine users of products, along with their increasing knowledge about marketers' manipulative tactics using fake and deceptive reviews has resulted in growing concerns about the credibility and accuracy of online reviews. The proliferation of online reviews and the highly accessible nature of the Internet make it inevitable that some of the contents posted online include unreliable information containing inaccurate, exaggerated, or even irrelevant comments. This problem is so prevalent in consumer reviews that the issue of how to protect both customers and businesses from unreliable reviews has become an important topic in the online business world. In addition to individual consumers who post outdated and inaccurate information, many companies are also known to create fake reviews to influence product sales and to enhance the reputation of their own products, as well as those of their competitors. As a result, perceived credibility of online reviews has become a

critical aspect of consumers' perceptions of online reviews. Without the knowledge of how consumers' concerns about credibility of online reviews affect shoppers' perceptions of online reviews, and ultimately their purchase decisions, marketers will fail to appropriately manage and strategically utilize online reviews on their websites.

Although considerable research has focused on identifying useful and credible online reviews, little is known about how shoppers' perceptions of online product reviews influence their online purchase decisions. This study therefore proposes a theoretical model based on Kim et al.'s (2012) Internet shopping business model as well as the Technology Acceptance Model (TAM) to describe the causal relationships among consumer perceptions of online product reviews, perceptions of online shopping, and intention to purchase online. Kim et al. (2012) proposed an Internet shopping business model to explain consumers' motivations for making online purchase decisions. In this model, consumers' perceptions of the quality of the information content provided by a website were expected to significantly predict their perceptions of the utilitarian value of online shopping in general, which in turn influence consumers' intention to purchase from the website. Perceived utilitarian value of online shopping, as measured by the degree to which consumers felt their online shopping goals had been quickly and easily accomplished, is similar to the concept of perceived useful-

ness of online shopping that appears in the modified versions of the TAM model adapted for online shopping environments. Perceived risk of online shopping is another variable often used in the modified TAM models (Gefen et al., 2003; Hassanein and Head, 2007; Kim, 2012; Tong, 2010), and was therefore used in our study along with perceived usefulness of online shopping.

In our study we focused on perceived quality of online product reviews as a variable that represents perceived quality of information content. We proposed that consumers' perceptions of online product reviews would significantly influence their perceptions of risks and usefulness of online shopping, which in turn influence their intention to make an online purchase. As for variables relating to consumer perceptions of online product reviews, we chose two concepts based on the literature review: perceived usefulness of online reviews and consumer skepticism toward online reviews. Although some studies that focus on perceived usefulness of online reviews exist, only a few examined its effect on purchase intention and none studied its indirect effect through other variables. In this study, consumer perceptions of 'online shopping' are chosen as a mediating variable that may help explain the association between 'online review' perceptions and purchase intention. Meanwhile, consumer skepticism toward online reviews is a new concept that has not yet been tested in empirical research but may be useful in ex-

plaining consumer perceptions of online shopping given consumers' increasing knowledge of the problems with the credibility of online reviews. The first of the specific objectives of this study was to determine the impact of perceived usefulness of the reviews on perceived usefulness of online shopping and online purchase intention. The second objective was to examine how strongly consumers' skepticism toward online product reviews influences their perceptions of online shopping risks. Lastly, this study examined how strongly online shopping usefulness and perceived risk influence online purchase intention.

II. Literature review and research hypotheses

2.1 Usefulness of online product reviews and usefulness of online shopping

The presence of customer reviews on a company website has been revealed to improve customer perception of the usefulness of the website (Kumar and Benbasat, 2006) and to have a positive influence on sales (Chen et al., 2008). Mudambi and Schuff (2010) noted that product reviews posted on websites have the potential to attract consumer visits, increase the time spent on the sites, and create a sense of community among frequent shoppers. The researchers also suggested that as the

availability of customer reviews becomes prevalent, the strategic focus should shift from the mere presence of product reviews, examining instead customer evaluation and use of those reviews.

Pan and Zhang (2011, p. 598) defined perceived usefulness or helpfulness of an online product review as "the extent to which a consumer perceives a product review to be useful in performing his/her shopping tasks". The usefulness of product reviews at retail websites has been measured either by counting the number of "useful" votes awarded to the reviews (Korfiatis et al., 2012; Mengmeng et al., 2015; Pan and Zhang, 2011; Park and Nicolau, 2015; Siering and Muntermann, 2013; Whillemsen et al., 2011) or by asking consumers if the reviews were useful in performing their shopping tasks or making purchase decisions (Benlian et al., 2012; Casalo et al., 2015; Park and Lee, 2009). The former approach was taken where the focus was on the identification of key characteristics of online reviews that drove consumers' perceived usefulness of reviews. By comparison, Benlian et al. (2012) and Park and Lee (2009) used the latter approach to examine if perceived usefulness of online review influenced the consumer's behavioral intention.

Scholars have argued that useful online reviews have a positive impact on sales (Chen et al., 2008) but have devoted scant attention to explaining how the usefulness of online reviews are linked to improved sales. A

few recent studies have attempted to address this gap in the literature by examining consumers' perceived usefulness and its impact on purchase decisions. In an experimental study, Benlian et al. (2012) found that perceived usefulness of online reviews positively influenced both intention to reuse online reviews and intention to purchase based on online reviews. In a study of US and Korean consumers, Park and Lee (2009) found that perceived usefulness of online reviews had a significant impact on purchase influence of online reviews and that its impact was stronger for the Korean sample than for the US sample. This finding suggested that those who found online reviews more useful were more likely to rely on online reviews in making purchase decisions, and that Korean consumers were more sensitive to useful online reviews than US consumers. The researchers also observed that perceived usefulness of online reviews positively influenced usage frequency of online reviews for both samples. Additionally, their study finding indicated that those who had a higher level of consumer susceptibility to interpersonal influence were more likely to perceive online reviews to be more useful than those who had lower levels of consumer susceptibility. However, the concept of intention or a tendency to make purchases based on online reviews in these studies was not specific to online purchases.

