

## Measuring consumer trust and perceived risk in e-commerce

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### ABSTRACT

In the context of e-commerce, consumer trust is commonly defined as a derivative of the willingness to be exposed to the outcomes of the uncertain actions of another party. By this definition, trust is an attitude that forms in the context of cognitions about the perceived risks posed by a transaction. Despite the commonality and prevalence of this general definition, studies continue to examine consumer trust without otherwise accounting for the effect of perceived risk or vice versa. This study compares partial research models and measurements that omit either consumer trust or perceived risk to a full research model that includes both trust and risk. Specifically, this study compares and contrasts three survey instruments: one that measures only consumer trust, one that measures only perceived risk, and one that measures both consumer trust and perceived risk. An experiment was performed using a relatively high dollar transaction involving a functional product while manipulating vendor-brand equity and product-brand equity. The results of this study indicate that manipulation of vendor-brand equity and product-brand equity does have a statistically significant effect on perceptions of consumer trust, perceived risk and willingness to transact. Analysis also indicates evidence of omitted variable bias as exhibited by the presence or absence of survey questions measuring consumer trust and the presence or absence of survey questions measuring perceived risk.

Keywords: Consumer trust, perceived risk, willingness to transact

## INTRODUCTION

This research examines the reliability of three strategies commonly used by researchers who investigate how consumer trust or perceived risk influence various outcomes of user-website interactions. Specifically, this study compares models and instruments that measure only consumer trust (but not perceived risk), only perceived risk (but not consumer trust), and both consumer trust and perceived risk. This question is based on the results of several studies that have indicated that models of trust that do not account for risk may be severely confounded by the omission of one or more key predictive variables (Kim, Ferrin, & Rao, 2008). Such models would be subject to specification error due to omitted-variable bias. Consider the following illustration. In order to engage in a transaction, a consumer must experience a level of trust that sufficiently compensates for the perceived level of risk posed by the transaction (Kim et al., 2008). For example, a consumer may be willing to transact with a vendor in whom they do not have a high level of trust as long as the transaction presents relatively low risk (e.g., \$35 Timex watch). However, this same consumer may be unwilling to buy from that same vendor when perceived financial risks, performance risks, or other risks are high (e.g., when buying a \$6000 Rolex watch) (Ba & Pavlou, 2002).

Despite the demonstrated influences of trust and risk on consumer decision-making and behavior, consistent strategies or practices of modeling or measurement have not emerged as standard (Mou & Cohen, 2013). Gefen, Karahanna, & Straub (2003) highlighted the need for IS researchers to distinguish between trust and trustworthiness, refine our conceptualization of risk and come to some agreement on the relationship between trust and risk. However, researchers continue to approach the measurement of trust and risk in drastically different ways (Mou & Cohen, 2013). The purpose of this research is to gain a better understanding of trust and risk in an e-commerce environment and the relationship between them. Specifically, this study examines the reliability and validity of models that measure only trust or only risk, as opposed to models that measure both trust and risk.

In the context of e-commerce, the effects of consumer perceptions of trust and risk are considered especially significant due to the lack of product tangibility and lack of interpersonal aspect that is substituted by technology serving as intermediary. The wide continuum of research models, definitions, and measurement methods are varied and not easily comparable. These variations pose significant barriers to researchers and practitioners who apply research findings.

This study defines trust as a trustor's willingness to be vulnerable to a trustee in an uncertain (risky) environment, despite the inability to monitor or control the trustee's actions (Gefen, Karahanna, et al., 2003; Mayer, Davis, & Schoorman, 1995). In order to capture differing levels of perceived risk, this study's approach manipulates the levels of vendor-brand equity and product-brand equity, while presenting a functional product with relatively high dollar value. Results of the study indicate that manipulation of vendor-brand equity and product-brand equity does have a significant effect on perceptions of consumer trust, perceived risk and willingness to transact. The presence or absence of survey questions measuring consumer trust had a significant impact on trust in vendor, but an insignificant impact on trust in brand and willingness to transact with either vendor or brand. The presence or absence of survey questions measuring perceived risk did not produce statistically significant effects.

This paper proceeds as follows: in the next section discusses relevant literature; the following section presents the research framework; the next section presents the research

methodology; the research analysis and results are presented; and the final section concludes with a discussion of the implications of this research.

## **RELEVANT LITERATURE**

This section first reviews consumer trust and perceived risk in the context of e-commerce are discussed, followed by an examination of the relationship between trust and risk.

### **Consumer trust in the context of e-commerce**

A large body of research has investigated how consumer trust influences user-website interactions and their outcomes. Gefen (2000) found that increased degrees of consumer trust in an e-commerce vendor had a positive influence on consumer information search (or “information inquiry”) and purchase intentions at a retail website. Several studies have found that consumers’ trust in an e-commerce vendor has a significant impact on consumers’ willingness to share personal information or engage in online transactions (Dinev & Hart, 2006; Jarvenpaa, Tractinsky, & Vitale, 2000). Trust and familiarity with an Internet vendor have also been found to influence consumers’ purchase intentions (Gefen, 2000). Hong and Cho (Hong & Cho, 2011) found that trust in an online marketplace influences both purchase intentions and attitudinal loyalty. Websites that establish high levels of trust are able to demand higher prices than websites that elicit comparatively low levels of trust (Ba & Pavlou, 2002; Reichheld & Scheffer, 2000).

Trust, per se, is difficult to measure (Mayer et al., 1995). For example, a survey question such as “How willing are you to be vulnerable to the company hosting this website?” is probably too existential to elicit meaningful answers from survey participants. Consequently, various trust antecedents are often used as proxy variables for trust. Mayer identified four central antecedents of trust: ability, benevolence, integrity, and individual trust propensity. Together, ability, benevolence, and integrity are often viewed as either “trusting beliefs” (McKnight, Choudhury, & Kacmar, 2002) or as attributes of trustworthiness (Hong & Cho, 2011). McKnight et al., (2002) argued that many of the trust antecedents reported in the peer-reviewed literature fit within the ability-benevolence-integrity model. Park, Gunn, and Han (2002) proposed dimensions of online trust including competence, integrity, and benevolence as having a direct effect upon the outcomes perceived risk and willingness to depend on the retailer.

A limited set of studies have investigated the “sources of trust” that trustors use as the basis for their trusting beliefs. Commonly cited sources of trust include cognitive processes, structural assurance, situational normality, familiarity, calculativeness, and values (Ba & Pavlou, 2002; Gefen, Karahanna, et al., 2003; McKnight et al., 2002). In the context of B2C websites, “trust signals” include the various components of a website’s design, information content, or functionality that build or degrade sources of trust, or which otherwise influence trusting beliefs, intentions, or behaviors (Ba & Pavlou, 2002; Dunning, Fetchenhauer, & Schlösser, 2012). For example, Gregg & Walczak (2010) found that trust can be induced by improving the quality of online auction listings. Results of that study indicated that website quality explained 49% of the variation in the trust for eBay sellers.

