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THE RELATIONSHIP BETWEEN PRICE, REPUTATION, AND PRODUCT KNOWLEDGE ON TRANSACTION VALUE IN PRICE COMPARISON WEB SITES

presented by

Sungwon Chung

has been accepted towards fulfillment
of the requirements for the

Master of Arts	degree in	Advertising, Public Relations, and Retailing

Major Professor's Signature

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Date

THE RELATIONSHIP BETWEEN PRICE, REPUTATION, AND PRODUCT KNOWLEDGE ON TRANSACTION VALUE IN PRICE COMPARISON WEB SITES

By

Sungwon Chung

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ABSTRACT

THE RELATIONSHIP BETWEEN PRICE, REPUTATION, AND PRODUCT KNOWLEDGE ON TRANSACTION VALUE IN PRICE COMPARISON WEB SITES

By

Sungwon Chung

Price comparison web sites have aggrandized price competition over the Internet. However, when considering that wide price dispersion of products still exists even in a price comparison web page, consumers' ultimate decision for purchasing a particular product is not strictly dictated by low price. A proposed research model posits that the product price offered by a seller, a seller's reputation, and consumers' product knowledge would have an impact on consumer-perceived transaction value of the offer. The research model also predicts that the perceived transaction value would affect their perceived acquisition value, and subsequently affect their willingness to accept the offer. For this study, 240 subjects took part in this experiment where they responded to an online questionnaire including a simulated comparison web site created for the experiment.

The results indicate that under the experimental environment of this thesis, price was a strong motivating market force for consumers. They also show that transaction value was considerably important as a key antecedent of acquisition value and subsequently their willingness to purchase the product. However, price acceptability, reputation, and product knowledge did not show a significant effect on transaction value. Finally, theoretical and practical implications pertaining to e-marketers are discussed, and directions for future research are then suggested.

DEDICATION

Thank you Lord for lighting the path that led me to all of my accomplishments. All of my inspiration and wisdom have undoubtedly come from your unwavering guidance.

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Above all, I give my deepest and truest thanks to my parents and sister Eunjung, who through their unconditional love and tremendous support have provided me with every opportunity to realize my goals. I also want to give a special thanks to Junghwa Seo, she has been my source of motivation, has walked by my side for every step, and has truly been the moon to my tide.

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CHAPTER 1: INTRODUCTION

An Internet-based environment encourages consumers to compare extrinsic attributes related to products (i.e., price information) easily and quickly (Korgaonkar & Wolin, 1999). With this environmental benefit, consumers tend to search for the lowest market price on the same item they want to purchase. Subsequently, many e-marketers have implemented low pricing strategies to impress the consumers, thereby positively affecting their willingness to buy (Baye, Morgan, & Scholten, 2004). More importantly, price competition caused by the low pricing strategies has become much more intensive among e-marketers since the advent of price comparison web sites, such as cnet.com, that enable consumers to compare offer prices for a homogeneous product at a single glance.

As price comparison web sites have grown rapidly, it is suggested that e-marketers should understand what options are available to consumers in order to ensure successful e-businesses. For example, the lowest market price does not seem to necessarily guarantee the success of e-businesses when considering that there still exists significant price dispersion of the same product even in price comparison web sites (Bay et al., 2004). Thus, consumers' tendencies to pursue lower-priced offers may have to be considered under other key influences, such as other extrinsic cues or individual differences, in the context of price comparison web sites.

To capture consumers' attention in value-conscious markets, e-marketers should emphasize the value or merits of their offers (Dodds, Monroe, & Grewal, 1991; Grewal, Monroe, & Krishnan, 1998; Lichtenstein & Bearden, 1989; Monroe & Krishnan, 1985; Urbany, Bearden, & Weilbaker, 1988). According to previous research, overall perceived

value of an offer is composed of two-dimensional values: transaction value and acquisition value (Grewal, Monroe, et al., 1998; Monroe & Chapman, 1987; Thaler, 1985). In particular, several past researchers have found that transaction and acquisition value are separate from each other, and that both values are interrelated but not independent (Grewal, Monroe, et al., 1998). More importantly, they have suggested that transaction value is an antecedent of acquisition value in the context of price comparison advertising. Therefore, it has been assumed that consumers' ultimate choice can be directly influenced by their perceived transaction value.

However, although previous researchers have recognized the influence of transaction value on price comparison advertising and have attempted to test these empirically (Aqueveque, 2006; Compeau, & Grewal, 1998; Grewal, Monroe, et al., 1998; Monroe & Chapman, 1987), the effects of transaction value on price comparison web sites remain unclear. Accordingly, there is a need for e-marketers to find and develop key factors that can enhance transaction value in the context of price comparison web sites.

Previous research has demonstrated the psychological and context-dependent nature of transaction value (Grewal, Monroe, et al., 1998). Thus, perceived transaction value will be changed by other extrinsic cues (i.e., seller reputation) and consumer purchasing situations (i.e., the range of acceptable prices and individual differences in product knowledge). Accordingly, the present study (a) provides an understanding of how price comparison web sites could influence consumer perceptions of transaction value, (b) establishes a proposed research model for addressing key factors affecting perceived transaction value, (c) develops hypotheses regarding these relationships, (d) identifies the relationships between transaction value, acquisition value, and willingness to buy, and (e)

conducts an exploratory investigation of the proposed model.

Consequently, it is expected that this research will continue from the previous, related literature and provide practical implications of using price comparison web sites. Especially through diagnosing the current issues existing in online markets, this study hopes to not only help consumers have better purchasing experiences by being well-informed to but also help e-marketers to access consumers strategically. Ultimately, this study expects that the results of this research will be able to suggest a better direction in the usage of price comparison web sites.

CHAPTER 2: LITERATURE REVIEW

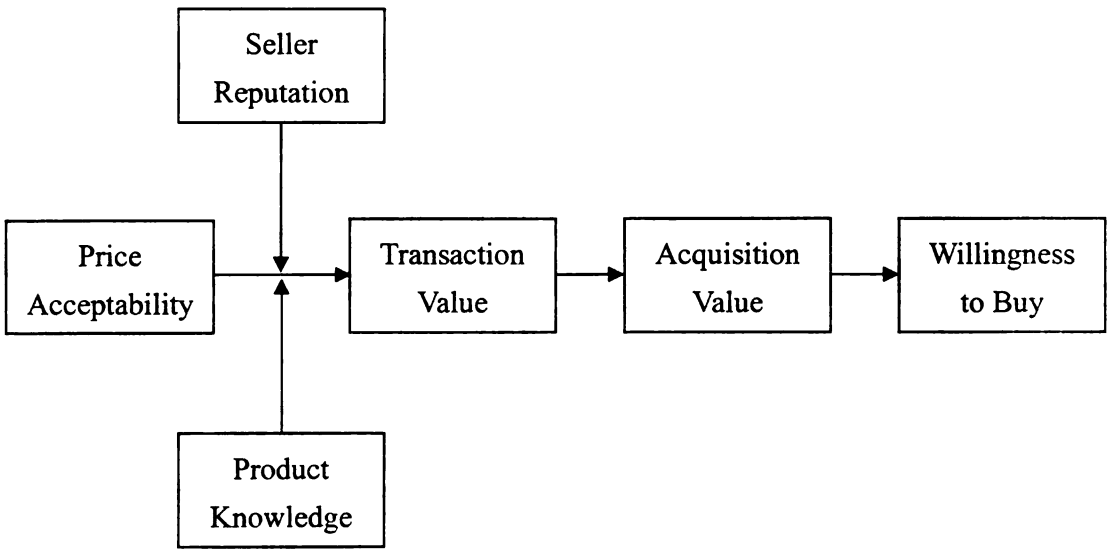
Proposed Research Model

Several past studies have found the construct of transaction value, an antecedent of perceived acquisition value that is considered as the overall value of a deal (Compeau & Grewal, 1998; Grewal, Monroe, et al., 1998; Monroe & Chapman, 1987; Thaler, 1985). The literature has discovered that transaction value is one of the key influences on acquisition value of the offer and subsequently on purchase intention through the perceived acquisition value in the context of price comparison advertising. Consistent with the importance of transaction value, it is suggested that e-marketers should identify factors affecting transaction value to strategically win in fierce price competition.

In price comparison web sites, an offer price product is compared with lower and/or higher comparison prices for a physically identical as the list of offer prices is shown in a single comparison page. However, consumers' judgments of the offer rely not

only on the comparison prices but also on contextual signals, such as seller reputation, presented in the advertisements, on situations influencing their choices, and on their internal price standards, such as the latitude of price acceptance (Grewal, Monroe, et al., 1998; Rajendran & Tellis, 1994). The proposed research model presented in Figure 1 identifies key precursors, in the context of price comparison web sites, affecting perceived transaction value and also the relationships among perceived transaction value, perceived acquisition value, and willingness to buy. Based on the proposed model, each of the key factors (price acceptability, seller reputation, and product knowledge) and their subsequent effects on transaction value, acquisition value, and also willingness to buy are elaborated.