The abundance of and easy access to product information as well as quality of information

(in-depth information on products) have been significantly linked to a positive attitude toward online shopping (Delafrooz et al., 2009; Wu, 2003). In a study of U.S. college students, Ha and Stoel (2009) proposed consumer's satisfaction with the amount of product information available at retail sites as one of the indicators for perceived quality of online shopping, which in turn influenced consumer perceptions of usefulness of online shopping. As perceived usefulness of online review represents a consumer's perception of the benefits of product information provided by other customers, we believed that consumers' perceptions of the usefulness of product reviews would also be linked to consumers' perceptions of the usefulness of online shopping. In other words, as online reviews facilitate consumers' search process by allowing them to compare products without going to stores (Bae and Lee, 2011), those who find online reviews more useful may perceive online shopping as a more efficient, convenient and productive way of completing their shopping tasks. Additionally, those consumers who find online reviews useful are also more likely to make online purchases since online reviews help them reduce their perceptions of uncertainty and help them feel more confident about making their product choices.

H1: Perceived usefulness of online product reviews is positively related to perceived usefulness of online shopping.

H2: Perceived usefulness of online product reviews is positively related to online purchase intention.

2.2 Consumers' skepticism toward online product reviews and perceived risks of online shopping

Several researchers suggested, based on their analyses of sales data, that the availability and characteristics of online product reviews may influence a customer's shopping experience (Chevalier and Mayzlin, 2006; Gauri et al., 2008). Because most consumers use online reviews primarily to make informed purchase decisions that minimize their risks, perceived risk in shopping is a meaningful variable that can be used to better understand the effect of consumer perception of online product reviews. Perceived risk is defined as "a consumer's perception of the uncertainty and the possible undesirable consequences of purchasing a product or service" (Faqih, 2013, p. 69). Faced with the abundant choice of products in the online marketplace, shoppers read online product reviews to reduce uncertainty in making purchases of products they cannot physically and personally examine. In addition to actual product risks, consumers may also feel uncertain about online vendors and therefore read online reviews to judge the trustworthiness of the vendors before placing an order. Utz et al. (2012) recently found that consumer reviews served

an important role in assessing the trustworthiness of an online store.

As even greater numbers of online product reviews have appeared, it has become impossible for consumers to read all the reviews pertaining to a product under consideration. Instead, consumers have begun to base their purchase decisions on selected reviews they deem most credible and useful. As such, credibility and usability are two dimensions of the review quality that have received significant attention in the literature. Prior research has demonstrated that more credible reviews lead to higher purchase intentions, supporting the critical role of credible online reviews in guiding purchase decisions (Floh et al., 2009; Jiménez and Mendoza, 2013).

However, unreliable and irrelevant consumer reviews and/or the knowledge of manipulated online reviews may make consumers feel more skeptical about the accuracy of the information provided online in general and also make them feel more vulnerable to fraudulent marketing practices, thereby increasing the level of risk they perceive in online shopping. Consumer skepticism refers to a negatively positioned attitude or a deposition of incredulity toward a particular consumer product, particularly product claims made by marketers and advertisers (Obermiller and Spangenberg, 1998). Consumer skepticism toward online reviews can therefore be defined as a consumer's tendency to doubt or disbelieve the information contained in online reviews. Although the

concept of consumer skepticism has been extensively studied in advertising research, it has received little attention in studies of on-line product reviews. As online consumers vary in their tendency to believe or disbelieve online reviews and consumers with different levels of skepticism may be influenced differently by online reviews (Sher and Lee, 2009), consumers' skepticism toward online reviews may be an important variable to consider in evaluating the association between perception of online reviews and purchase decisions. The advertising literature supports that skeptical consumers are less likely to believe information from an advertising source and less likely to use the source to make decisions, reflecting diminished information value for those consumers (Chen and Leu, 2011; Obermiller and Spangenberg, 1998). Similarly, people who are skeptical of online reviews may be less likely to believe information provided in those reviews and thus less likely to rely on consumer reviews for product information. Those consumers may also perceive that online shopping presents more risks due to the diminished value of the information available in reviews. For example, even after reading positive comments about the product performance and the delivery time of orders, skeptical consumers may still be hesitant to trust the information and remain uncertain about the quality of a product they purchase and the service provided by the retailer. In this study, we therefore proposed that the degree

of consumers' skepticism toward online reviews, particularly regarding the credibility of online reviews, would significantly affect consumer perceptions of risk in online shopping.

H3: Consumers' skepticism toward online product reviews is positively related to perceived risk of online shopping.

2.3 Perceived usefulness of online shopping, perceived risk and online purchase intention

The Technology Acceptance Model, developed based on the theory of reasoned action, posits that an individual's behavioral intention to adopt information technology is determined jointly by the perceived usefulness of the technology and perceived ease of use (Davis, 1989). The TAM has widely been used to explain consumers' online shopping behaviors, and past studies have consistently found that the adoption of online shopping is significantly predicted by a consumer's perceived usefulness of online shopping (Chen et al., 2010; Lim and Ting, 2012). Perceived usefulness of online shopping is defined as "the extent to which a consumer believes that online shopping will enhance his or her transaction performance" (Chiu et al., 2009, p. 766).

As the online environment heightens shoppers' sense of uncertainty and vulnerability due to its virtual and impersonal nature, the role of perceived risk has also received par-

ticular attention in online shopping research, and many scholars have even modified the TAM by introducing the concepts of trust and risk perception into the model (e.g., Gefen et al., 2003; Hassanein and Head, 2007; Kim, 2012; Tong, 2010). Although a number of studies have investigated the effect of perceived usefulness of online shopping on behavioral intentions, along with the effect of perceived risk in online shopping (e.g., Gefen et al., 2003; Hassanein and Head, 2007; Kim, 2012), only a few have proposed a causal relationship between perceived usefulness and perceived risk of online shopping (e.g., Çelik, 2011; French and O’Cass, 2001; Van der Heijden et al., 2003). Although few in number, these studies have shown that consumers with lower levels of perceived risk have a more favorable attitude toward online shopping, and ultimately a more favorable intention to shop online. For example, in a study by French and O’Cass (2001), online shoppers’ perceived risk pertaining to web security significantly predicted their negative attitude toward online shopping, which in turn influenced their adoption of online shopping. Using a sample of Dutch college students, Van der Heijden et al. (2003) tested relationships among perceived risk, attitude toward online shopping and online purchase intention and found that perceived risk was negatively related to attitude, which in turn predicted online purchase intention. In a recent study, Çelik (2011) observed that online

shopping anxiety or risks had a negative impact on perceived usefulness of online shopping through perceived ease of use in online shopping. As such, despite little empirical evidence for the relationship between perceived risk and perceived usefulness of online shopping, previous research supports a significant connection between the two variables and we therefore proposed that those with higher levels of perceived risk would be less likely to find online shopping useful, reflecting their less favorable attitude toward online shopping and higher levels of uncertainty toward online purchasing.