## Perceptions of Risk in e-Commerce

The construct of risk is prevalent in research within the business disciplines. For example, the concept of risk plays a central role in decision theory. Mayer et al. (1995), suggest that "If a decision involves the possibility of a negative outcome coupled with a positive outcome, the aggregate level of risk is different than if only the possibility of the negative outcome exists" (p. 725). Risk is frequently viewed as either based in the uncertainty of outcomes or in the costs of those outcomes (Gefen, Rao, and Tractinsky, 2003). When purchasing online, sellers possess significantly more information about the item being sold than do buyers (Gregg & Scott, 2006). In addition, buyers in the context of e-commerce are frequently transacting with sellers that they do not know and have had no direct interaction. This creates a condition of information asymmetry which increases the risk associated with online transactions (Mishra, Heide, & Cort, 1998).

Although the precise definition of risk is debatable, most definitions of risk that have been applied to the e-commerce domain seek to measure consumer beliefs about the effect and probability of not realizing an expected outcome. In their study of e-commerce shopping behavior, Jarvenpaa et al. (2000) measured risk as both the possibility that an undesirable outcome will occur (uncertainty associated with shopping), and the consequences of that outcome occurring. According to Mitchell (1999), consumer risk is "a subjectively-determined expectation of loss; the greater the probability of this loss, the greater the risk thought to exist for an individual." (p. 168). In the context of e-commerce, it is important to note that perceived risk is not the same as actual (or purportedly "objectively measured") risk. In fact, research indicates that retail customers are very poor at assessing actual risk (Grazioli & Jarvenpaa, 2000). Consequently, consumer behavior is much more influenced by perceived risk than actual risk, and most investigations that study risk in an e-commerce context focus on consumers' perceptions of risk.

In the e-commerce domain, risk is posed by several sources, with each source posing various types of risk. Sources of risk describe the source of the uncertainty, while types of risk describe the types of loss that can be incurred. For example, e-commerce research often distinguishes between channel risk (also referred to as Internet risk, web risk, or online marketplace risk), store risk (also referred to as vendor risk or seller risk), e.g. (Dholakia et al., 2010), and product risk, e.g. (Gregg & Walczak, 2008). Risk in IS research is also related to the magnitude of that risk, usually operationalized as the financial cost to a buyer (or user) should an undesirable outcome occur. Numerous studies have found that the purchase price strongly influences willingness to transact online (Aqueveque, 2006; Bajari & Hortaçsu, 2004; Pezani-Christou, 2002). Finally, consumer perceptions of risk are invariably tainted by their individual tolerance and preference for risk. Researchers have found that perceptions of risk impact consumer attitudes towards purchasing online (van der Heijden, Verhagen, & Creemers, 2003), reduce the perceived benefits associated with purchasing online (Teo & Yeong, 2003), negatively impact willingness to transact (Jarvenpaa et al., 2000; McKnight et al., 2002; Pavlou, 2003) and inhibit intention to use mobile commerce (Wu & Wang, 2005).

Extensive e-commerce research has investigated two common sources of risk: seller and intermediary risk. For example, online marketplaces like eBay and Amazon act as intermediaries which can use institutional mechanisms (e.g. reputation systems, escrow services) to reduce perceptions of risk associated with transacting with unknown sellers and consequently facilitate online transactions (Pavlou & Gefen, 2004). Similarly the content of e-commerce websites can

also reduce (or enhance) perceptions of risk. For example, Featherman et al. (2006) found that content on vendor web sites can seem artificial and non-authentic, which be a significant driver of consumer perceptions of seller risk. Another study examining sources of e-commerce risk found that high quality information helps reduce the levels of perceived uncertainty and risk related to an electronic commerce transaction (Kim et al., 2008).

Another common theme investigated in e-commerce research is product risk. Product risk is typically defined as “the extent to which the consumer thinks that the various brands of a product perform differently in ways that are important to him” (Lutz & Reilly, 1974). Online transactions suffer from a lack of product transparency due to the inability of the consumer to completely understand all attributes required to make an informed decision (Datta & Chatterjee, 2008). Different types of products have different levels of product related risk associated with them. For example, Scott, et al. (2012) found that product characteristics are a significant predictor of “lemon” complaints at online auctions (where lemon complaints reflect poor product performance).

### **Trust and Risk: An Intrinsic Relationship**

The Theory of Reasoned Action proposes that beliefs lead to attitudes, which lead to behavioral intentions, which lead to the behavior itself (Fishbein & Ajzen, 1975; Sheppard, Hartwick, & Warshaw, 1988). Based on the Theory of Reasoned Action, this study asserts that trust is the willingness to be exposed (attitude) formed in the context of perceived risk (cognitions). Accordingly, in a transaction between a buyer and a seller, a given level of trust must be reached by the buyer to offset that buyer’s perceived risk (Jarvenpaa et al., 2000; McKnight et al., 2002). Hence, a seller does not necessarily have to instill a high level of trust within a buyer; rather, a seller must instill just enough trust to offset the buyer’s perceived risk. Researchers have found that trust and risk judgments can be influenced by a set of contradictory beliefs. The influence of one belief might override another to the extent that the resulting probability favors one behavioral intention over another (Dinev & Hart, 2006).

Despite significant evidence demonstrating the conjoint effects of both risk and trust, studies continue to measure consumer trust while at the same time failing to measure or otherwise account for perceived risk (e.g. (Bhattacharjee, 2002; Brengman & Karimov, 2012; Chiu, Hsu, Lai, & Chang, 2012; Hong & Cho, 2011)). For example, Chiu, et al. (Chiu et al., 2012) consider familiarity, value, satisfaction and habit in conjunction with trust as factors affecting repeat purchase intentions; however, risk is not included in their model. Limited recent research has examined both constructs of trust and risk in the context of e-commerce (e.g. (Bansal, Zahedi, & Gefen, 2010; Katos, 2012; Krasnova, Spiekermann, Koroleva, & Hildebrand, 2010; H. Li, Gupta, Zhang, & Sarathy, 2014; Liao, Liu, & Chen, 2011; Lu, Yang, Chau, & Cao, 2011; Luo, Lin, & Wang, 2010; Park et al., 2012)); however, these studies exemplify the varied approaches to modeling the two constructs. This research is motivated by the paradox that although authors almost always define trust as taking place within the context of a risky environment (Mayer et al., 1995; McKnight et al., 2002), and despite research results indicating that the effects of consumer trust are highly influenced by perceptions of risk (Dinev & Hart, 2006), studies continue to evaluate consumer trust without specifically measuring or otherwise accounting for the effects of perceived risk or vice versa.

## RESEARCH FRAMEWORK

This study explores research models involving trust and risk as perceived by consumers and the resulting effect on willingness to transact. In order to manipulate these perceptions, this study's experimental design manipulates the brand equity of elements of the transaction. Brand equity is a marketing concept that refers to the value of having a well-known brand name. Specifically, this study posits that different levels of vendor-brand equity and product-brand equity will elicit differing perceptions of consumer trust, perceived risk and resulting willingness to transact. These combinations are illustrated in Table 1 (Appendix C).