Figure 1. Hypothesized Research Model



Perceived Transaction Value of the Offer

Consumers visiting a price comparison web site will differently perceive the

values of deals provided for the same product. They are likely to evaluate whether an offer is valuable or not by comparing the selling price to their internal price standards (Grewal, Monroe, et al., 1998; Monroe & Chapman, 1987; Thaler, 1985). For example, an offer of $500 may be considered to be a good deal at a discount price by comparing the offer price to an estimated market price of $600. In the same way, another offer of $300 may be considered as a better choice by comparing the comparison price of $500 as well as the estimated price of $600. The positive feelings obtained through price comparison can be explained by the concept of perceived transaction value. Much of the literature has discussed that the perception of transaction value presents a degree of psychological satisfaction or pleasure that a consumer feels by taking advantage of the deal (Lichtenstein, Netemeyer, & Burton, 1990; Monroe & Chapman, 1987; Thaler, 1985; Urbany & Bearden, 1989).

According to a number of scholars, the overall value of an offer consists of transaction and acquisition value (Compeau & Grewal, 1998; Grewal, Monroe, et al., 1998; Monroe & Chapman, 1987; Thaler, 1985). Grewal, Monroe, et al. (1998) described the relationship between transaction value and acquisition value. Transaction value is additional value beyond the acquisition value that means the buyer's net gains perceived by acquiring products or services. Transaction value has a positive impact directly on the acquisition value that is very similar to overall value (Grewal, Monroe, et al., 1998). Accordingly, when considering the important influence of transaction value, the present study investigates antecedents of the transaction value that are a determinant of actual behavioral procedures in the context of price comparison web sites.

Price Acceptability

Several price-related studies have argued that there is a negative relationship between price and perceived transaction value of the offer (Dodds, Monroe, et al., 1991; Grewal, Monroe, et al., 1998; Monroe, 1990; Zeithaml, 1988). However, the price-value relationship might not be applied to the selling prices that are not within the range of consumers' acceptable prices (Alford & Engelland, 2000). More research on price acceptability is needed to identify whether or not the relationship between price and transaction value is affected by price acceptability.

Buyer's judgment of price acceptability is a core component to explain the relationships between the explicit responses, such as consumer behavior and their psychological processes (Monroe, 1984; Monroe & Krishnan, 1985). For instance, price offers within the range of acceptable prices are more likely to positively impact perception of quality and value and also purchase intention than price offers out of the range (Alford & Engelland, 2000). Lichtenstein, Bloch, and Black (1988) argue that price acceptability is determined by comparing selling prices to the range of acceptable prices stored in memory. They described that the term "range" involves two dimensions: the level of and the width of the acceptable price range considered by consumers.

The concept of price acceptability can be supported by Sherif and Hovland's social judgment theory (1961). This theory focuses primarily on expressions of the attitudes and the psychological processes underlying the development (Alford & Engelland, 2000). According to the theory, when evaluating individuals or things, such as advertised selling prices, people develop guidelines for their evaluations: the latitudes of acceptance, rejection, or noncommitment. For example, the latitude of acceptance

indicates all possible behaviors or perceptions that can be considered to be acceptable by consumers (Alford & Engelland, 2000). Based on the guidelines, price offers falling within the latitude of acceptance can be judged to be acceptable and assimilated, thus regarding them as credible information. Price offers falling within the latitude of rejection can be considered to be unacceptable and contrasted, thereby viewing them as unbelievable information. However, the stimulus falling in the latitude of noncommitment can be all possible behaviors that are neither positive nor negative, hence leading to consumer indecisiveness.

Much of the price-related literature has supported the applicability of social judgment theory in that consumers have a wide range of internal price standards against which price offers may be judged (Alford & Engelland, 2000; Kalyanaram & Little, 1994; Klein & Oglethorpe, 1987; Lichtenstein & Bearden, 1989; Urbany, Bearden, et al., 1988). The continuum of internal price standards is composed of the latitudes of acceptance, rejection, and noncommitment that have been described above. Similarly, the latitudes of acceptance, rejection, and noncommitment can be identified with the preferred prices that are considered as internal reference prices that are easily acceptable, rejectable, or very difficult to decide (Lii & Lee, 2005). Therefore, the concept of internal price standards seems to be very similar to the range of acceptable prices.

As discussed above, consumers' judgments may be influenced by the range of their acceptable prices in perceiving the transaction value of the deals presented in a single comparison page on a price comparison web site. For instance, price offers falling within the range of acceptable prices are probably treated as plausible offers, thus influencing the perception of transaction value positively. Price offers falling below the

range of acceptable prices are likely to be regarded as implausible offers, hence affecting the perception of transaction value negatively. Consumers' judgments of the offers may also be influenced by seller reputation presented in a single comparison page in price comparison web sites.

The Moderating Role of Seller Reputation

In most consumer-purchase situations, consumers perceive risks during the decision-making process (Taylor, 1974). For example, consumers take a risk when purchasing costly products, when having few past purchase experiences, or when purchasing high-value products or important products. According to previous research, perception of risk has been defined as consumer perceived uncertainty and concomitant negative outcomes that may be caused by buying products or services (Dowling & Staelin, 1994), subsequently identifying various types of losses (Conchar, Zinkhan, Peters, & Olavarrieta, 2004). In particular, consumers explicitly take much greater risks in an Internet-based environment where consumers cannot directly meet with marketers and cannot identify product quality by touching or seeing it directly (Grewal, Munger, Iyer, & Levy, 2003). Therefore, an instrument, or an indicator, such as seller reputation, that can help consumers feel safe during an online transaction can be considered to be considerably important in Internet retailing.

Reputation helps to enhance a seller's (or store's) image because it describes the seller's features or the nature of the store (Grewal, Krishnan, et al., 1998). Therefore, a seller's reputation has been observed as a good instrument for evaluating products or services offered by the seller (Grewal, Krishnan, Baker, & Borin, 1998; Teas & Agarwal,

2000). Furthermore, reputation is considered to be much more important not only in assessing products provided by the online sellers that have no physical appearance but also in reducing the risks that are perceived in an Internet-based environment, thereby positively influencing the value perception of a deal (Grewal, Munger, et al., 2003). The importance of reputation, therefore, encourages lots of sellers to improve their reputation, and thereby to increase their trustworthiness in online transactions (McDonald & Slawson, 2002).

Most e-marketplaces, such as eBay.com and amazon.com, have enhanced the sellers' reputation mainly through the use of consumer feedback. Especially, price comparison web sites, such as shopping.com and cnet.com, have utilized a star rating system that helps consumers recognize seller reputation easily. In the rating system, a seller's reputation score is determined by consumer expectations – whether the seller is honest or not, for example, whether the seller provides promised goods after being paid (Houser & Wooders, 2006). According to Resnick, Zeckhauser, Friedman, and Kuwabara (2000), reputation systems, such as a star rating system, are considerably important in e-business because of discriminative and predictive values of the reputation systems. For example, reputation ratings make it possible to compare different offers and also they can provide an indication whether a specific offer can be good or bad to potential consumers. Motivated by the values of reputation systems, a number of sellers endeavor to build up a good reputation in order to be chosen by consumers in competitive e-marketplaces.

As previously discussed, higher reputation ratings can help diminish the risk, and can also make consumers feel safer and have more credibility in their online transactions. Therefore, the present study expects that the positive feelings toward a good reputation

will positively influence perception of transaction value in the context of price comparison web sites.

The Moderating Role of Consumer Product Knowledge

During the purchase decision process, consumers may be affected by the information (i.e., product knowledge) stored in their memories. A number of scholars have found that product knowledge is a key variable that influences consumers' cognitive processing, such as information collecting (Brucks, 1985; Rai & Sieben, 1992) and information processing (Bettman & Park, 1980; Hutchinson & Alba, 1991; Johnson & Russo, 1984; Rao & Monroe, 1988). Consistent with the importance of product knowledge, prior literature has argued that consumers make purchasing decisions based on previous knowledge stored in their memories (Lynch, Marmorstein, & Monroe, 1988; Rao & Monroe, 1988). In particular, Chuang and Tsai (2005) asserted that product knowledge is considered to be important when evaluating the value of a product, and subsequently positively influencing consumers' willingness to buy.

Much of the literature on product knowledge has suggested that consumer product knowledge is composed of two components: familiarity and expertise (Alba & Hutchinson, 1987; Cordell, 1997). Product familiarity is defined as the extent to which consumers know about product-related experiences. Product expertise is described as the degree of the ability to successfully perform tasks related to a product (Alba & Hutchinson, 1987). More importantly, consumer product knowledge is operationalized by objective perspectives of product knowledge, which are tested by an impartial third party, and subjective perspectives of product knowledge, which are self-tested (Park & Lessig,

1981). Accordingly, the present study measures these multidimensional aspects of product knowledge.