H4: Perceived risk of online shopping is negatively related to perceived usefulness of online shopping.

Perceived usefulness of online shopping constitutes a key determinant of attitude toward online shopping and plays a significant role in not only a person’s initial and continued adoption of online shopping but also his or her decision to revisit or repurchase from a website (Chiu et al., 2009; Kim, 2012; Tong, 2010). For example, in a study of Korean consumers, Kim (2012) observed that perceived usefulness of online shopping significantly influenced attitude toward online shopping, which in turn influenced new consumers’ first purchase intention. In a study of Taiwanese online shoppers, Chiu et al. (2009) found that perceived usefulness of online shopping

positively influenced the respondents' intention to repurchase from a retail website. Given this well-supported connection between perceived usefulness of online shopping and online purchase intention, the following hypothesis was proposed:

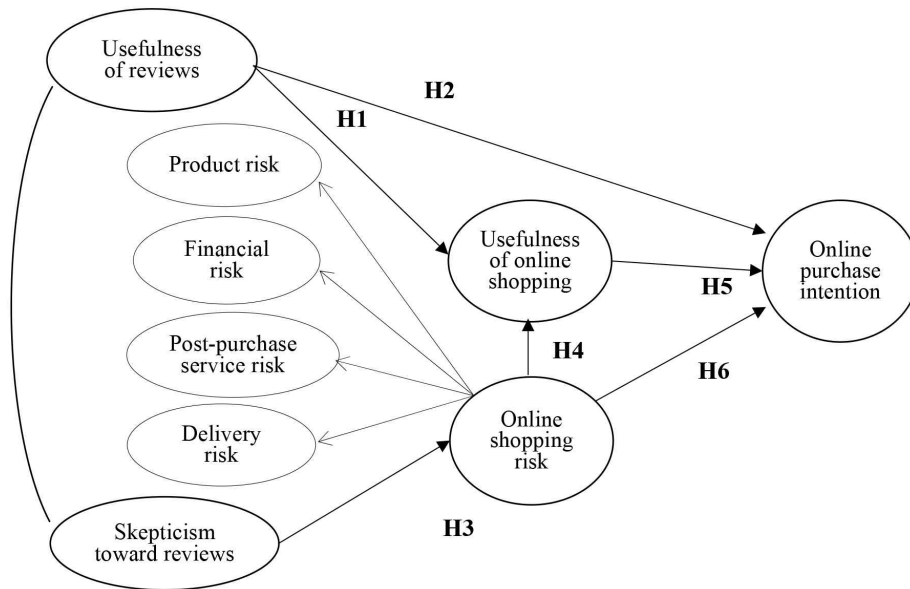
H5: Perceived usefulness of online shopping is positively related to online purchase intention.

2.4 Perceived risk of online shopping and online purchase intention

Although past studies of perceived risks of online shopping have produced mixed results, most likely due to differences in the definition of risk, most studies agree that perceived risk of online shopping had a direct or indirect influence, not only on consumers' attitude towards online shopping but also on their purchase and loyalty intentions (Chang et al., 2005; Gupta and Kim, 2010; Park and Kim, 2007; Tong, 2010). Whereas some researchers have defined perceived risk very narrowly, many scholars have argued that it should be viewed as a multidimensional construct (Tong, 2010). Several studies have identified four distinct dimensions of perceived risks associated with online purchase decisions: financial risk (Huang et al., 2004), product performance risk (Tong, 2010), post-purchase service risk (Huang et al., 2004), and delivery/time risk (Huang et al., 2004,

Tong, 2010). Except post-purchase service risk, the three types of risks were commonly identified by other previous studies (Corbitt et al., 2003; Forsythe et al., 2006; Forsythe and Shi, 2003; Lee and Huddleston, 2006). Empirical evidence from previous studies shows that perceived risk significantly decreased purchase intention (e.g., Aqueveque, 2006; Chang and Chen, 2008; Lee and Huddleston, 2006; Tong, 2010). Recently, Chang and Wu (2012) observed that the effect of perceived risk on online purchase intention was mediated by affect-based and cognitive-based attitudes toward online shopping for all of the four products studied. This finding implies that perceived risk negatively influences purchase intention, not only directly but also indirectly through attitude toward online shopping. As such, the extant literature on perceived risks of online shopping overwhelmingly suggests that a consumer's perceived risk is a primary factor determining whether he or she will engage in purchase behaviors in the online marketplace. Accordingly, the following hypothesis was proposed:

H6: Perceived risk of online shopping is negatively related to online purchase intention.



〈Figure 1〉 Proposed research model

III. Research method

3.1 Measurement

Operational definitions and measurement items for constructs were developed based on the previous literature. *Skepticism toward consumer reviews* in our study is defined as consumers' concerns about the accuracy, relevance, reliability, objectivity and timeliness, as well as the sufficiency of consumer review information. Its measurement items were newly developed based on the studies of information quality (Cheung et al., 2008; Lee et al., 2002). *Perceived usefulness of consumer reviews* refers to the perception that using consumer

reviews is productive, effective, easy, and useful for online shopping and was measured by items adapted from previous studies (Davis, 1989; Legris et al., 2003). *Perceived usefulness of online shopping* represents perceived effectiveness and productivity of using online stores for buying products and was measured with items selected from previous research (Gefen et al., 2003). *Perceived risk of online shopping* refers to concerns about product risk, financial risk, delivery risk, and post-sales service risk perceived when shopping online and was proposed as a second-order construct. The measurement items were adapted from previous studies for use in the context of online shopping (Corbitt et al., 2003; Forsythe and Shi, 2003; Forsythe et al., 2006; Kim

and Lennon, 2000; Huang et al., 2004). *Online purchase intention* is defined as the willingness, plan, and expectation to purchase products from online stores in the future and was measured by the items adapted from previous research (Chang and Chen, 2008; Choi and Lee, 2003; Kim et al., 2008). All items were measured on a 7-point Likert scale (1=strongly disagree, 7=strongly agree).

3.2 Data collection and respondent characteristics

A structured self-administered questionnaire was distributed to a convenience sample of 338 college students enrolled at a southeastern university in the United States. Considering that college students in their 20s represent a major consumer group for online shopping (DeCono, 2013; SheerID, 2013), a student sample was deemed suitable for the current study. The researchers first contacted instructors in different majors on campus and a time was arranged to visit each class for the purpose of administering the surveys. The students' participation in the survey was voluntary and no incentives were given to those who completed the survey. Of the 338 questionnaires distributed, 316 met the sample criteria (i.e., college students with experience of purchasing products online and reading online consumer reviews) resulting in a response rate of 93.5 percent. SPSS 12.0 and AMOS 18.0 were used for data analyses. Prior to

implementing SEM analyses, 23 outliers were identified by calculating Mahalanobis' distance ($p < 0.005$) and excluded from further analysis in order to improve data normality (Byrne, 1998). A total of 293 responses were used for data analysis. The expectation-maximization method was used to replace a total of 15 missing values.