H1: Consumers considering a transaction environment presenting a known vendor (with relatively high vendor-brand equity) compared to an unknown vendor (with relatively low vendor-brand equity) will indicate, on average, (a) higher consumer trust in vendor, (b) lower perceptions of perceived risk in vendor, and (c) higher willingness to transact with vendor.

H2: Consumers considering a transaction environment presenting a known brand/product with higher product-brand equity compared to an unknown brand/product with lower product-brand equity will indicate, on average, (a) higher consumer trust in the brand/product, (b) lower perceived risk in the brand/product, and (c) higher willingness to transact with brand/product.

Further, this study investigates the validity of survey instruments that include only survey items measuring trust or only survey items measuring risk, in comparison to survey instruments that include items that measure both trust and risk. As depicted in Figure 1 (Appendix A), the research model posits that website quality, consumer trust and perceived risk affect the consumer's willingness to transact. Since the focus of this study is on trust and risk, the researchers endeavored to hold website quality constant across experimental treatments.

Prior researchers have argued that trust cannot be fully understood, or measured, in the absence of the context or perceptions of risk (Rousseau, Sitkin, Burt, & Camerer, 1998). In their seminal research on trust, Mayer et al. (1995) argue that trust is difficult to measure directly. Consequently, various trust antecedents (or risk factors) are often used as proxy variables for trust. For example, one study asks about individuals' beliefs about the security of private information and the accuracy of information as measures of trust in a site and its members (Dwyer, Hiltz, & Passerini, 2007). This study posits that in research surveys where trust is measured in the absence of risk, the questions used to measure the trust construct may in fact measure consumer trust, but these questions may also unintentionally act as proxy measurements of perceived risk. Consequently, a survey question such as "I trust this website" may be interpreted either as "Do you have a high level of trust in the seller?" or as "Do you trust the seller enough to offset your perceptions of risk?" Researchers have found that lack of clarity in survey questions can result in biased estimates of the underlying constructs (Fowler, 1992). We anticipate that survey items intended to measure consumer trust are more likely to be interpreted correctly when both trust and risk are measured. Thus, this study posits that when survey items measuring risk are absent from the survey, respondents will indicate, on average, higher perceptions of trust.

H3: Average reported perceptions of consumer trust in (a) vendor and (b) brand/product will be higher for respondents viewing survey items omitting risk than for respondents viewing survey items including both trust and risk measures.

H4: Average reported consumers' willingness to transact with (a) vendor, (b) brand/product, and (c) store will be higher for respondents viewing survey items omitting risk than for respondents viewing survey items including both trust and risk measures.

Risk is typically measured based either on the probability of a loss or on the size of a possible loss (Barki, Rivard, & Talbot, 1993). These measurements do not typically include the context in which the risks occur. However, other researchers have argued that perceived risk is less important when individuals deal with a trustworthy and credible institution (Bener, 2000). In the context of social networks and self-disclosure, trust in the service provider had a significant influence upon perceived privacy risk (Krasnova et al., 2010). A study focused on actual online transactions found that increased trust beliefs reduced risk perception (Katos, 2012). This study anticipates that measurements of perceived risk will be impacted by the levels of trust in vendor and trust in brand/product existing in the environment surrounding a given transaction. Thus, the researchers expect that when survey items measuring trust are absent from the survey, respondents will indicate, on average, higher perceptions of risk.

H5: Average reported perceptions of perceived risk in (a) vendor and (b) brand/product will be higher for respondents viewing survey items omitting trust than for respondents viewing survey items including both trust and risk measures.

H6: Average reported consumers' willingness to transact with (a) vendor, (b) brand/product, and (c) store will be lower for respondents viewing survey items omitting trust than for respondents viewing survey items including both trust and risk measures.

## RESEARCH METHODOLOGY

### Study Setting, Data Collection and Sample Characteristics

Research participants were asked to view a website under the presumption that they were investigating the purchase of a new tablet computer. The website presented an online storefront with a single product available for consideration. After viewing an image of the website, participants were asked to complete a Web-based survey. Qualtrics was used to deliver both the website image and survey, via a link provided through Amazon Mechanical Turk. Use of Qualtrics allowed for random assignment to both the website image and the survey while maintaining even distribution to the different treatments. Participants in the study included Amazon Mechanical Turk workers in the United States. Amazon Mechanical Turk gives businesses and developers access to an on-demand, scalable workforce while allowing workers to select from tasks and complete work whenever it's convenient. For this study, workers were paid 35 cents for completion of the survey. The response rate was not calculated due to the unknown of how many workers met the criteria and observed the option of completing the task. Responses were removed for the following reasons: respondent completed the survey more than once, respondent completed only the first page of the survey, or respondent worked at BestBuy.

Ultimately, 576 usable responses were obtained. According to a power analysis for the between-subject design (Faul, Erdfelder, Buchner, & Lang, 2009), 20 subjects for each of 12 groups (hence 240 subjects) can assure enough statistical power of 0.80 for a medium effect size ( $f = 0.25$ ) (Cohen, 1988). As seen in Table 2 (Appendix C), the number of subjects for each group ranged from 38 to 56. Of the 576 total participants, 286 (49.6%) were male and 289 (50.2%) were female. The average age of the participants was 34 years.

The research design deliberately aimed to capture differing levels of perceived risk. Consequently, both vendor-brand equity and product-brand equity were manipulated, while presenting a functional product with relatively high dollar value transaction. For the manipulation, level of brand equity was presented at two levels for both vendor and brand/product: higher level vs. lower level of vendor-brand equity, and higher vs. lower level of product-brand equity. As such, our experiment includes four different websites. Additionally, three separate survey instruments were presented corresponding to the two partial research models and one full research model. The manipulated factors produced a 2x2x3 design. Appendix A provides sample screenshots from the four websites. Table 2 (Appendix C) presents the 12 treatments.

Tablet computers were chosen for this study because prior research has found that product risk is increased if the product category is a functional item, such as computers and consumer electronics (Scott et al., 2012). The Apple iPad was chosen to represent a brand/product with relatively high perceived product-brand equity, and the Appex Tablet, a fictitious brand/product, was chosen to represent a brand/product with relatively low product-brand equity. Best Buy, an international company with hundreds of retail stores, was chosen to represent a vendor with relatively high vendor-brand equity. A2B Tek, a fictitious company, was chosen to represent a vendor with relatively low vendor-brand equity.

To better control the experiment, the web pages of the companies and products being investigated were copied from the actual Best Buy website and re-posted with adjusted information that showed the same product pictures, descriptions and prices of each of the products at each website. Specifically, the same pictures, descriptions, and prices were shown for the Apple iPad at the Best Buy and A2B Tek pages, and the same pictures, descriptions, and prices were shown for the Appex Tablet at each retailer store.