Several past researchers have empirically explored the influences of product knowledge on consumer cognitive processing and consumer product evaluation. According to Biswas and Sherrell (1993), consumers have an estimated price of a specific brand by using product knowledge. They argued that consumer estimated prices, such as the range of acceptable prices, are different according to the degree of product knowledge. Moreover, according to Alba and Hutchinson (1987), more knowledgeable consumers can more accurately match specific brands in their brand category because they tend to remember brand-specific information. Furthermore, Cordell (1998) suggested that when evaluating products, more knowledgeable consumers depend on objective cues provided in advertisements, such as price and reputation information, rather than on subjective cues stored in their memories, such as the range of acceptable prices and product knowledge. Based on these empirical results, the present study assumes that product knowledge may influence transaction value, which plays a key role in consumer product evaluation.

Perceived Acquisition Value of the Offer

Much of the previous literature on price-value perceptions has used the term "perceived value of the offer" instead of "perceived acquisition value of the offer" (Dodds, Monroe, et al., 1991; Lichtenstein & Bearden, 1989; Monroe & Krishnan, 1985; Urbany, Bearden, et al., 1988). The present study uses the term "perceived acquisition value" in order to be distinguished from a different type of value, perceived transaction

value. Perceived acquisition value is conceptualized as consumer perceived net gains occurred by acquiring products or services (Dodds, Monroe, et al., 1991; Grewal, Monroe, et al., 1998; Zeithaml, 1988). Therefore, the perception of acquisition value is determined by a trade-off between benefits from the product and its costs (Monroe, 1990; Zeithaml, 1988). For example, perception of acquisition value can be positively affected by the benefits obtained by acquiring a product, but concurrently the perception of acquisition value can also be negatively affected by the financial sacrifice occurred by acquiring the product (Grewal, Monroe, et al., 1998).

As discussed before, when getting preferred products or services, consumers will feel greater psychological satisfaction, which is related to the perception of transaction value. The present study expects that the positive feelings toward preferred products will enhance the perception of acquisition value because the positive feelings can make the consumers perceive greater psychological benefits obtained or a smaller amount of the financial sacrifice given up. Therefore, there will be a positive relationship between transaction value and acquisition value.

Willingness to Buy

Willingness to buy is defined as the probability that a consumer accepts a specific offer or the consumer considers the purchase (Compeau & Grewal, 1998; Dodds, Monroe, et al., 1991). Much of the previous research has demonstrated that consumers' willingness to buy is positively influenced by their value perceptions of the offer (Dodds, Monroe, et al., 1991; Monroe, 1990; Rao & Monroe, 1989; Szybillo & Jacoby, 1974; Zeithaml, 1988). Therefore, as previously discussed, consumers' willingness to buy will be

positively influenced by their perceptions of acquisition value that are similar to the overall perceived value of the offer.

Hypotheses

As has been discussed, perceived transaction value is considered a cognitive consequence that occurs when consumers compare different offers for the same product using price comparison web sites. Perceived transaction value seems to be different based on consumers' emotional responses occurred when comparing the offers. Therefore, perceived transaction value will be influenced by price acceptability because whether the offer price is acceptable or unacceptable can lead to positive or negative consumer feelings. For example, consumers will feel greater satisfaction toward the offer price within the range of acceptable prices. On the other hand, they will feel negative feelings toward the offer price outside the range of acceptable prices. Consequently,

H1a: Consumers' perceptions of transaction value will be higher when the offer price falls within the range of their acceptable prices, as opposed to when the offer price falls below the range of their acceptable prices.

Perceived transaction value seems to be different according to the levels of offer prices provided in price comparison web sites. For example, when the offer price is lower than comparison prices, consumers will feel greater satisfaction toward the offer price because they believe that they can get the same product at a relatively lower price. Thereby, perceived transaction value will be higher for the lower-priced offer than for the

higher-priced offer. However, this negative relationship between price and transaction value will be allowable only when the offer price is within the range of acceptable prices, because price acceptability will influence perceived transaction value as discussed in H1a. Therefore,

H1b: If the offer price falls within the range of consumers' acceptable prices, consumers' perceptions of transaction value will be higher for a low-price offer than for a high-price offer.

Another key factor that can enhance consumer pleasure or satisfaction for a deal is seller reputation. As discussed in the literature review, the present study manipulates sellers' reputation using a star rating system. In this manner, higher reputation, such as a higher number of stars, will reduce consumer-perceived risk, and also increase their credibility and believability toward the advertised offer, subsequently leading to a higher perception of transaction value. In addition, interaction effects between price and reputation are expected. For example, it can be suggested that relatively higher-priced products might be perceived by consumers to be quality-oriented products and thereby to be good reputation products. Conversely, it can also be suggested that consumers are willing to pay more for stores with a good reputation or pay less for stores with a bad reputation (Grewal, Krishnan, et al., 1998). In particular, Ba and Pavlou (2002) suggested that higher reputation ratings can generate higher trust toward the sellers in the realm of the context of Internet retailing, and subsequently consumers can be willing to pay premium prices for the products of credible sellers. Therefore,

H2: The impact of price on consumers' perceptions of transaction value will be moderated by seller reputation.

How consumers use information for product evaluation seems to be different depending on their level of product knowledge. Rao and Monroe (1988) suggested that consumers with high knowledge tend to use extrinsic cues, such as price and reputation information, whereas consumers with low knowledge rely more on intrinsic attributes directly related to the product. Similarly, King and Balasubramanian (1994) argued that during product evaluation, more knowledgeable consumers rely more on objective information while less knowledgeable consumers depended more on subjective information. Consequently, product knowledge may have an influence when consumers use price information during their product evaluation. Therefore, the present study expects that:

H3: The impact of price on consumers' perceptions of transaction value will be moderated by their product knowledge.

As has been previously discussed, perceived transaction value seems to be an antecedent of consumer product evaluation. First of all, perceived transaction value will be interrelated with perceived acquisition value. Moreover, the enhanced perceived acquisition value will positively affect willingness to buy. These relationships will support the importance of transaction value as a key influence on product evaluation in the context of price comparison web sites. Therefore, the related hypotheses are

H4: Consumers' perceptions of transaction value will positively impact their perceptions of acquisition value.

H5: Consumers' perceptions of acquisition value will positively impact their willingness to buy.

CHAPTER 3: METHODOLOGY

Subjects and Research Design

The present study aims to examine subjects' responses to the choice made by a potential purchaser, a situation that can occur in price comparison web sites, cnet.com. Therefore, the researcher needed an experimental design in order to control extraneous factors around the manipulations of price and reputation, and to simplify the stimulus environment. A single comparison page of a simulated, price comparison web site was created for research participants to imagine an actual shopping environment. The researcher also used a web-based questionnaire to provide the purchase web page and to collect data.

A total of 251 college students were recruited from undergraduate and graduate courses at a large university in the U.S. to participate in the web-based experiment. The present study was designed so that 240 subjects would be assigned randomly to one of 6 experimental cells in a 3 x 2 between-subjects factorial design. Thus, of the 251 respondents, 11 were removed by using the random elimination of cases until the data sets had reached 40 respondents in each of the six cells. For the experiment, the two factors and levels are: (1) plausible-high, plausible-low, and implausible-low advertised

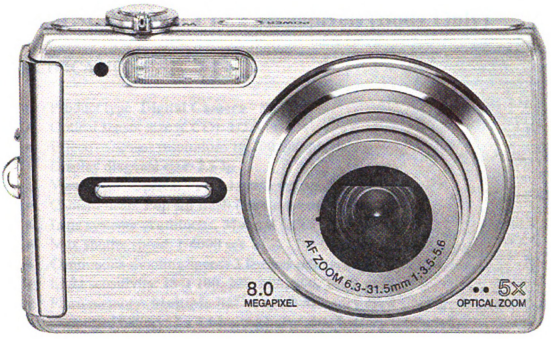
selling price and (2) high and low reputation. The selling prices were manipulated on the basis of the results (see Appendix C) of the pretest that indicated subjects' acceptable price range and a ridiculously low price for the same digital camera. Based on a one-to five-star rating system, reputation was manipulated using either a four-star or a two-star rating. The extreme reputation scores of one and five were avoided in order to measure more subtle differences in seller reputation. In addition, product knowledge was a measured variable. To explore the effect of product knowledge, the whole group of 240 subjects was divided into two groups according to the median value: high and low knowledge subjects. Among 251 research participants, 181 students were given extra credit in their class. No significant differences were found between the students who received extra credit and those who did not.

Product Selection and Stimuli

A digital camera (Olympus FE-340) was selected for this experiment not only because digital cameras are one of the most popular products observed on well-known price comparison web sites, such as cnet.com, nextag.com, and shopping.com, but also because e-marketplaces have price dispersion for this product category. To eliminate the effects of brand recognition, the product brand was eliminated using Adobe Photoshop.