Participants were first asked to recall their most recent online shopping experience where they read consumer product reviews, and to write down the name of the website and the product item for which they shopped at the time. Although the participants were asked to recall their recent visit to a website with online reviews, it was simply to facilitate their responses to some of the questions that followed: all the questions were general in nature and not specific to any particular website. The participants were instructed to think about their shopping experiences with that particular product category which they had recently shopped for, and to answer the questionnaire based on those experiences. This restriction to one product type was to ensure that the participants' responses would not be based on their mixed experiences with different types of products but would rather reflect their general experiences with one specific product type they had actually shopped for from websites with online reviews. The participants reported that they had recently shopped for the following product categories: clothing (29.4%), digital products/computers (16.0%), books

(15.4%), shoes (12.3%), hat/bag/purse (7.2%), and general suppliers (6.8%). The majority of the respondents were female (74.1%), young (19-22 years old, 86.7%), and either junior or senior students (73.1%). Furthermore, most respondents indicated that they frequently (somewhat frequently, frequently, or very frequently) shopped online (52.5%) and frequently (somewhat frequently, frequently, or very frequently) read consumer reviews on retail websites when shopping online (65.3%).

IV. Results

Consistent with the two-step approach advocated by earlier researchers, this study first evaluated the measurement model by conducting confirmatory factor analysis (CFA). The structural equation model was then estimated for hypothesis testing. Both the measurement model and the structural model were assessed by the maximum likelihood method (Arbuckle, 2003) using AMOS 18.0. To evaluate the fit of models, chi-square with degrees of freedom, CFI, GFI, AGFI, NNFI (also known as Tucker-Lewis Index), and RMSEA were assessed. As a general rule, model fit is considered to be adequate if GFI, TLI, and CFI are larger than 0.9; AGFI is larger than 0.8; and RMSEA is smaller than 0.08 (Bagozzi and Yi, 1988; Hair et al., 1998; Jöreskog and Sörbom, 1994).

4.1 Measurement model

Prior to conducting confirmatory factor analysis, the distribution of all measurement items was inspected for skewness and kurtosis. According to Kline (2005), it is difficult to assess all aspects of multivariate normality in SEM because it is impractical to examine all joint frequency distribution in order to detect violation of multivariate normality. The author also noted that multivariate non-normality could be detected through inspection of skewness and kurtosis of univariate distributions. Kline (2005) recommended that the skewness and kurtosis indices should not respectively exceed $|3|$ and $|10|$ to ensure normality of the data. As a result of assessment of normality, the skewness values of all measurement items included in our study ranged between -0.943 and 0.217 and kurtosis values ranged between -1.062 and 0.550 , demonstrating a normal distribution. Thus, based on assessment of univariate normality of each measurement item, our data was applicable to an analysis of SEM.

The measurement model yielded a chi-square value of 494.806 with 310 degrees of freedom ($p=0.000$). The relative chi-square value ($\chi^2/df=1.596$) was smaller than the recommended value of 2.0 for good fit of a model (Tabachnick and Fidell, 2007). In addition, with the exception of the GFI, the other indices satisfied the recommended values, producing a good model fit (GFI=0.886, AGFI=0.861, RMSEA

=0.045, TLI=0.964, CFI=0.968). Because the GFI and AGFI values are sensitive to sample size (Bollen, 1990; Shevlin and Miles, 1998), these are not relied upon as a stand-alone index. Researchers therefore suggest more consistent indices for evaluating model fitness such as CFI, RMSEA, and TLI (NNFI) that are not sensitive to sample size (Bandalos, 1997; Byrne, 1998; Hu and Bentler, 1999; Kline 2005). The RMSEA value for our hypothesized model was 0.045, with the 90% confidence interval ranging from 0.038 (the lower bound) to 0.052 (the upper bound), and the p value for close fit was 0.857. The hypothesized model fit the data well because the RMSEA point estimate was less than 0.05 (Browne and Cudeck, 1993); the upper bound of the 90% interval was less than 0.06 (Hu and Bentler, 1999) and the probability value associated with the test of close fit was higher than 0.05. In addition, the TLI value (0.964) was also higher than the recommended value of 0.95 (Byrne, 1998; Hu and Bentler, 1999). These results therefore suggested that there was a good fit between the model and the observed data.

Furthermore, each construct was evaluated separately by examining the indicator loading for statistical significance and by assessing the construct's reliability and its extracted variance (Hair et al., 1998). In conducting CFA, measurement items with loading values smaller than 0.5 were deleted. Three items from each variable of consumer's skepticism

toward online product reviews, product risk, and delivery risk were deleted. Two items from each financial risk and online shopping usefulness, and one item from each variable of review usefulness and post-sale service risk were also deleted. As shown in Table 1 and Table 2, the scale composite reliabilities (CR) and the average variance extracted (AVE) for each construct exceeded the acceptable level of 0.70 and 0.50 respectively (Hair et al., 1998). The value of financial risk (AVE=0.476) was at a marginal acceptance level, which was in turn close to the recommended value of 0.50. Thus, the results confirmed convergent validities of all variables. All SMC values were found to be lower than AVEs, confirming discriminant validity for all scales (see Table 2). All measurement items included for hypotheses testing are shown in Appendix 1.