In order to establish the relative levels of brand equity of the vendors and products, two pilot tests were conducted prior to the main data collection. The first pilot test was administered to a sample of 144 undergraduate students enrolled in introductory MIS courses at a large university in the United States, with a response rate of 60%. Subjects were first instructed to view one of four randomly assigned websites presenting an online storefront with a single brand/product available for consideration. In order to measure brand equity, survey items focused on familiarity with the vendor and brand/product depicted by the given website. Respondents were anticipated to be more familiar with known vendors and brand/products than unknown. The experimental websites presented the vendor and brand/product in four different scenarios: known vendor and known brand/product, known vendor and unknown brand/product, unknown vendor and known brand/product, unknown vendor and unknown brand/product. Best Buy and Apple iPad were chosen for the known vendor and known brand/product. MyPC and Appex Tablet were chosen for the unknown vendor and unknown brand/product. These unknown names were created to appear to be plausible without using real vendor, brand and product names, thus reducing brand equity. All four websites were identical



with the exception of the names of the vendor and brand/product, image of the product, physical store location and phone number, and the small logo representing the vendor.

Upon completion of viewing the website, subjects were instructed to return to the survey website. Survey items examined subjects' familiarity with the vendor and brand/product presented by the website. The purpose of the pilot test was to establish brand equity with BestBuy and Apple, as well as MyPC and Appex. Table 3 (Appendix C) provides results of the items measuring familiarity with MyPC and Appex. These results gave an indication that MyPC was not as unknown or unrecognizable as we preferred. Therefore, we changed the name of the unknown vendor. Results for familiarity with Appex were deemed acceptable.

The pilot test was repeated with a newly created vendor name, A2B Tek. The second pilot test was administered to a sample of 100 undergraduate students enrolled in an introductory MIS course at a large university in the United States, with a response rate of 85%. These results indicated familiarity with A2B Tek to a lesser degree that we deemed acceptable for our main data collection.

## Measures

Constructs were measured using multiple-item perceptual scales, using previously established survey items from prior studies. All items were measured on a 7-point Likert scale. Some items were modified to adapt them to the specific experimental context. Survey items and sources are provided in Appendix B.

## Independent Variables

The independent variables used in this research are website quality, consumer trust and perceived risk. Items measuring website quality were included in each of the three surveys. The four items measure participants' perceptions of the quality of the website in terms of information quality and design quality. The five items measuring consumer trust focus on participants' opinions on their trust in the vendor and the brand/product and also their trust in completing a transaction over the Internet. The five items measuring risk ascertain participants' perceptions of perceived risk involved in transacting with the vendor, risk in purchasing the brand/product, risk in quality of both the vendor and brand/product, and the notion that shopping over the Internet is more risk than other options. We then separate consumer trust into trust in vendor and trust in brand/product and we separate perceived risk into risk in vendor and risk in brand/product. The items pertaining to trust or risk in the Internet are included as control variables.

## Dependent Variable

The dependent variable in this study is willingness to transact. The five items measuring willingness to transact focus on intentions to purchase from the vendor, intentions to purchase goods provided by the brand, and intentions to purchase from the given online store. In the analyses, focus is placed on willingness to transact with vendor, or willingness to transact with brand, or willingness to transact with store accordingly.

## Control Variables and Demographics

This study attempted to control for trust and risk in Internet transactions and also subject experience using the Internet. Regarding web experience, participants were asked how much time per week they spent on the following Internet activities: using social networking sites such as Facebook, reading and/or posting to discussion boards or blogs, accessing information on the Internet about products and services you may buy, and shopping (i.e., actually purchasing something) on the Internet. In addition to the specified activities, participants were also asked for total time spent on the Internet per week. Additional survey items collected demographic data including gender, age, highest level of education, and industry.

## Examination of Reliability and Validity

Examination of reliability and validity was performed on the full data set using PLS analysis and SmartPLS software (Ringle, Wende, & Will, 2005). Convergent and discriminant validity are evident when each indicator loads higher on the corresponding construct than on the other constructs. The item indicator cross-loadings indicate sufficient convergent (bold entries) and discriminant (plain text entries) validity (Table 4, Appendix C). Upon removal of two items for web experience and one item for website quality, all items loaded greater than the 0.70 recommended threshold for indicator reliability (Hair, Sarstedt, Ringle, & Mena, 2012).

## RESEARCH ANALYSIS AND RESULTS

Hypotheses H1 and H2 essentially discern the effect of the four different websites upon consumer trust, perceived risk and willingness to transact. The treatment means and standard deviations for vendor trust, brand/product trust, vendor risk, brand/product risk and willingness to transact with vendor, brand/product and store are shown in Tables 5a, 5b, and 5c (Appendix C).

The effects of the four websites were evaluated using a 2 (vendor-brand equity) x 2 (product-brand equity) multivariate analysis of variance (MANOVA). The results show a main effect of vendor-brand equity ( $F = 9.046$ ,  $p < .001$ , Pillai's Trace = 0.257), and a main effect of product-brand equity ( $F = 12.044$ ,  $p < .001$ , Pillai's Trace = 0.315). The interaction effect was not found to be significant. The authors next ran separate ANOVAs to test the hypotheses.

Supporting H1, vendor-brand equity displayed a main effect for (a) trust in vendor, (b) risk in vendor, and (c) willingness to transact with vendor. Compared to the unknown vendor, A2B Tek, the known vendor, Best Buy, displayed (a) higher trust in vendor ( $M = 5.45$  vs  $M = 4.45$ ,  $F = 43.499$ ,  $p < .001$ ), (b) lower risk in vendor ( $M = 2.64$  vs  $M = 3.70$ ,  $F = 36.550$ ,  $p < .001$ ), and (c) higher willingness to transact with vendor ( $M = 4.72$  vs  $M = 3.88$ ,  $F = 32.987$ ,  $p < .001$ ).

Supporting H2, product-brand equity displayed a main effect for (a) trust in brand/product, (b) risk in brand/product, and (c) willingness to transact with brand/product. Compared to the unknown brand/product, Apex Tablet, the known brand/product, Apple iPad, displayed (a) higher trust in brand/product ( $M = 5.44$  vs  $M = 4.19$ ,  $F = 42.712$ ,  $p < .001$ ), (b) lower risk in brand/product ( $M = 2.47$  vs  $M = 4.06$ ,  $F = 69.878$ ,  $p < .001$ ), and (c) higher willingness to transact with brand/product ( $M = 4.36$  vs  $3.44$ ,  $F = 15.086$ ,  $p < .001$ ).

One-way analysis of variance (ANOVA) was used to examine hypotheses H3-H6. These hypotheses seek to discern the effect of the survey instruments upon consumer trust, perceived risk and willingness to transact.