A picture and specifications of the digital camera chosen above were used for the pretest (Figure 2). This picture stimulus was borrowed from a product review page from www.reviews.cnet.com. It was presented before measuring subjects' price estimates of the digital camera in the pretest.

Figure 2. Stimulus Material: Digital Camera Specifications



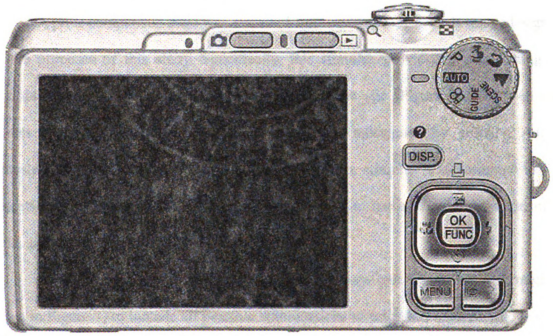


Figure 2 (cont'd).

Digital SLR Camera 10.2 Megapixels (Body Only)

SPECIFICATIONS

- Product type: **Digital Camera - SLR**
- Optical sensor size (CCD): **1/2.5 in**
- Effective sensor resolution: **10,200,000 pixels**
- Display diagonal size: **2.5 in**
- Viewfinder: **Optical - Fixed eye-level pentaprism**
- Camera flash: **Pop-up flash (Red eye reduction)**
- Lens systems: **Autofocus, Manual focus**
- Max shutter speed: **1/4000 sec**
- Continuous shooting speed: **3 frames per second**
- Light sensitivity: **ISO 100, 200, 400, 800, 1600, auto**
- Flash memory: **MultiMediaCard, SD Memory card**
- Supported battery: **1 x Li-ion rechargeable battery (included)**
- Weight: **1.6 lbs**

A price comparison page was extracted from www.nextag.com. It was redesigned for the purposes of this study. Specifically, this stimulus provided a page listing of possible choices of sellers on a price comparison web site (Figure 3). The web site address is www.reasonablepurchase.com and it was redesigned by utilizing Adobe Photoshop and Macromedia Dreamweaver. This picture stimulus was presented to the subjects before measuring their responses with respect to transaction value, acquisition value, and willingness to buy in the experiment.

This picture stimulus had six different conditions (see Condition A through F shown in Figure 3) to include all possible combinations of price and reputation levels. In the stimulus, www.reasonablepurchase.com listed three price offers for a digital camera as shown in price comparison web sites. Each offer was named A, B, and C to identify

three offers. The three offers were listed in random order to diminish any order effect. Then, the center one among three offers was highlighted by a red box. Participants were asked to respond only to the highlighted product offering. With respect to price, therefore, there were three conditions highlighting one of three offers. In addition, the present study aimed to measure reputation effects under two conditions: high and low reputation. Therefore, the red-highlighted offer had either a four-star or a two-star rating for its reputation. In order to compare differences in reputation, a decision was made to use a four-star and a two-star rating, since a five-star rating could distort any subtle differences in reputation. For the two other offers, one of them had a star rating that the red-highlighted offer did not have, and the other offer had a five-star rating. Positioning of the non-stimulus ratings was done with a coin flip. Moreover, www.reasonablepurchase.com provided a table with store name, price, seller reputation, additional information, and tax and shipping information so the stimulus would be considered more realistic.

Figure 3. Stimulus Material: Www.reasonablepurchase.com

Condition A (Plausible-Low Price / High Reputation)

Figure 3 (cont'd).

Condition B (Plausible-Low Price / Low Reputation)

STORE	PRICE	ADDITIONAL INFORMATION	STORE RATINGS	+ TAX & SHIPPING
A	$259.85	In Stock	★★½☆☆	Total Price = Price + Tax + Shipping
B	$148.99	In Stock	★★½☆☆	To calculate Total Price including exact Tax and Shipping, please enter your zip code below.
C	$66.71	In Stock	★★★★★	Zip Code: Go

Figure 3 (cont'd).

Condition C (Plausible-High Price / High Reputation)

STORE	PRICE	ADDITIONAL INFORMATION	STORE RATINGS	+ TAX & SHIPPING
B	$148.99	In Stock	★★★★★	Total Price = Price + Tax + Shipping
A	$259.85	In Stock	★★★★☆	To calculate Total Price including exact Tax and Shipping, please enter your zip code below.
C	$66.71	In Stock	★★☆☆☆	Zip Code: Go

Figure 3 (cont'd).

Condition D (Plausible-High Price / Low Reputation)

STORE	PRICE	ADDITIONAL INFORMATION	STORE RATINGS	+ TAX & SHIPPING
B	$148.99	In Stock	★★☆☆☆	Total Price = Price + Tax + Shipping
A	$259.85	In Stock	★★☆☆☆	To calculate Total Price including exact Tax and Shipping, please enter your zip code below.
C	$66.71	In Stock	★★★★★	Zip Code: Go

Figure 3 (cont'd).

Condition E (Implausible-Low Price / High Reputation)

STORE	PRICE	ADDITIONAL INFORMATION	STORE RATINGS	+ TAX & SHIPPING
A	$259.85	In Stock	★★★★★	Total Price = Price + Tax + Shipping
C	$66.71	In Stock	★★★★☆	To calculate Total Price including exact Tax and Shipping, please enter your zip code below.
B	$148.99	In Stock	★★☆☆☆	Zip Code: Go

Figure 3 (cont'd).

Condition F (Implausible-Low Price / Low Reputation)

Pretest

A pretest web survey (see Appendix A) was done to determine the price approximations for the experimental manipulation. The researcher needed to find the highest acceptable price, the lowest acceptable price, and a low price that was outside the range of acceptable values. In other words, the researcher was looking for a price so low that it might be considered suspicious to a potential purchaser. Therefore, measuring subjects' acceptable price range was part of the pretest, not part of the experiment.

The range of subjects' acceptable prices was measured using dollar estimates provided by the subjects. The four scale items used are provided in Appendix C. These measures were developed from the ones used by Grewal, Krishnan, et al. (1998), Grewal, Monroe, et al. (1998), Grewal, Munger, et al. (2003), Lichtenstein and Bearden (1989), and Urbany, Bearden, et al. (1988).

A total of 201 participants responded to the pretest that was conducted before the actual experiment. Overall, 76.1% of the respondents had their own digital camera, and 86.9% of the camera owners purchased them offline. The pretest was also used to assess the amount of product knowledge students had about digital cameras. In the pretest, the respondents were asked to indicate their product knowledge for digital cameras and their risk perceptions while shopping online. Then, after being exposed to the first picture stimulus, the respondents were asked to formulate an estimate of the following four factors regarding a digital camera to the best of their ability: the average market price, the highest and lowest prices they would pay, and finally what price would be considered to be a ridiculously low price for the digital camera. All the participants received extra credit for their participation in the web survey.

According to the results of the pretest, reliability coefficients for product knowledge and risk perception scale items were .915 and .657, respectively, indicating that the measures were highly reliable and moderately reliable, respectively. The levels of reliability were similar to those obtained by previous researchers for the same scale. Moreover, a calculated knowledge index was created by summing the individual item scores. A frequency distribution was examined, and the mean (SD) was 24.19 (6.22). The distribution had negative values for skewness (-.245) and kurtosis (-.698). Also, a calculated risk index was created by summing the individual item scores. A frequency distribution showed that the mean (SD) was 13.81 (3.06) and the median was 14.

Price levels for the digital camera were determined based on the results (see Appendix C) of the pretest that measured subjects' price estimates for the same camera. The means (SDs) of the highest and lowest price within the acceptable range and of the ridiculously low price were $306.93 (130.11), $166.85 (98.39), and $104.61 (58.43), respectively. The modes were $300, $150, and $100, respectively. Because of the overlap between the distributions of the prices, the modes were used to set the plausible-high, plausible-low, and implausible-low price for the actual experiment. In particular, the out of range price at the bottom was set between the two highest modal values of the distribution of the ridiculously low price. In addition, the three prices for the actual experiment had the cents ending modified to look like the web page values in www.cnet.com. Consequently, the plausible-high, plausible-low, and implausible-low price were set at $259.85, $148.99, and $66.71, respectively.

Experiment Procedure

The experiment (see Appendix B) had six different sets of questionnaires because of the combinations of six different stimulus conditions. Questionnaires were administrated using WebSurveyor, an online survey software. An additional web page was created for an informed-consent form, providing a link to one of the six questionnaire conditions randomly. A copy of the informed consent form can be found in Appendix B. In the experiment, subjects were asked about their product knowledge of digital camera categories, about their camera purchase experiences, and about their risk perceptions of online shopping. Then, they were exposed to the second stimulus, which was a price comparison web site called www.reasonablepurchase.com. Afterwards, they were told "The offer highlighted by a red box was the choice made by a purchaser, please evaluate that choice," to assess their perceived transaction value of the red-highlighted offer. Next, they were asked to indicate their perceived acquisition value for the red-highlighted offer and their perception as to whether the purchaser discussed above would be willing to buy the product. After completing all questions, they were asked to respond to several demographic questions.