4.2 Hypotheses testing

The structural model yielded a chi-square value of 497.085 with 313 degrees of freedom ($p=0.000$). The ratio of the chi-square to the degrees of freedom was 1.588, which was smaller than the recommended value of 2.0 for good fit of a model (Tabachnick and Fidell, 2007). A comparison of all fit indices, with their corresponding recommended values, indicated a good model fit (GFI=0.885, AGFI=0.862, RMSEA=0.045, TLI=0.965, CFI=0.969), although the GFI value was at a mar-

〈Table 1〉 Confirmatory factor analysis for measurement model

Variables	Items	Estimate	S.E.	C.R.	Standardized Estimate	Composite Reliability	AVE
Perceived usefulness of online reviews	PUR_1	1.000			.886	.914	.726
	PUR_2	.936	.043	21.580***	.903		
	PUR_3	.933	.051	18.279***	.821		
	PUR_4	.781	.045	17.216***	.794		
Consumer skepticism toward online reviews	CSR_1	1.000			.957	.896	.643
	CSR_2	.941	.033	28.654***	.912		
	CSR_3	.926	.036	25.887***	.882		
	CSR_4	.727	.054	13.466***	.644		
	CSR_5	.547	.055	9.980***	.522		
Online Shopping risk	Post-sale service risk	1.000			.826	.835	.566
	Financial risk	.900	.099	9.055***	.902		
	Delivery risk	.749	.077	9.781***	.665		
	Product risk	.699	.090	7.791***	.572		
Post-sale service risk	SR_1	1.000			.923	.920	.794
	SR_2	.929	.037	25.047***	.920		
	SR_3	.874	.044	20.039***	.827		
Financial risk	FR_1	1.000			.673	.731	.476
	FR_2	.921	.093	9.899***	.728		
	FR_3	.845	.091	9.294***	.666		
Delivery risk	DR_1	1.000			.958	.938	.836
	DR_2	.989	.030	33.164***	.951		
	DR_3	.862	.047	18.732***	.828		
Product risk	PR_1	1.000			.847	.843	.643
	PR_2	.894	.066	13.470***	.774		
	PR_3	.761	.056	13.600***	.782		
Perceived usefulness of online shopping	PUS_1	1.000			.937	.932	.821
	PUS_2	.992	.036	27.209***	.930		
	PUS_3	.901	.041	22.039***	.849		
Online purchase intention	OPI_1	1.000			.822	.915	.782
	OPI_2	.934	.048	19.477***	.933		
	OPI_3	.872	.047	18.732***	.895		
Fit of the model	$\chi^2 = 494.806$ (d.f. = 310, $p = .000$), $\chi^2/d.f. = 1.596$, GFI = .886, AGFI = .861, RMSEA = .045(LO = .038, HI 90 = .052, $p_{close} = .857$), CFI = .968, TLI = .964						

*** $p < .001$

<Table 2> The comparison of AVE and SMC

Variables	Perceived usefulness of online reviews (A)	Consumer skepticism toward online reviews (B)	Perceived risk of online shopping (C)	Perceived usefulness of online shopping (D)	Online purchase intention (E)
PUR (A)	<i>.726</i>				
CSR(B)	.002	<i>.643</i>			
PRS (C)	.003	.077	<i>.566</i>		
PUS(D)	.073	.008	.035	<i>.821</i>	
OPI(E)	.049	.000	.015	.252	<i>.782</i>

Notes: Italicized diagonal elements are average variance extracted (AVE) for each construct. Off-diagonal elements are squared multiple correlation (SMC). All SMC < All AVE

ginal acceptance level (Etezadi-Amoli and Farhoomand, 1996). The hypothesized structural model fit the data well in that the RMSEA was 0.045 (the lower bound of the 90% interval was 0.037 while the upper bound of the 90% interval was 0.052), which was smaller than the cutoff value, and the probability value associated with the test of close fit was 0.873. The TLI value (0.965) was also higher than the recommended value, 0.95 (Byrne, 1998; Hu and Bentler, 1999). The sample size (n=293) also met Hoelter's critical N (CN=220, p=0.01). Therefore, the hypothesized model was accepted. Table 3 shows the structural model estimates, where the estimate parameters are standardized path coefficients. All the path coefficients, except the paths of perceived risk of online shopping and perceived review usefulness to online purchase intention, were significant at the 95 percent level (p < 0.05).

As reported in Table 3, the results indicated

that consumers' perceived usefulness of on-line reviews significantly increased perceived usefulness of online shopping (H1: estimate =0.339, p=0.000). Furthermore, consumers' skepticism toward online product reviews significantly increased consumers' perceived risk of online shopping (H3: estimate=0.303, p=0.000) which significantly decreased perceived usefulness of online shopping (H4: estimate=-0.220, p=0.002). Additionally, perceived usefulness of online shopping significantly increased online purchase intention (H5: estimate=0.428, p=0.000). The influences of perceived usefulness of online reviews (H2: estimate=0.106, p=0.102) and perceived risk of online shopping (H6: estimate=-0.038, p=0.533) with respect to online purchase intention were not significant. Thus, all the research hypotheses, except for H2 and H6, were supported. Perceived usefulness of on-line reviews explained 27.8% of the variance in perceived usefulness of online shopping;

〈Table 3〉 The results of the path model

Hypotheses	Influence paths	Estimate	S.E.	C.R.	Standardized Estimate
H1	Review usefulness → Shopping usefulness	.339	.074	4.605***	.278
H2	Review usefulness → Purchase intention	.106	.065	1.636	.095
H3	Skepticism toward online reviews → Shopping risk	.303	.073	4.173***	.277
H4	Shopping risk → Shopping usefulness	-.220	.071	-3.095**	-.200
H5	Shopping usefulness → Purchase intention	.428	.056	7.644***	.470
H6	Shopping risk → Purchase intention	-.038	.061	-.623	-.038
Fit of the model	$\chi^2=497.085$ (d.f.=313, $p=.000$), $\chi^2/d.f.=1.588$, GFI=.885, AGFI=.862, CFI=.969, TLI=.965, RMSEA=.045 (LO=.037, HI 90=.052, $p_{close}=.873$)				

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

consumers' skepticism toward online reviews explained 27.7% of the variance in perceived risk of online shopping, and perceived usefulness of online shopping explained 47% of the variance in online purchase intention.

As a follow up to the rejection of Hypothesis 6, we tested an alternative model incorporating the direct effect of consumers' skepticism toward online product reviews on online purchase intention. Consumer skepticism toward online reviews may directly influence online purchase intention even though its indirect effect, mediated by online shopping risk perception, was insignificant. The alternative model had acceptable fit indices ($\chi^2=495.886$, d.f.=312, $p=0.00$; $\chi^2/d.f.=1.589$; GFI=0.886; AGFI=0.862; RMSEA=0.045, LO 90=0.037,

HI 90=0.052, $p_{close}=0.870$; TLI=0.965; CFI=0.969). However, consumers' skepticism toward online reviews did not show a significant direct effect on online purchase intention (estimate=0.070, $p=0.270$); neither did online shopping risk (estimate=-0.060, $p=0.347$) or online review usefulness (estimate=0.110, $p=0.089$). When comparing the indices of the two models, the difference between two χ^2 values was insignificant ($\Delta\chi^2 = 1.199$, d.f.=1, $p > 0.05$) and the fit indices of the alternative model were not higher than our proposed model.