Hypotheses H3 and H4 consider the presence or absence of survey items measuring risk. Thus, to examine these hypotheses, the partial data set comprised respondents answering the full survey and respondents answering the survey containing questions on trust, but not on risk. (Data from respondents who answered questions about risk but not trust were removed.) Hypothesis H3 was partially supported. Respondents completing the survey omitting questions on risk demonstrated higher trust in vendor ( $M = 5.21$ ) compared to those completing the full survey ( $M = 4.88$ ,  $F = 7.291$ ,  $p < .01$ ). The difference in means for trust in vendor between the two groups was not significant ( $M = 5.03$  vs  $M = 4.83$ ,  $F = 1.726$ ,  $p = 0.19$ ). Consequently, there appears to be support for hypothesis H3(a) but no support for hypothesis H3(b).

Hypothesis H4 was partially supported. Respondents completing the survey omitting questions on risk demonstrated higher willingness to transact with vendor ( $M = 4.54$ ) compared to those completing the full survey ( $M = 4.24$ ,  $F = 4.464$ ,  $p < .05$ ). The difference in means for willingness to transact with brand/product between the two groups was not significant ( $M = 4.13$  vs  $M = 3.91$ ,  $F = 1.497$ ,  $p = 0.22$ ). Also, the difference in means for willingness to transact with brand/product between the two groups was not significant ( $M = 4.41$  vs  $M = 4.23$ ,  $F = 1.429$ ,  $p = 0.23$ ). Ultimately, there was support for hypothesis H4(a), but there was no support for hypotheses H4(b) and H4(c).

Hypotheses H5 and H6 consider the presence or absence of survey items measuring trust. Thus, to examine these hypotheses, the data comprised respondents answering the full survey and respondents answering the survey containing questions measuring risk, but not measuring trust. (Data on respondents answered questions about trust but not risk were removed.) Hypothesis H5 was not supported. Respondents completing the survey omitting questions on trust did not show significant differences compared to those completing the full survey for (a) risk in vendor ( $M = 3.17$  vs  $M = 3.246$ ,  $F = 0.299$ ,  $p = 0.585$ ) or (b) risk in brand/product ( $M = 3.31$  vs  $M = 3.25$ ,  $F = 0.146$ ,  $p = 0.70$ ). Therefore, hypotheses H5 (a) and H5 (b) were not supported.

Hypothesis H6 was not supported. Respondents completing the survey omitting questions on trust did not show significant differences compared to those completing the full survey for (a) willingness to transact with vendor ( $M = 4.15$  vs  $M = 4.24$ ,  $F = 0.438$ ,  $p = 0.51$ ), (b) willingness to transact with brand/product ( $M = 3.96$  vs  $M = 3.91$ ,  $F = 0.099$ ,  $p = 0.75$ ), or (c) willingness to transact with store ( $M = 4.16$  vs  $M = 4.23$ ,  $F = 0.175$ ,  $p = 0.68$ ).

### **Implications for Research**

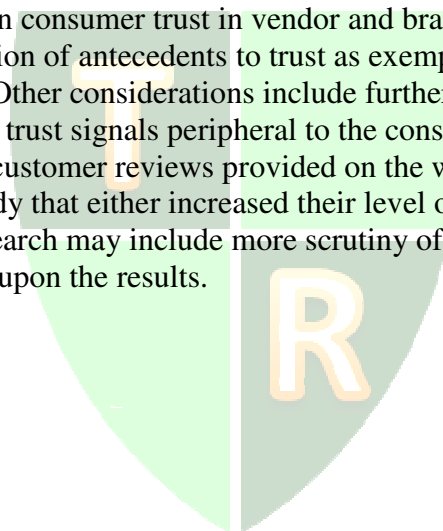
When conducting empirical research there is a risk that a study might omit variables that are correlated with the included independent variables. However, in practice, researchers are faced with a trade-off between the number of variables that should be included in a model and the number of questions a respondent will answer on a survey. Although researchers agree that risk is a necessary condition for trust (Rousseau et al., 1998), this research suggests that survey questions about perceived risk do not contribute significantly to a subject's understanding and evaluation of trust.

## Limitations and Directions for Future Research

Candidates for this study involved Amazon Mechanical Turk workers. While we expect that the workers are good proxies for online consumers, we cannot guarantee that external validity will hold. The survey items measured willingness to transact as opposed to actual purchase. Subjects making actual purchases may have responded differently to the surveys. Additionally, survey items measuring all constructs were collected at the same point in time with the same instrument; although our analysis included ... the test is not 100% ... therefore, the possibility of common method bias still exists.

In carrying out our experimental design, we made every effort to manipulate only our factors of interest while holding all others constant. In doing so, we used the consumer reviews that were provided on the original Best Buy website for the Apple iPad on all four websites created for the experiment. It is possible that the positive reviews helped to either strengthen trust or alleviate the perceptions of risk. Additionally, we maintained the same price of the brand/product on all four websites. The dollar amount may have had an influence on willingness to transact. For future studies we may consider removing items all together that are not directly connected to our factors of interest.

This research focused on consumer trust in vendor and brand/product. Future research may consider deeper investigation of antecedents to trust as exemplified in the ability-benevolence-integrity model. Other considerations include further exploration of sources of trust internal to the consumer and/or trust signals peripheral to the consumer. For example, as mentioned above, the positive customer reviews provided on the websites may have been a signal to participants of the study that either increased their level of trust or alleviated perceptions of risk. Future research may include more scrutiny of the websites used for the experiment and their influence upon the results.



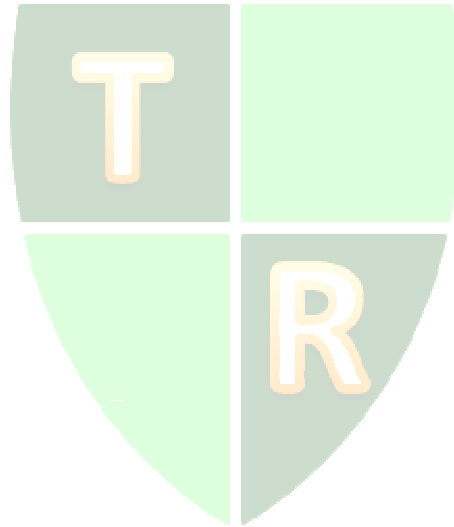
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### APPENDIX A: Images of the four websites

#### Website 1: Best Buy, Apple iPad

**BEST BUY** Search by Keyword, SKU # or Item #

PRODUCTS SERVICES SHOPS & DEALS GIFTS 0 Items

Best Buy > Computers & Tablets > Tablets, iPad & E-Readers > iPad > Product Info

### Apple® - iPad® 2 with Wi-Fi - 16GB - Black

Model: MC769LL/A SKU: 1945531

★★★★★ 4.7 of 5 (924 reviews)

Shipping: Usually leaves our warehouse in 1 business day

[Estimate Arrival Time](#)

Store Pickup: [Check Store](#)

[Learn about Store Pickup](#)

**LOW PRICE GUARANTEE**

**FREE SHIPPING**

Our Price: **\$399.99**

[Add to Cart](#)

[ADD TO WISH LISTS](#)

Overview Specifications Customer Reviews Learn

#### CUSTOMER REVIEWS

★★★★★ 4.7 [Read reviews \(929\)](#)  
[Write a review](#)

#### SHARE THIS PRODUCT

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[Tweet](#) 0

The all-new thinner and lighter design makes iPad 2 even more comfortable to hold. It's even more powerful with the dual-core A5 chip, yet has the same 10 hours of battery life.<sup>1</sup> With two cameras, you can make FaceTime video calls,<sup>2</sup> record HD video and put a twist on your snapshots in Photo Booth. And the iPad Smart Cover attaches magnetically and wakes up, stands up and brightens up your iPad 2.<sup>3</sup>

#### PRODUCT FEATURES

- 9.7" LED-backlit display with IPS technology
- Dual-core A5 chip
- Front and back cameras
- Up to 10 hours of battery life
- Built-in Wi-Fi (802.11a/b/g/n)
- Bluetooth 2.1 + EDR technology
- 16GB flash storage
- Over 65,000 apps made for iPad, available from the App Store

Product images, including color, may differ from actual product appearance.