Measures

Table 1 provides the scales used for measuring key constructs presented in the proposed research model. Subjects' product knowledge and their perceptions of risk, transaction value, and acquisition value were measured using a 5-point rating scale based on previous research (1 = strongly disagree; 5 = strongly agree). The subjects' willingness to buy was measured using a 5-point rating scale based on previous research (1 = very

low; 5 = very high). In addition, three measures for the subjects' camera purchase experiences and four measures for demographic questions were followed sequentially.

Table 1. Scale Items and Measurement Properties

Product Knowledge
I know a lot about digital cameras.
Compared to most other people, I know less about digital cameras.
I have heard of most of the new digital cameras that area around.
I feel quite knowledgeable about digital cameras.
When it comes to digital cameras, I really don't know a lot.
Among my circle of friends, I'm one of the "experts" on digital cameras.
I rarely come across a digital camera that I haven't heard of.
I do not feel very knowledgeable about digital cameras.
Perceived Risk
I worry about the security of financial transaction done.
Regardless of security problems, I like the convenience of online shopping.
Most merchants in online sites are trustworthy.
Many product claims on the Internet are exaggerated and untrue.
One of my major concerns online is identity theft.
Perceived Transaction Value
Taking advantage of this price deal would make this purchaser feel good
This Purchaser would get satisfaction by knowing that he or she is saving money from this price deal.
Beyond money saved, taking advantage of this price deal will give a sense of joy to this purchaser.
Perceived Acquisition Value
If this purchaser acquires this camera at this store, I think he or she would be getting good value for the money he or she spends.
I think that given this digital camera's features, the camera at this store is a good value for the money.
At this store, this camera would be a worthwhile acquisition because it would help this purchaser take pictures at a reasonable price.
Willingness to Buy
The probability that this purchaser would consider buying the camera at this store would be.
The likelihood that this purchaser would purchase the camera at this store would be.
The likelihood that this purchaser would purchase the camera at "ANOTHER STORE" would be.

Product knowledge. The level of product knowledge was described as the extent of prior knowledge that consumers have about a product category, which should be applied to both current and potential consumers (Flynn & Goldsmith, 1999). Thus, for the present study, product knowledge was measured using eight items developed by Flynn and Goldsmith (1999) and Flynn, Goldsmith, and Eastman (1996)'s research. The reliability coefficient for product knowledge was .910. The result was consistent with the results of the pretest.

Perceived risk. The present study could not utilize the measures of perceived risk used by previous research because research subjects were responding to the choice made by the imaginary purchaser rather than responding to their own choices. Hence, five scale items for measuring the risk simulated in the experiment of this study were created. The reliability coefficient for perceived risk was .642, indicating the measures were moderately reliable. The result was consistent with the results of the pretest.

Perceived transaction value. Much of the past research has had trouble measuring perceived transaction value, which is discriminated from perceived acquisition value. Grewal, Monroe, et al. (1998) suggested measuring perceived transaction value by using three items developed from their research and Lichtenstein, Netemeyer, et al. (1990)'s research. These three Likert statements seemed to support the idea of perceived transaction value – subject's satisfaction or pleasure obtained by taking advantage of the advertised offer. Therefore, the present study used the three items suggested by the prior research. The reliability coefficient for perceived transaction value was .912, indicating that the measures used in the experiment were fairly stable and reliable. Therefore, the result was consistent with past research.

Perceived acquisition value. Subjects' perceived acquisition value was measured using three items. These measures were developed from the ones used by Chapman and Monroe (1990), Dodds, et al. (1991), and Grewal, Munger, et al. (2003). The reliability coefficient for perceived acquisition value was .879, indicating that the measures was highly stable and reliable. Therefore, the result was consistent with past research.

Willingness to buy. Subjects' willingness to buy was measured using three items. These measures were developed from the ones used by previous research (Dodds, et al., 1991; Grewal, Monroe, et al., 1998). The reliability coefficient for willingness to buy was .676, indicating that the measures used were moderately stable and reliable. The result was consistent with past research.

CHAPTER 4: RESULTS

Data Checks

A calculated knowledge index was created by summing the individual item scores. Then, a frequency distribution was examined. The mean (SD) of the calculated knowledge was 23.51 (6.525), and the distribution had negative values for skewness (-.042) and kurtosis (-.687). These results were consistent with the results of the pretest. Based on the results, a decision was made to create two groups, high and low knowledge, by dividing the same at the median value, 24. In addition, a calculated risk index was created by summing the individual item scores. A frequency distribution indicated that the mean (SD) was 14.63 (3.20) and the median was 15. Consequently, the findings of the

research were also consistent with the results of the pretest.

A total of 240 research participants responded to their camera purchase experiences and demographic questions. Overall, 80.4% of the respondents had their own digital camera and 19.6% did not have their own camera. Moreover, 90.7% of the camera owners purchased them offline and 9.3% purchased them online. Among the camera owners, 44% received it as a gift, 23.8% bought it over a year ago, 19.7% bought it within the last 6 months, and 12.4% bought it more than 6 months ago, but within the last year. In regard to their demographics, the mean age of the 240 respondents was 20.5 years old (age range 18-34). There were 76 men (31.7%) and 164 women (69.3%). There were 95.6% undergraduate, 4.2% graduate students, and .4% other. The sample was 76.7% white, 9.6% African American, 7.1% Asian American, 2.5% Hispanic, 1.3% American Indian, and 2.9% other.

Hypotheses Tests

Table 2 illustrates the list of hypotheses tested and statistical techniques used in this study.

Table 2. Hypotheses

	Independent Variable	Dependent Variable	Statistical Method
H1a	Price	Transaction Value	One-Way ANOVA
H1b	Plausible-High Price, Plausible-Low Price	Transaction Value	One-Way ANOVA
H2	Price × Reputation	Transaction Value	Two-Way ANOVA
H3	Price × Product Knowledge	Transaction Value	Multiple Regression
H4	Transaction Value, Acquisition Value		Pearson's Correlation
H5	Acquisition Value, Willingness to Buy		Pearson's Correlation

Price acceptability and perceived transaction value. Hypothesis 1a posited that consumers' perceptions of transaction value would be higher when the offer price falls within the range of their acceptable prices, as opposed to when the offer price falls below the range of their acceptable prices. The analysis using a one-way ANOVA (see Table 3) indicated a significant difference between the prices in perceived transaction value ($F = 10.578$, $df = 2$, $p = .000$). This result showed that transaction value might vary because of manipulation of prices. Scheffe's post-hoc test after the ANOVA test showed significant differences in perceived transaction value between the high and low price within the range of acceptable prices ($p = .001$) and between the high price within the range of acceptable prices and the price outside the range ($p = .000$). However, the result of the Scheffe's test did not show a statistically significant difference between the low price of the range of acceptable prices and the out of range price in perceived transaction value ($p = .991$). Therefore, perceived transaction value was higher for the plausible-low price ($M = 10.95$) than for the plausible-high price ($M = 9.44$). However, there was not a statistically significant difference between the plausible-low price and the implausible-low price in perceived transaction value. The results did not support hypothesis 1a.

Table 3. ANOVA Results of Price Effect on Transaction Value

	Count	**Mean**	**S.D.**
Plausible-high Price	80	9.44	3.089
Plausible-low Price	80	10.95	1.895
Ridiculously Low Price	80	11	2.182
Total	240	10.46	2.538

	Sum of Squares	***df***	**Mean Square**	***F* Value**	Sig.
Between Groups	126.175	2	63.087	10.578	.000
Within Groups	1413.488	237	5.964		
Total	1539.663	239			

Table 3 (cont'd).

Dependent Variable: Transaction Value		Sheffe	
Price (I)	**Price (J)**	**Mean Difference (I-J)**	**Sig.**
Plausible-high	Plausible-low	-1.512*	.001
Plausible-high	Implausible-low	-1.563*	.000
Plausible-low	Implausible-low	-.050	.991

*. The mean difference is significant at the .05 level.

Price effects within the range of acceptable prices. Hypothesis 1b posited that if the offer price falls within the range of the consumers' acceptable prices, consumers' perceptions of transaction value would be higher for a low-price offer than for a high-price offer. Hypothesis 1b was simultaneously tested by the same ANOVA for hypothesis 1a. As expected, perceived transaction value was higher for the plausible-low price than for the plausible-high price (p = .000). Therefore, hypothesis 1b was supported.

Reputation effects. Hypothesis 2 posited that the impact of price on consumers' perceptions of transaction value would be moderated by seller reputation. The analysis using a two-way ANOVA (see Table 4) indicated there were not statistically significant effects for seller reputation (F = .006, df = 1, p = .937). The ANOVA results presented no significant interaction between reputation and price (F = .568, df = 2, p = .568). Thus, unexpectedly, the relationship between price and perceived transaction value was not influenced by reputation. The research results did not support hypothesis 2.