Table 4 presents the bootstrap maximum likelihood estimates for the indirect and total effects of the variables on online purchase intention. The indirect effect of online shop-

<Table 4> The indirect effects and total effects of variables on online purchase intention

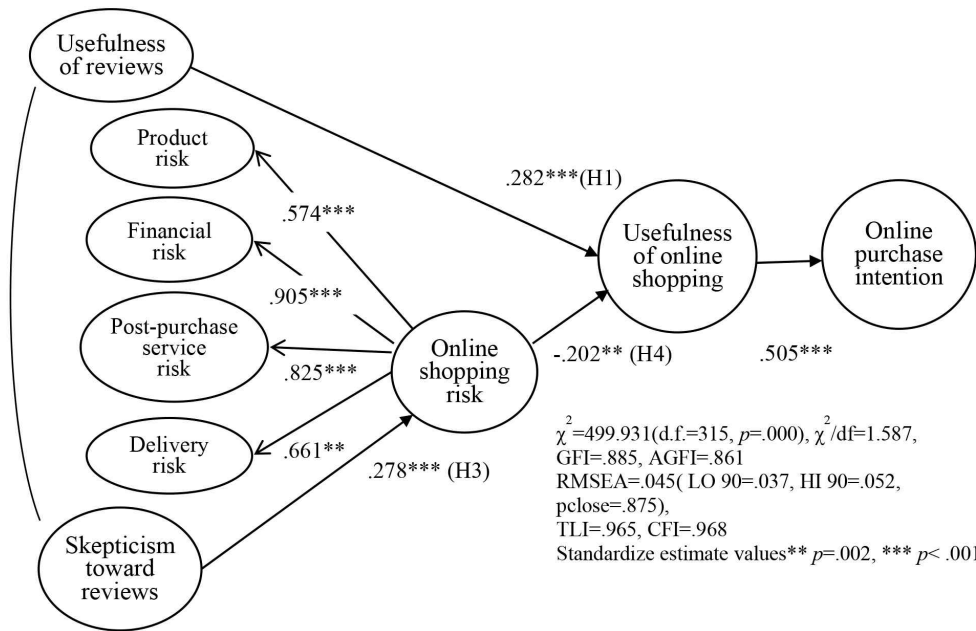
Effects	Paths	Standardized Estimate
Indirect effects	Review usefulness → shopping usefulness → purchase intention	.131**
	Skepticism toward online reviews → shopping risk → shopping usefulness → purchase intention	-.036*
	Shopping risk → shopping usefulness → purchase intention	-.094**
Total Effects	Review usefulness → purchase intention	.226**
	Skepticism toward reviews → purchase intention	-.036*
	Shopping usefulness → purchase intention	.470**
	Shopping risk → purchase intention	-.132*

* $p < .05$, ** $p < .01$, *** $p < .001$

ping risk on online purchase intention through online shopping usefulness in our proposed model was negative and significant (standardized estimate=-0.094, $p=0.004$). Furthermore, the indirect effect of consumer skepticism toward online reviews was also significant (standardized estimate=-0.036, $p=0.033$), as was the indirect effect of perceived usefulness of online reviews (standardized estimate =0.131, $p=0.006$). In the case of the total effects, including both direct and indirect effects, the positive effect of shopping usefulness (standardized estimate=0.470, $p=0.012$) on online purchase intention was the highest, in addition to being greater than the negative effect of shopping risk (standardized estimate =-0.132, $p=0.029$). Even more significantly, the total effect of perceived review usefulness (standardized estimate=0.226, $p=0.005$) on purchase intention was greater than that of skepticism toward reviews (estimate=-0.036,

$p=0.033$) and the total effect size was the second highest.

Finally, a modified model including only the significant paths among variables was presented in Figure 2. Fit indices of this model were acceptable ($\chi^2=499.931$, d.f.=315, $p=0.000$; $\chi^2/d.f.=1.587$; GFI=0.885; AGFI=0.861; RMSEA=0.045, LO 90=0.037, HI 90 =0.052, $p_{close}=0.875$; TLI=0.965; CFI=0.968) and all direct effects were significant. It was also confirmed that all indirect effects of online product review usefulness (standardized estimate=0.142, $p=0.008$), consumer's skepticism toward online product reviews (standardized estimate=-0.028, $p=0.006$), and online shopping risk (standardized estimate=-0.102, $p=0.005$) on online purchase intention were significant in the modified model.



(Figure 2) Modified model including only the significant paths

V. Discussion and Implications

The results of this study demonstrate how consumers' perceptions of online reviews influence their online purchase decisions. In summarizing our study findings, consumers perceived that usefulness of online product reviews determined their perceptions of online shopping usefulness (H1), which in turn influenced consumers' purchase intention towards a specific online retailer (H5). Furthermore, consumers' skepticism toward online reviews significantly increased consumers' perception of online shopping risk (H3), which subsequently lowered consumers' perceived usefulness of

online shopping (H4). In other words, consumers' skepticism toward online reviews was negatively related to online purchase intention through consumers' negative perceptions of online shopping risk and usefulness. The results also revealed that perceived usefulness of consumer reviews was not directly connected with purchase intent from the online retailer (H2). These findings are in line with those of previous research (Leader et al., 2000; Wixom and Todd, 2005), which reported that information quality (or information characteristics) of information system or websites is linked to intention to use the system or websites through perceived usefulness of the system or websites. One possible reason for the

insignificant direct impact of perceived online review usefulness on online purchase intention might be the inclusion of a mediating variable when examining the relationship between the two variables. Researchers have documented the significant influence of perceived usefulness of online reviews/information quality on either purchase intention or system use intention (Cheung et al., 2008; Park and Lee, 2009; Sussman and Siegal, 2003), however doing so without including a mediator variable between these two. Unlike the previous studies, we included perceived usefulness of online shopping as a mediator variable, and examined both direct and indirect effects of perceived online review usefulness on online purchase intention through the mediator variable. The results of our study suggest that consumers' perceptions of online shopping (perceptions of either risk or usefulness of online shopping) mediate the relationship between their perceptions of online review (either usefulness of or skepticism toward reviews) and online purchase intention. These findings suggest that consumers' use of online stores to purchase products may well be dependent on their positive or negative perceptions of online reviews through their favorable or unfavorable perceptions of online shopping.