#### TECH SUPPORT



**Geek Squad** 1 year of Tech Support \$99.99 with qualifying purchase. [Learn more >](#)


#### RELATED PRODUCTS

Apple® - Smart Case for Apple® iPad® 2nd-, 3rd- and 4th-Generation - Dark Gray  
Our Price: \$49.99


Apple® - Smart Case for Apple® iPad® 2nd-, 3rd- and 4th-Generation - Green  
Our Price: \$49.99

Website 2: Best Buy, Appex Tablet



[PRODUCTS](#) [SERVICES](#) [SHOPS & DEALS](#) [GIFTS](#)  0 Items

[Best Buy](#) > [Computers & Tablets](#) > [Tablets, Tablet & E-Readers](#) > [Tablet](#) > [Product Info](#)



### Appex® - Tablet 2 with Wi-Fi - 16GB - Black


Model: MC769LL/A SKU: 1945531

★★★★★ 4.7 of 5 (924 reviews)

Shipping: Usually leaves our warehouse in 1 business day

[Estimate Arrival Time](#)


Store Pickup:  
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**LOW PRICE GUARANTEE**

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#### CUSTOMER REVIEWS

★★★★★ 4.7 [Read reviews \(929\)](#)  
[Write a review](#)

#### SHARE THIS PRODUCT

 Like  17 people like this. [Sign Up](#) to see what your friends like.

 Tweet 0


The all-new thinner and lighter design makes the Appex Tablet even more comfortable to use. It's even more powerful with dual-core processing, yet has the same 10 hours of battery life. With two cameras, you can make video calls, record HD video and put a twist on your snapshots with Instagram. It comes with an attachable cover that protects as well as acting as a stand for your Appex Tablet.

#### PRODUCT FEATURES


- 9.7" LED-backlit display
- Dual-core processing
- Front and back cameras
- Up to 10 hours of battery life
- Built-in Wi-Fi (802.11a/b/g/n)
- Bluetooth 2.1 + EDR technology
- 16GB flash storage
- Over 65,000 apps made for your Android device, available from Google Play


Product images, including color, may differ from actual product appearance.


#### TECH SUPPORT

 1 year of Tech Support \$99.99 with qualifying purchase. [Learn more >](#)



#### RELATED PRODUCTS


 [Appex - Keyboard](#)  
Our Price: \$47.88

 [Appex - Mini Trackball Keyboard](#)  
Reg. Price: \$47.99  
You Save: \$4.01  
Sale: \$43.98


 [Appex - Mini-Touch Keyboard - White](#)  
Reg. Price: \$49.99

Website 3: A2B Tek, Apple iPad



[PRODUCTS](#) [SERVICES](#) [SHOPS & DEALS](#) [GIFTS](#)  0 Items

[A2BTEK](#) > [Computers & Tablets](#) > [Tablets, iPad & E-Readers](#) > [iPad](#) > [Product Info](#)



### Apple® - iPad® 2 with Wi-Fi - 16GB - Black


Model: MC769LL/A SKU: 1945531


★★★★★ 4.7 of 5 (924 reviews)

Shipping: Usually leaves our warehouse in 1 business day


[Estimate Arrival Time](#)

Store Pickup:  
[Check Store](#)

 [Learn about Store Pickup](#)

 **LOW PRICE GUARANTEE**

**FREE SHIPPING**  
Our Price: **\$399.99**  
[Add to Cart](#)



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#### CUSTOMER REVIEWS

★★★★★ 4.7 [Read reviews \(929\)](#)  
[Write a review](#)

#### SHARE THIS PRODUCT

 Like  17 people like this. [Sign Up](#) to see what your friends like.


 Tweet 0

#### PRODUCT FEATURES

- 9.7" LED-backlit display with IPS technology
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#### RELATED PRODUCTS






Apple® - Smart Case for Apple® iPad® 2nd-, 3rd- and 4th-Generation - Dark Gray  
Our Price: \$49.99



Apple® - Smart Case for Apple® iPad® 2nd-, 3rd- and 4th-Generation - Green  
Our Price: \$49.99

Website 4: A2B Tek, Appex Tablet

 Search by Keyword, SKU # or Item # 

**PRODUCTS** **SERVICES** **SHOPS & DEALS** **GIFTS**  0 Items

A2BTEK › Computers & Tablets › Tablets, Tablet & E-Readers › Tablet › Product Info



### Appex® - Tablet 2 with Wi-Fi - 16GB - Black

Model: MC769LL/A SKU: 1945531

★★★★★ 4.7 of 5 (924 reviews)

Shipping: Usually leaves our warehouse in 1 business day

[Estimate Arrival Time](#)

Store Pickup:

[Check Store](#)

 [Learn about Store Pickup](#)

 **LOW PRICE GUARANTEE**

**FREE SHIPPING**

Our Price: **\$399.99**

 **Add to Cart**



 **ADD TO WISH LISTS**

[Overview](#) [Specifications](#) [Customer Reviews](#) [Learn](#)

#### CUSTOMER REVIEWS

★★★★★ 4.7 [Read reviews \(929\)](#)  
[Write a review](#)

#### SHARE THIS PRODUCT

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The all-new thinner and lighter design makes the Appex Tablet even more comfortable to use. It's even more powerful with dual-core processing, yet has the same 10 hours of battery life. With two cameras, you can make video calls, record HD video and put a twist on your snapshots with Instagram. It comes with an attachable cover that protects as well as acting as a stand for your Appex Tablet.