Table 4. ANOVA Results of Price and Reputation Effects

Effects	Type III Sum of Squares	*df*	Mean Square	*F* Value	Sig.
Price (P)	126.175	2	63.087	10.495	.000**
Reputation (R)	.038	1	.038	.006	.937
P × R	6.825	2	3.412	.568	.568

**. Significant at p < .01

Knowledge effects. Hypothesis 3 posited that the impact of price on consumers' perceptions of transaction value would be moderated by their product knowledge. Multiple regression analysis was performed to test hypothesis 3 (see Table 5). The results indicated that the whole regression model was significant (F = 5.349, df = 3, p = .001). If the beta weight is not significant, then it does not explain the model significance. Unexpectedly, the beta weights .037 for product knowledge and reputation were not significant (p = .818), therefore product knowledge and seller reputation cannot be moderators in this experiment. Consequently, the suggested hypothesis 3 was not supported. The overall R square for the regression equation was .064 (adjusted R square = .052).

Table 5. Multiple Regression Results

Model Summary

Model	R	*R* Square	Adjusted R Square	Std. Error of the Estimate
1	.252a	.064	.052	2.472

a. Predictor: (Constant), Knowledge Calculation, Price, Reputation

Table 5 (cont'd).

Coefficients a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	8.937	.638		14.005	.000
Price	.783	.195	.252	4.004	.000
Reputation	-.027	.319	-.005	-.084	.933
Knowledge Calculation	.037	.160	.015	.231	.818

a. Dependent Variable: Transaction Value

Perceived transaction and acquisition value. Hypothesis 4 posited that consumers' perceptions of transaction value would positively impact their perceptions of acquisition value. Pearson's correlation analysis indicated a strongly significant, positive relationship between perceived transaction and acquisition value ($r = .682$, $p = .000$). The result suggests that consumers' perceptions of transaction value did positively influence their perceptions of acquisition value, supporting hypothesis 4.

Perceived acquisition value and willingness to buy. Hypothesis 5 posited that consumers' perceptions of acquisition value would positively impact their willingness to buy. Pearson's correlation analysis presented a significant positive relationship between perceived acquisition value and willingness to buy ($r = .594$, $p = .000$). The result suggests that consumers' perceptions of acquisition value did positively influence their willingness to buy. Thereby, hypothesis 5 was supported.

CHAPTER 5: DISCUSSIONS AND CONCLUSIONS

The purpose of this research was to demonstrate how selling price and seller reputation provided in price comparison web sites and consumer product knowledge can influence their perceptions of transaction value. This research also aimed to demonstrate how the enhanced perception of transaction value can influence their perceptions of acquisition value and subsequently their willingness to buy. The findings of the current research provided several managerial implications in the context of price comparison web sites.

Under the experimental environments, the research results indicated the positive impacts that lower-priced offers had on transaction value. Therefore, consumers would have greater psychological satisfaction or more positive feelings toward lower-priced offers in price comparison web sites. Consistent with previous research, the findings of this research have suggested that consumer preference for lower market prices still exists in the comparison sites. As a result, price can be a strong motivating market force for consumers. A potential reason for the implication seems to be that it is very easy to search for lower-priced offers and to compare them with other prices in a single comparison page on price comparison web sites. More importantly, when products with different prices are being compared in a single glance, the product with a comparatively lower price may be perceived by consumers to have a greater value than its actual value. Therefore, e-marketers or retailers should consider that low pricing strategies can provide a strategic advantage to prevail over their competitors.

Other implications of the research findings come from the relationship between

price acceptability and transaction value. Whether a price offer is acceptable or unacceptable is determined on the basis of the range of acceptable prices (Alford & Engelland, 2000; Lichtenstein, Bloch, et al., 1988; Monroe, 1984; Monroe & Krishnan, 1985), and therefore it has been suggested that price offers within that range are perceived by consumers as more valuable than price offers outside the range (Alford & Engelland, 2000; Lichtenstein, Bloch, et al., 1988). Contrary to expectation, the results of the current study did not indicate significant differences between the low prices within the range and the out of range prices in transaction value. Thus, the research results suggest that whether price offers are within or out of the range may not be important in order to be perceived as valuable in price comparison web sites. That is, without considering the range of acceptable prices, the lowest price offer may be preferred to other higher-priced offers in the comparison sites. Consequently, when considering fierce price competition in the comparison sites, a potential implication for the results is that e-marketers can consider setting their product price at an unexpectedly low price to overcome heated price competition in comparison sites.

Another interpretation of the implications, however, may come from the research findings that showed that there were not significant differences between the low price within the range of acceptable prices and the out of range price in transaction value. The findings of the research might imply that the out of range price is not preferred to the low price within the range. Thereby, consumers do not seem to necessarily pursue the lowest market price. A reason for the assumption might be because of the possibility that consumers' acceptable price range might be changed when they meet a list of various price offers in a single comparison page on price comparison web sites, even if the range

of acceptable prices has been built before visiting the comparison sites. Therefore, further related research may be needed to identify the relationship between price acceptability and transaction value.

Given that previous literature has consistently suggested that reputation enhances seller's trustworthiness and reduces consumers' risk perceptions (Chen & Dubinsky, 2003; Grewal, Munger, et al., 2003; Hendrix, 1999), the research findings indicating no reputation effects on transaction value were unexpected. The unanticipated findings have the assumption that in price comparison web sites, consumers might depend on price information rather than seller reputation. This suggests that reputation effects might be relatively underestimated in determining the value of deals. It might also mean that the rating stars are not really a continuous scale in the mind of consumers. Instead, consumers may believe five stars are high and desirable; fewer stars are inferior. Accordingly, the research results give e-marketers the insights that lowering product prices may provide greater strategic advantages than enhancing their reputation in the context of price comparison web sites.

However, the research findings might still have another explanation for reputation effects. Because there are various expressions presenting seller reputation, such as positive/negative comments in price comparison web sites, more related research may be considered to identify reputation effects in comparison sites.

While previous literature has suggested that more knowledgeable consumers tend to avoid relatively higher-priced offers (Lichtenstein & Bearden, 1989), the findings of the current research indicated no moderating effects of product knowledge on transaction value. The unanticipated results mean that there were not significant differences between

high and low knowledge consumers in transaction value, suggesting that taking advantage of product knowledge might not be useful for evaluating the value of deals in price comparison web sites. Therefore, e-marketers may not need to pay as much attention as to whether potential purchasers have high or low product knowledge in the comparison sites. Nevertheless, there still exists the possibility that the results showing no moderating effect of product knowledge might be an artifact of the variable manipulation conducted in the experiment.

Another potential explanation, however, might lie in the assumption that consumers rely on the product information provided on a single comparison page of a comparison web site rather than on their prior knowledge stored in memory. For example, a single comparison page on a comparison web site generally includes product-related information above a list of offers. The product-related information might have much more effect on consumer information processing than their product knowledge does. Therefore, more research may be needed to identify whether product-related information embedded in the single comparison page has a greater effect on product evaluation than consumer product knowledge.

Most importantly, the results of the current research indicated a significant positive relationship between transaction value and acquisition value. The results also demonstrated a significant positive relationship between acquisition value and willingness to buy in the context of price comparison web sites. The findings of this research were consistent with previous related studies. Therefore, it is not surprising that in the comparison sites e-marketers should understand the importance of transaction value as a key antecedent of subsequent processing, acquisition value and willingness to

buy. Furthermore, the sponsored results for the importance of transaction value have strongly supported the assumptions and potential implications previously mentioned above. Consequently, e-marketers should find more related factors which can enhance potential consumers' perceptions of transaction value.

CHAPTER 6: LIMITATIONS AND RECOMMENDATIONS

Limitations

Despite unique methodological features of this study, it revealed several methodological limitations that should be considered in interpreting the results discussed above. Above all, when considering the nature of the empirical research, it seems to be very difficult to avoid some manipulation-related problems.

One of the critical issues considered was the fact that the current research failed to prove the hypothesized effects of the manipulated variables, price and reputation. In regard to price manipulation, the experiment for the study failed to make discriminations between the low and the unexpectedly low price, although price had an effect on transaction value. The manipulation of the unexpectedly low price could have had a few problems: 1) there was such low risk that it did not matter; 2) the unexpectedly low price was still in the acceptable range for quite a few subjects; 3) the overall price of the camera might have been too low. In regard to reputation, the research experiment failed to make discriminations between high and low reputation. There are some possible causes of the manipulation problems: 1) in the experiment for this study, consumers, when looking at reputation, might only look at the highest stars and did not discriminate

between two and four stars; 2) the difference between two and four stars might be too small to be measured reliably; 3) it is possible that the price of the product, because it was too low, reduced the risk and therefore consumers were willing to take the risk.