Interestingly, the direct effect of consumers' skepticism toward online reviews on purchase intention was also insignificant in the analysis of the alternative model. This study, however, reveals that consumers' skepticism to-

ward reviews appears to indirectly influence their online purchase intention through perceived risk of online shopping and usefulness of online shopping. In other words, those who are more skeptical about the credibility of online reviews tend to perceive higher levels of risk in online shopping and are also less likely to believe that online shopping is useful, which subsequently lowers their intention to purchase from a website. The findings suggest that companies should effectively manage the quality of review information that produces positive consumers' perceptions in order to build consumer trust and reduce the perceived risk involved in online shopping and skepticism directed at the online retailer.

Our study did not confirm the direct impact of perceived risk of online shopping on online purchase intention (H6). Previous studies have found that perceived risk of online shopping is negatively associated with usefulness, adoption, or behavioral intention of online shopping or using online systems (Aqueveque, 2006; Chang and Chen, 2008; Dash and Saji, 2008; Featherman and Wells, 2004; Tong, 2010). However, some of these studies also noted that the influence of perceived risk on behavioral intention was weaker than the influence of perceived usefulness on acceptance and transaction intention (e.g. Dash and Saji, 2008; Featherman and Wells, 2004). In addition, Chang et al. (2005, p. 544) suggested based on the results of empirical studies identifying the antecedents of online shopping

adoption that when attitude toward online shopping is positively associated with the intention to shop online, perceived risk should indirectly influence intention or usage through attitude. Recently, empirical evidence from several studies was shown to confirm the significant effect of specific or overall perceived risk on online purchase intention through attitude toward a website (Chang and Wu, 2012; Park and Kim, 2007) or other attitudinal variables such as perceived value of a website (Gupta and Kim, 2010). Taken together with our results, the negative relationship consistently observed between perceived risk in online shopping and purchase intention is likely to be the result of indirect, rather than direct effects of the former on the latter. As in our study, when tested together with a significant mediator such as perceived usefulness of online shopping, the direct effects of perceived risk become insignificant, thereby suggesting the importance of identifying a meaningful mediator that can aid in a better understanding of the relationships among the variables.

This study makes an important contribution to the existing literature on online shopping behavior for three main reasons. First, although usefulness of online reviews has been extensively studied, only a few studies have used attitudinal data to explore the concept of review usefulness. This study expands our understanding of the relationship between perceived usefulness of online product review

and behavioral intention of product purchase by analyzing the role of mediating factors such as consumers' favorable (usefulness) or unfavorable(risk) perception of online shopping.

Secondly, the results of this study shed light on some important issues related to online product reviews and online shopping. Unlike the previous studies that focused on the positive (perceived usefulness) or negative (perceived risk) effect of online shopping on consumers' choice of online stores or products, our study highlights the effects of consumers' perceptions toward 'online product reviews' on their perceptions of 'online shopping' and 'online purchase' intention. Notably, this study reveals the fact that consumers' perceptions of online product reviews (including both skepticism toward and perceived usefulness of online product reviews) are critical cues that affect consumers' trust in online shopping as well as their purchase intent from the online store. These results may also be explained by a halo effect, which might have caused consumers' impressions of a particular feature of online shopping (i.e., online product reviews) to influence their entire judgment of online shopping. These results suggest that consumers' perceptions of online shopping could be well captured by understanding the consumers' perceptions of the quality of online product reviews rather than its presence, quantity, or the sources.

Finally, our findings provide several managerial implications for e-retailers. This em-

pirical study shows that online product reviews can play the role of reducing the risk associated with online shopping as well as determining consumers' perceptions as to whether online shopping is risky or useful. This also implies that online product reviews can be a useful marketing tool for online retailers, leading to multiple visits to, and purchases from the online store. Thus, online retailers should consider focusing more of their marketing strategies on managing the quality of product review information. Online retailers need to establish mechanisms or programs to increase consumers' perception of review usefulness through the improved quality and credibility of review information and thus, in turn, reduce skepticism toward the reviews and enhance perceived usefulness of consumer reviews. Legris et al. (2003) suggested that perceived usefulness of an information system might be increased by managing or controlling output quality from an information system. As suggested by our study findings, in the case of an online store, perceived usefulness of online shopping can be increased by effectively managing quality of product reviews submitted to retail websites. Therefore it is important that online retailers develop and implement key criteria for consumers to meet when submitting product evaluations. For example, consumers should be asked to answer specific questions before submitting their reviews in order to ensure that their reviews contain relevant contents. Previous studies

(Hong, 2011; Hong and Jin, 2011) reported that when shopping for apparel online, Korean consumers generally rely heavily on customer reviews for information about intrinsic attributes (e.g., size, fit, color, and fabric), return/refund of purchased clothes, and quality of interactions with an online store (e.g., easy connection with store call centers and their quick response to customer's questions). Therefore, in order to be considered relevant and useful for online apparel shopping, product reviews should convey information that addresses those issues.

Another tool to improve the quality of product reviews already adopted by some companies is a peer-review system to reward quality reviews. By asking peer-shoppers to rate consumer reviews based on relevance, helpfulness and credibility, marketers may encourage consumers to submit quality reviews tailored specifically to meet those criteria, in turn maximizing perceived usefulness of the reviews and reducing shoppers' skepticism regarding the credibility of the reviews. In order to reduce consumer skepticism toward online reviews, e-retailers could consider introducing a special feedback system that asks peer shoppers to select inferior reviews and evaluate them with respect to their shortcomings. For example, a shopper can compare the delivered product with the product as described in the reviews. The automatic frequency analysis function of this system will show the inferiority rating of each review, allowing other shoppers

to determine which reviews to consider. This system may reduce consumer skepticism toward online reviews. Along with a peer-review system, marketers could also adopt an incentive system whereby both writers of highly-rated reviews and shoppers evaluating inferiority (mismatch) or helpfulness (usefulness) of reviews are rewarded with eligibility to enter into contests or with coupons/gift certificates that could be used toward future purchases. Such an incentive system provided by e-trailers could encourage shoppers' active evaluation of reviews.

Further, in dealing with the issues of fake reviews submitted by non-users or manufacturers of products as well as reviews with mismatched contents, marketers should implement a system to verify that reviews are from genuine buyers of those products. Although many online retailers have already adopted some of the practices discussed above, they have rarely taken extensive measures. In order to significantly improve consumer perceptions of the quality of online reviews, it may be critical to consistently and systematically implement such practices and to highlight their use of such measures in order to enhance shoppers' awareness of the heightened quality of the reviews. This study represents the first empirical study that introduces the concept of consumers' skepticism toward online reviews, adapted from the concept of information quality (Cheung et al., 2008; Lee et al., 2002). This study confirmed both the conversant and

the discriminant validities of the items developed to measure consumer skepticism, thereby supporting the validity of the scale for e-retailers' monitoring or assessment of inferiority or quality level of reviews hosted on their websites, as well as for academic use in future research.