#### PRODUCT FEATURES

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#### TECH SUPPORT

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Our Price: \$47.88

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Reg. Price: \$47.99  
You Save: \$4.01  
Sale: \$43.98

 [Appex - Mini-Touch Keyboard - White](#)  
Reg. Price: \$49.99

**APPENDIX B: Constructs, items, and corresponding references**

<b>Web Experience</b>	(Everard & Galletta, 2005)
On average, how much time per week do you spend on each of the following Internet activities?	
- Using social networking sites such as Facebook	
- Reading and/or posting to discussion boards or blogs	
- Accessing information on the Internet about products and services you may buy	
- Shopping (i.e., actually purchasing something) on the Internet	
On average, how much total time per week do you spend on the Internet (including above activities and any other activities)?	
<b>Consumer Trust</b>	(Qureshi et al., 2009)
I trust that this vendor, Best Buy (A2B Tek), is consistent in quality and service.	
I trust that this brand, Apple (Appex), has consistently high quality.	
This vendor, Best Buy (A2B Tek), can be trusted.	
This brand, Apple (Appex), can be trusted.	
I trust the internet enough to make a transaction over the internet.	
<b>Perceived Risk</b>	(Grazioli & Jarvenpaa, 2000) (Items 1-4), (Everard & Galletta, 2005) (Item 5)
I feel there is a risk that the quality or service provided by this vendor, Best Buy (A2B Tek), will not meet my expectations. <sup>1</sup>	
I feel there is a risk that the quality of this brand, Apple (Appex), will not meet my expectations. <sup>2</sup>	
I feel that transacting with this vendor, Best Buy (A2B Tek), is risky. <sup>3</sup>	
I feel that purchasing this brand, Apple (Appex), is risky. <sup>4</sup>	
Compared with other ways of shopping, buying on the internet is more risky. <sup>5</sup>	
<b>Website Quality</b>	(Gregg & Walczak, 2008)
The amount of information at this website is appropriate for the website's purpose.	
This website's use of fonts and colors is pleasing.	
The content of this website is accurate.	
This website's design is visually pleasing.	
<b>Willingness to Transact</b>	(Bhattacharjee, 2002) (Items 1-4), (Grazioli & Jarvenpaa, 2000) (Item 5)
I intend on using Best Buy for some of my future purchases. <sup>1</sup>	
I intend on purchasing a product made by Apple for some of my future purchases. <sup>2</sup>	
I am inclined to purchase goods and services provided by Best Buy. <sup>3</sup>	
I am inclined to purchase goods provided by Apple. <sup>4</sup>	
For this purchase, how likely is it that you would buy from this store? <sup>5</sup>	
<b>Demographics</b>	
Please indicate your gender.	
Please indicate your age as of your last birthday.	
Please indicate your highest level of education.	
In what area or industry do you primarily work?	
Do you currently or have you ever worked at BestBuy?	

Note: All items measured on 7 point agree/disagree Likert scale, with the exception of Web Experience (7 point: 1=none, 2=0-30 min, 3=30-60 min, 4=1-2 hrs, 5=2-4 hrs, 6=4-8 hrs, 7=8+hrs) and Demographics.

**APPENDIX C: TABLES AND FIGURES**

Table 1

Interactions of source of trust and resulting level of risk

BRAND NAME & PRODUCT VALUE		VENDOR	
		Known Vendor	Unknown Vendor
Known Brand Name	Expensive product	moderate risk	moderate risk
	Inexpensive product	lower risk	moderate risk
Unknown Brand Name	Expensive product	moderate risk	higher risk
	Inexpensive product	lower risk	moderate risk

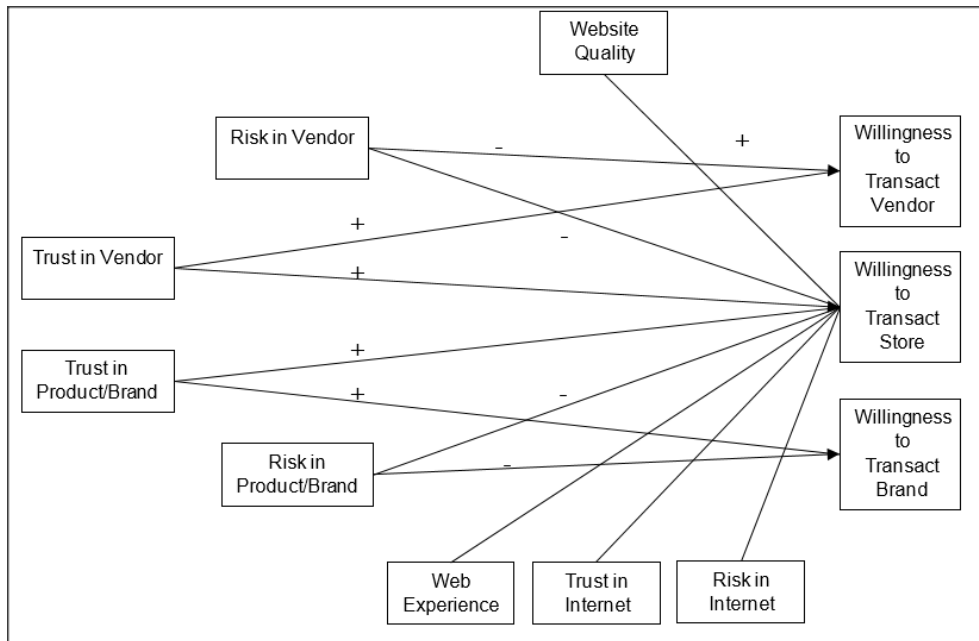


Figure 1. Research Model

Table 2

## Description of Treatments

	Vendor	Brand/ Product	Number of Responses
<b>Full survey including Trust and Risk questions</b>			
Treatment 1: Best Buy / Apple iPad	1	1	43
Treatment 2: Best Buy / Appex Tablet	1	0	40
Treatment 3: A2B Tek / Apple iPad	0	1	56
Treatment 4: A2B Tek / Appex Tablet	0	0	54
<b>Survey including Trust questions and omitting Risk questions</b>			
Treatment 5: Best Buy / Apple iPad	1	1	51
Treatment 6: Best Buy / Appex Tablet	1	0	56
Treatment 7: A2B Tek / Apple iPad	0	1	47
Treatment 8: A2B Tek / Appex Tablet	0	0	38
<b>Survey including Risk questions and omitting Trust questions</b>			
Treatment 9: Best Buy / Apple iPad	1	1	48
Treatment 10: Best Buy / Appex Tablet	1	0	48
A2B Tek / Apple iPad	0	1	43
Treatment 12: A2B Tek / Appex Tablet	0	0	52

Note: 1 = known, 0 = unknown

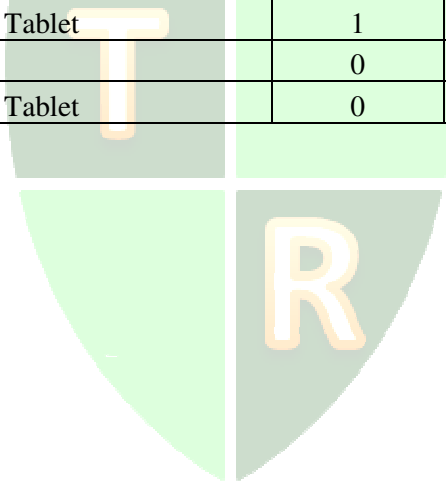


Table 3

## Pilot Study 1 Results

Survey Item	Mean	Number of Responses Indicating Agree or Strongly Agree
I have heard of the vendor shown in this website, MyPC.	3.64	13 (30%)
I have seen ads or articles on MyPC products.	3.32	9 (20%)
I have been to a physical MyPC store.	1.80	3 (7%)
Before this exercise, I was familiar with the My PC website.	2.34	6 (14%)
I have heard of Appex products.	2.58	4 (10%)
I have seen ads about or articles about Appex products.	2.25	3 (8%)
I have been to a physical Appex store.	1.25	0 (0%)
Before this exercise, I was familiar with the Appex brand.	2.13	2 (5%)