The scales used in this experiment might be too compressed near low values for the camera. Therefore, it is possible that it did not discriminate between camera experts and non-experts. It is also possible that it did not allow for manipulation of the low expected and low unexpected prices.

There can be other possible limitations regarding sample subjects and product selection used in the experiment for this study. This study recruited student subjects that might have lead to a narrow variance in camera-related knowledge. Also, a relatively low-priced camera might have caused the overall estimated prices for the camera to be too low to detect subtle differences between the other variables.

Recommendations for Future Research

The current study investigated the influences of price, reputation, and product knowledge on transaction value, and the relationships between transaction value, acquisition value, and willingness to buy. The research results supported the hypothesis that if the offer price falls within the range of consumers' acceptable prices, consumers' perceptions of transaction value would be higher for a low-price offer than for a high-price offer. The results also indicated that consumers' perceptions of transaction value positively would impact their perceptions of acquisition value, and subsequently their willingness to buy. However, the research findings' failure to prove the effects of price acceptability, reputation, and product knowledge on transaction value limits it to a

generalization of the proposed research model. Future research can present several challenges to the objectives of this study and recommend exploring uncharted topics.

This study indicated that there was a price effect on transaction value. However, it was not the hypothesized effect for this study. Furthermore, the effects of reputation and product knowledge were not statistically significant. These results were inconsistent with previous research findings. In particular, the failures of this research seemed to have been caused mainly by the variable manipulation problems discussed above. For such reasons, future research will be able to suggest studying a more complex camera model where there would be some discrimination between pro and consumer users.

Another interesting issue concerns the importance of risk and about the moderating effects of risk on the current research. Consumers may project the risk, which can be a problem in the context of price comparison web sites. Thereby, the current study has tried to simulate risk because subjects were responding to the choice made by the imaginary purchasers. However, it might not be a good measure of risk in that the risk was not directly modeled or measured in the current research. Therefore, taking advantage of using the risk variable may provide more realistic and richer insights for e-marketers and future researchers.

The present study has explored the construct of transaction value and some factors that can affect perceived transaction value. However, the study has not found any factor that might influence perceived acquisition value, without going through transaction value or being directly related to transaction value. To understand the distinguished realm of transaction value, more research on the factors independently affecting acquisition value will be needed.

Future research will be able to integrate the findings, such as the importance of transaction value, of this study from prior researchers' efforts about the influence of other variables, such as brand name, store name, and/or country of origin. Moreover, there can be other potential variables, such as the effects of list ordering, other expressions for reputation, consumer shopping habits, and/or the trustworthiness of a comparison web site itself that should be considered in the context of price comparison web sites. Research on these issues will contribute to enhancing the theoretical and practical knowledge of this study in terms of price comparison web sites.

APPENDIX A: QUESTIONNAIRE FOR THE PRETEST

Online Purchase Behavior:

Camera Perceptions and Camera Pricing

Informed Consent Form

This is a short pretest questionnaire about **digital cameras and camera pricing** for a graduate student in the Department of Advertising, Public Relations, and Retailing.

You are being asked to participate in an experiment to evaluate your perceptions on purchasing digital cameras online. You will be also presented with open-ended questions in order to know your expectations on pricing digital cameras online. The obtained results will be used for the experiment for this graduate student's future research; therefore please take your time to answer the questions carefully. Your responses will be very helpful for this student's thesis.

This is a web survey that will be done in the web page for the questionnaire, and it will take approximately 10 minuets to answer the questionnaire items. Your responses will be kept confidential, and your privacy will be protected to the maximum extent of the law.

Your participation this experiment is voluntary, so you may refuse to participate or you may withdraw from the research by discontinuing answering questions at any time.

Your questionnaire will be completed on the web page for the questionnaire and will have no personal identification on it. The survey software will assign identification numbers that cannot be connected to your personal information. Since you will be participating for credit or as part of a classroom research experience, you will be asked to indicate your MSU email address and class name once you complete your online survey. Only the email address and class name provided by you will be used to identify your information. The only foreseeable risk is that your credit for participation may be incorrectly assigned. If your credit is not recorded correctly, please contact the researcher listed below.

If you have questions about this study, contact: Keith Adler, Ph.D., Department of Advertising, Public Relations, and Retailing, Michigan State University, 366 Communication Arts Building, East Lansing, MI 48824, (517) 353-3266, adler@msu.edu.

If you have any questions about your role and rights as a research participant, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Director of MSU's Human Research Protection Programs, Dr. Peter Vasilenko, at 517-355-2180, FAX 517-432-4503, or e-mail irb@msu.edu, or regular mail at: 202 Olds Hall, MSU, East Lansing, MI 48824.

If you wish to take part in this research, please click the **"Accept"** button below.

ACCEPT / DO NOT ACCEPT

Camera Knowledge

1) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
I know a lot about digital cameras.	1	2	3	4	5
Compared to most other people, I know less about digital cameras.	1	2	3	4	5
I have heard of most of the new digital cameras that are around.	1	2	3	4	5
I feel quite knowledgeable about digital cameras.	1	2	3	4	5
When it comes to digital cameras, I really don't know a lot.	1	2	3	4	5
Among my circle of friends, I'm one of the "experts" on digital cameras.	1	2	3	4	5
I rarely come across a digital camera that I haven't heard of.	1	2	3	4	5
I do not feel very knowledgeable about digital cameras.	1	2	3	4	5

Camera Purchase

2 Do you currently own a digital camera?

a. No
b. Yes

3) How recently did you search or shop for a digital camera, or did you receive it as a gift?

a. Within the last 6 months
b. More than 6 months ago, but within the last year
c. Over a year ago
d. Received it as a gift

4) If you purchased your camera, did you purchase it online?

a. No
b. Yes

Online Purchasing

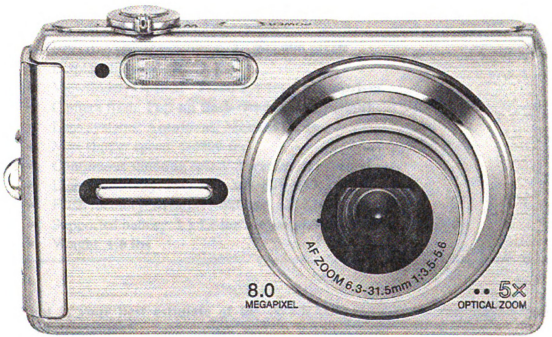
Please answer these questions about your feelings about online shopping and online purchasing of products.

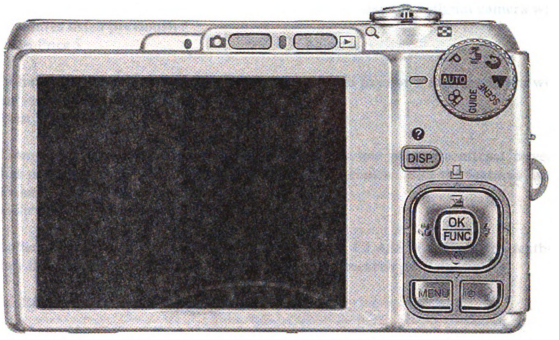
5) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
I worry about the security of financial transaction done online.	1	2	3	4	5
Regardless of security problems, I like the convenience of online shopping.	1	2	3	4	5
Most merchants in online sites are trustworthy.	1	2	3	4	5
Many product claims on the Internet are exaggerated and untrue.	1	2	3	4	5
One of my major concerns online is identity theft.	1	2	3	4	5

Camera Evaluation

Please read the description of the camera pictured, then answer the pricing questions on the following page.





Digital SLR Camera 10.2 Megapixels (Body Only)

SPECIFICATIONS

- Product type: **Digital Camera - SLR**
- Optical sensor size (CCD): **1/2.5 in**
- Effective sensor resolution: **10,200,000 pixels**
- Display diagonal size: **2.5 in**
- Viewfinder: **Optical - Fixed eye-level pentaprism**
- Camera flash: **Pop-up flash (Red eye reduction)**
- Lens systems: **Autofocus, Manual focus**
- Max shutter speed: **1/4000 sec**
- Continuous shooting speed: **3 frames per second**
- Light sensitivity: **ISO 100, 200, 400, 800, 1600, auto**
- Flash memory: **MultiMediaCard, SD Memory card**
- Supported battery: **1 x Li-ion rechargeable battery (included)**
- Weight: **1.6 lbs**

6) What is your best estimate of the AVERAGE PRICE for the digital camera pictured previously?
Average Price $_____

7) What is the HIGHEST PRICE you would expect to pay for a digital camera with the features listed previously?
Highest Price $_____

8) What is the LOWEST PRICE you would expect to pay for a digital camera with these features listed previously?
Lowest Price $_____

9) Sometimes retailers list products at ridiculously low prices to attract buyers. What price would be UNBELIEVABLY LOW for a camera with the features listed previously?
Unbelievably Low Price $_____

10) Please enter your MSU EMAIL ADDRESS and CLASS NAME in the textbox below if you want to be given EXTRA CREDIT for research participation.