VI. Limitation and future research

As no established scales exist to measure consumer skepticism toward online product reviews, we adopted the scales used by Lee et al. (2002) and Cheung et al. (2008) to measure information quality and modified them to reflect a person's level of skepticism toward the quality of information obtained from online product reviews. Although this new scale was found to have satisfactory validity in our study, future researchers may wish to further explore this construct. Additionally, the current study did not investigate the influence of product type, nor was it limited to a particular type of product. Future research should examine whether the relationships among the variables selected in this study vary by product type and also determine whether product type affects consumer skepticism and perceptions of online reviews. Exploring how consumer satisfaction with the products purchased online relates to quality/inferiority of online reviews may be of interest to future researchers. It may also prove important to explore the use-

fulness of online reviews. Future research should also consider other important variables that might affect perceived risks of online shopping, such as prior online shopping experience (Kwon and Noh, 2010; Tong, 2010) and consumers' sensitivity to security and privacy (Shergil and Chen, 2005). In closing we should note that our data were collected from a convenience sample of college students with a narrow demographic representation. Future researchers need to study the habits of consumers drawn from a sampling of a broader demographic base in order to improve the generalizability of the research findings.

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〈Appendix 1〉 Variables and measurement items (n=293)

Latent Variables		Observed Items:	Mean	S.D	Alpha
Perceived usefulness of online reviews	PUR-1	Using consumer reviews posted on online stores increases my online shopping productivity.	5.096	1.313	0.913
	PUR-2	Using consumer reviews posted on online stores enhances my effectiveness in online shopping.	5.336	1.209	
	PUR-3	Using consumer reviews posted on online stores enables me to accomplish my shopping goals easier.	5.280	1.323	
	PUR-4	Using consumer reviews posted on online stores is useful for shopping online	5.799	1.145	
Consumers' skepticism toward online reviews	CSR-1	When shopping online for this type of product, I am worried: ... Consumer reviews posted on online stores may not be reliable.	4.942	1.326	0.891
	CSR-2	Consumer reviews posted on online stores may be inaccurate.	4.945	1.333	
	CSR-3	Consumer reviews posted on online stores may not be credible.	4.935	1.311	
	CSR-4	Consumer reviews posted on online store may be inflated in favor of the product.	4.907	1.437	
	CSR-5	Consumer reviews posted on online stores may not be relevant to my needs.	4.420	1.329	
Perceived usefulness of online shopping	PUS-1	Using online stores highly enhances my effectiveness in purchasing this type of product	5.003	1.523	0.932
	PUS-2	Using online stores highly improves my ability to buy in buying this type of product.	5.079	1.521	
	PUS-3	Using online stores highly increases my productivity in buying this type of product.	5.113	1.512	
Post-purchase service risk	SR-1	My complaining would not be handled satisfactorily.	4.044	1.680	0.918
	SR-2	Post-sales service would not be performed satisfactorily.	3.949	1.569	
	SR-3	Contacting customer service may not be easy for return or refund.	4.363	1.643	
Financial risk	FR-1	I may not get the product purchased and so I just may throw away money.	3.656	1.906	0.725
	FR-2	I may be required to pay extra money for exchanging or returning the product purchased.	5.195	1.620	
	FR-3	The product purchased may be available at a lower price somewhere else or later.	5.055	1.626	
Delivery risk	DR-1	Delivery may take a long time after purchasing a product.	5.038	1.506	0.936
	DR-2	The products purchased may not be delivered in a timely manner.	4.884	1.504	
	DR-3	The purchased product may fail to be delivered within the expected time frame.	4.911	1.503	
Product risk	PR-1	The size of a product may be different with what I thought it would.	5.089	1.850	0.838
	PR-2	The color of a product may not be what I thought it would.	4.672	1.810	
	PR-3	The product may be different than what I expected because I can't touch and feel the actual product.	5.253	1.523	
Online purchase intention	OPI-1	I plan to purchase this type of product from online stores within the next year.	5.000	1.802	0.906
	OPI-2	I expect to purchase this type of product from online stores in the future.	5.451	1.483	
	OPI-3	I intend to buy this type of product from online stores in the future.	5.486	1.447	

온라인 점포의 상품구매후기에 대한 소비자 지각이 온라인 쇼핑에 대한 지각과 온라인 구매의도에 미치는 영향

홍희숙 · 석유경 · 김소영

요 약

본 연구의 목적은 온라인 점포 상품구매후기에 대한 지각이 온라인 쇼핑에 대한 지각과 온라인 구매의도에 어떠한 영향을 미치는지를 규명하는 것이다. 설문조사를 통해 미국 대학생들의 자료가 수집되었다. 연구변인들 간 영향 관계를 나타낸 구조방정식 모형을 분석한 결과, 측정모형과 연구모형의 적합도는 기준치에 부합하였다. 가설 검증 결과, 온라인 점포의 상품구매후기가 유용하게 지각될수록 온라인 쇼핑 또한 유용하게 지각되었다. 반면, 온라인 점포의 상품구매후기에 대해 회의적인 소비자일수록 온라인 쇼핑에 대한 위험지각이 높았다. 그리고 온라인 쇼핑에 대한 위험지각이 높을수록 온라인 쇼핑 유용성에 대한 지각이 낮고 온라인 구매의도가 낮았다. 그러나 온라인 점포 상품구매후기에 대한 지각과 온라인 구매의도의 직접적 관계는 비유의적이었다. 즉 온라인 점포 상품구매후기에 대한 소비자 지각은 온라인 쇼핑에 대한 태도(위험지각, 유용성 지각)를 매개변인으로 하여 온라인 구매의도에 간접적으로 영향을 미침이 확인되었다. 이것은 소비자가 온라인 점포의 상품구매후기를 어떻게 지각하느냐에 따라 온라인 쇼핑에 대한 태도 및 온라인을 통한 상품 구매의도가 달라짐을 의미한다. 온라인 점포의 상품구매후기에 대한 회의적 지각을 낮추고, 상품구매후기에 대한 유용성 지각을 높이기 위한 방안이 논의되었다.

주제어: 구매후기, 회의적, 위험지각, 유용성, 온라인 쇼핑

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