Your Email Address: (e.g., apple@msu.edu)

_____

11) Class Name: (e.g., ADV375)

_____

Thank you for your participation. Your help with project will help another student graduate from our program.

APPENDIX B: QUESTIONNAIRE FOR THE EXPERIMENT

Consumer Perceptions of Price Comparison Alternatives

Informed Consent Form

You are being asked to participate in an experiment to evaluate **characteristics of possible transactions on a price comparison web site.** You will be presented with a simulated purchase decision, and asked to evaluate that decision.

Your participation in this experiment is voluntary. You may refuse to participate or may refuse to answer some of the questions asked. You may discontinue participation at any time.

This is a web survey that will be done in the web page for the questionnaire, and it will take approximately 15 minutes to answer the questionnaire items. Your responses will be kept confidential, and your privacy will be protected to the maximum extent of the law.

Your questionnaire will be completed on the web page for the questionnaire and will have no personal identification on it. The survey software will assign identification numbers that cannot be connected to your personal information. Since you will be participating for credit or as part of a classroom research experience, you will be asked to indicate your MSU email address and class name once you complete your online survey. Only the email address and class name provided by you will be used to identify your information. The only foreseeable risk is that your credit for participation may be incorrectly assigned. If your credit is not recorded correctly, please contact the researcher listed below.

If you have questions about this study, contact: Keith Adler, Ph.D., Department of Advertising, Public Relations, and Retailing, Michigan State University, 366 Communication Arts Building, East Lansing, MI 48824, (517) 353-3266, adler@msu.edu.

If you have any questions about your role and rights as a research participant, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Director of MSU's Human Research Protection Programs, Dr. Peter Vasilenko, at 517-355-2180, FAX 517-432-4503, or e-mail irb@msu.edu, or regular mail at: 202 Olds Hall, MSU, East Lansing, MI 48824.

If you wish to take part in this research, please click the **"Accept"** button below.

ACCEPT / DO NOT ACCEPT

Camera Knowledge

1) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
I know a lot about digital cameras.	1	2	3	4	5
Compared to most other people, I know less about digital cameras.	1	2	3	4	5
I have heard of most of the new digital cameras that are around.	1	2	3	4	5
I feel quite knowledgeable about digital cameras.	1	2	3	4	5
When it comes to digital cameras, I really don't know a lot.	1	2	3	4	5
Among my circle of friends, I'm one of the "experts" on digital cameras.	1	2	3	4	5
I rarely come across a digital camera that I haven't heard of.	1	2	3	4	5
I do not feel very knowledgeable about digital cameras.	1	2	3	4	5

Camera Purchase

2 Do you currently own a digital camera?

a. No
b. Yes

3) How recently did you search or shop for a digital camera, or did you receive it as a gift?

a. Within the last 6 months
b. More than 6 months ago, but within the last year
c. Over a year ago
d. Received it as a gift

4) If you purchased your camera, did you purchase it online?

a. No
b. Yes

Online Purchasing

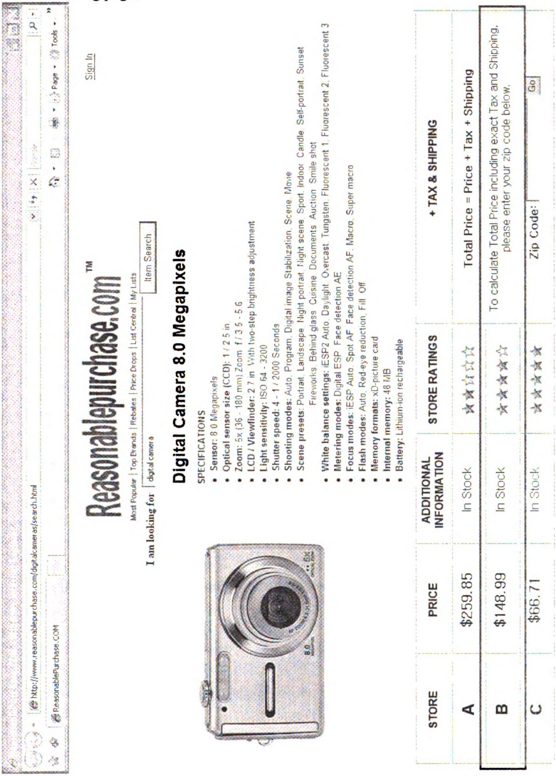
Please answer these questions about your feelings about online shopping and online purchasing of products.

5) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
I worry about the security of financial transaction done online.	1	2	3	4	5
Regardless of security problems, I like the convenience of online shopping.	1	2	3	4	5
Most merchants in online sites are trustworthy.	1	2	3	4	5
Many product claims on the Internet are exaggerated and untrue.	1	2	3	4	5
One of my major concerns online is identity theft.	1	2	3	4	5

Price Comparison Web Site - A

The RED HIGHLIGHT BOX below is a choice made by AN ONLINE PURCHASER in a price comparison web site. Please take your time to evaluate this purchaser's decision on the following page.



Thinking about the choice HIGHLIGHTED PREVIOUSLY,

6) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
Taking advantage of this price deal would make this purchaser feel good.	1	2	3	4	5
This purchaser would get satisfaction by knowing that he or she is saving money from this price deal.	1	2	3	4	5
Beyond money saved, taking advantage of this price deal will give a sense of joy to this purchaser.	1	2	3	4	5

7) Please mark on the scale below, how good would the purchaser feel about completing he deal that in highlighted?

Terrible Deal	Very Poor Deal	Poor Deal	Neither Good nor Bad	Good Deal	Very Good Deal	Outstanding Deal
-3	-2	-1	0	1	2	3

Continued... Thinking about the choice HIGHLIGHTED PREVIOUSLY,

8) Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree				**Strongly Agree**
If this purchaser acquires this camera at this store, I think he or she would be getting good value for the money he or she spends.	1	2	3	4	5
I think that given this digital camera's features, the camera at this store is a good value for the money.	1	2	3	4	5
At this store, this camera would be a worthwhile acquisition because it would help this purchaser take pictures at a reasonable price.	1	2	3	4	5

9) Please indicate your agreement or disagreement with the following statements.

	Very Low				**Very High**
The probability that this purchaser would consider buying the camera at this store would be.	1	2	3	4	5
The likelihood that this purchaser would purchase the camera at this store would be.	1	2	3	4	5
The likelihood that this purchaser would purchase the camera at "ANOTHER STORE" would be.	1	2	3	4	5

Personal Information

10) What is your gender?
a. Female
b. Male

11) What is your Age?

_____

12) What is your ethnic background?
a. American Indian or Alaskan Native
b. Asian, Asian American, or Pacific Islander
c. Black or African American
d. Mexican, Mexican American or Chicano
e. White (non-Hispanic)
f. Other, please specify: _____

13) What is your education level?
a. Freshman
b. Sophomore
c. Junior
d. Senior
e. Graduate
f. Other, please specify: _____

14) If your professor is giving you extra credit, then we need your MSU email address (and class) if that was required.

Your Email Address: (e.g., apple@msu.edu)

_____

15) Class Name: (e.g., ADV375)

_____

Thank you for your participation. Your help with project will help another student graduate from our program.

Thank you for your participation!

APPENDIX C: DESCRIPTIVE STATISTICS

Scale Items for Measuring Subjects' Acceptable Price Range

Acceptable Price Range
What is your best estimate of the AVERAGE PRICE for the digital camera pictured previously?
What is the HIGHEST PRICE you would expect to pay for a digital camera with the features listed previously?
What is the LOWEST PRICE you would expect to pay for a digital camera with these features listed previously?
Sometimes retailers list products at ridiculously low prices to attract buyers. What price would be UNBELIEVABLY LOW for a camera with the features listed previously?

Pretest Results: Subjects' Price Estimates for a Digital Camera

Measure	Mean	Median	Mode	S.D.	Variance
Average Market Price	$231.61	$200	$200	88.90	7903.08
The Highest Expected Price	$306.93	$300	$300	130.11	16927.90
The Lowest Expected Price	$166.85	$150	$150	98.39	9679.71
Ridiculously Low Price	$104.61	$100	$100	58.43	3413.63

Reliability of Measurements

Scale	Number of Items	Sources of Measure	Reliability Coefficient
Product Knowledge	8	Flynn & Goldsmith (1999); Flynn, Goldsmith, & Eastman (1996)	.910
Perceived Risk	5	Self-created for the experiment	.642
Perceived Transaction Value	3	Grewal, Monroe, & Krishnan (1998)	.912
Perceived Acquisition Value	3	Chapman & Monroe (1990); Dodds, Monroe, & Grewal (1991); Grewal, Munger, Iyer, & Levy (2003)	.879
Willingness to Buy	3	Dodds, Monroe, & Grewal (1991); Grewal, Monroe, & Krishnan (1998)	.676

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