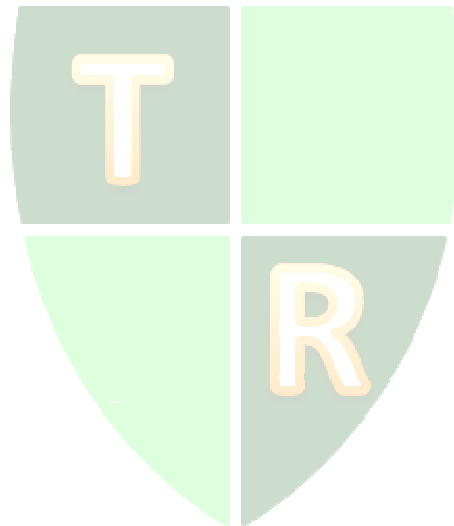




Table 4

Tests of convergent and discriminant validity and indicator reliability

	Internet Trust	Internet Risk	Web Experience	Website Quality	Trust in Brand/Product	Trust in Vendor	Risk in Brand/Product	Risk in Vendor	Willingness Transact Brand/Product	Willingness Transact Store	Willingness Transact Vendor
Trust5	1.000	-0.137	0.047	0.192	0.179	0.212	-0.072	-0.070	0.022	0.017	0.085
Risk5	-0.137	1.000	-0.089	-0.109	-0.048	-0.049	0.118	0.278	-0.007	-0.018	-0.105
WebExp1	0.025	-0.066	<b>0.813</b>	0.102	0.050	0.124	0.010	-0.041	0.030	0.101	0.131
WebExp3	0.091	-0.085	<b>0.750</b>	0.085	0.008	0.045	0.001	-0.005	0.054	0.052	0.065
WebExp4	0.012	-0.059	<b>0.733</b>	0.060	0.028	0.014	-0.001	0.035	0.092	0.067	0.098
WebQual2	0.133	-0.096	0.120	<b>0.891</b>	0.193	0.424	-0.119	-0.321	0.116	0.361	0.457
WebQual3	0.255	-0.094	0.034	<b>0.695</b>	0.378	0.409	-0.229	-0.329	0.234	0.309	0.399
WebQual4	0.104	-0.082	0.111	<b>0.877</b>	0.174	0.403	-0.077	-0.302	0.096	0.366	0.449
Trust2	0.189	-0.024	0.032	0.282	<b>0.959</b>	0.316	-0.410	-0.096	0.566	0.208	0.201
Trust4	0.153	-0.068	0.050	0.278	<b>0.957</b>	0.306	-0.368	-0.094	0.581	0.204	0.187
Trust1	0.226	-0.047	0.100	0.455	0.294	<b>0.942</b>	-0.162	-0.365	0.166	0.464	0.573
Trust3	0.167	-0.045	0.072	0.478	0.314	<b>0.927</b>	-0.125	-0.311	0.142	0.406	0.534
Risk2	-0.058	0.110	-0.012	-0.141	-0.372	-0.124	<b>0.941</b>	0.365	-0.456	-0.245	-0.129
Risk4	-0.077	0.112	0.022	-0.170	-0.393	-0.167	<b>0.940</b>	0.389	-0.431	-0.244	-0.141
Risk1	-0.063	0.256	-0.022	-0.342	-0.096	-0.324	0.374	<b>0.918</b>	-0.100	-0.352	-0.414
Risk3	-0.066	0.256	0.000	-0.364	-0.087	-0.344	0.365	<b>0.926</b>	-0.045	-0.348	-0.449
WillTrans2	-0.016	0.000	0.065	0.129	0.552	0.126	-0.455	-0.082	<b>0.942</b>	0.321	0.240
WillTrans4	0.058	-0.014	0.068	0.199	0.577	0.186	-0.435	-0.065	<b>0.944</b>	0.330	0.297
WillTrans5	0.017	-0.018	0.102	0.420	0.215	0.467	-0.260	-0.380	0.345	<b>1.000</b>	0.675
WillTrans1	0.061	-0.105	0.142	0.466	0.178	0.532	-0.149	-0.443	0.277	0.651	<b>0.932</b>
WillTrans3	0.097	-0.092	0.114	0.521	0.201	0.576	-0.120	-0.434	0.256	0.612	<b>0.938</b>

Table 5a  
Full survey including Trust & Risk questions

		<b>Trust in Vendor</b>	<b>Trust in Brand/Product</b>	<b>Risk in Vendor</b>	<b>Risk in Brand/Product</b>	<b>Willingness to Transact Vendor</b>	<b>Willingness to Transact Store</b>	<b>Willingness to Transact Brand/Product</b>
Treatment 1: Best Buy / Apple iPad	Mean	5.593	5.349	2.488	2.442	4.674	4.651	4.047
	Standard Deviation	1.197	1.541	1.361	1.398	1.336	1.587	1.966
Treatment 2: Best Buy / Appex Tablet	Mean	5.3	4.05	2.813	4.063	4.763	4.45	3.075
	Standard Deviation	0.823	1.186	1.164	1.178	1.177	1.431	1.304
Treatment 3: A2B Tek / Apple iPad	Mean	4.438	5.518	3.777	2.5	3.777	3.946	4.598
	Standard Deviation	0.987	1.433	1.103	1.382	1.247	1.623	1.882
Treatment 4: A2B Tek / Appex Tablet	Mean	4.472	4.296	3.62	4.065	3.991	4.019	3.713
	Standard Deviation	1.105	1.139	1.189	1.314	1.23	1.339	1.176

Table 5b  
Survey including risk questions only

		<b>Trust in Vendor</b>	<b>Trust in Brand/Product</b>	<b>Risk in Vendor</b>	<b>Risk in Brand/Product</b>	<b>Willingness to Transact Vendor</b>	<b>Willingness to Transact Store</b>	<b>Willingness to Transact Brand/Product</b>
Treatment 1: Best Buy / Apple iPad	Mean	5.593	5.349	2.488	2.442	4.674	4.651	4.047
	Standard Deviation	1.197	1.541	1.361	1.398	1.336	1.587	1.966
Treatment 2: Best Buy / Appex Tablet	Mean	5.3	4.05	2.813	4.063	4.763	4.45	3.075
	Standard Deviation	0.823	1.186	1.164	1.178	1.177	1.431	1.304
Treatment 3: A2B Tek / Apple iPad	Mean	4.438	5.518	3.777	2.5	3.777	3.946	4.598
	Standard Deviation	0.987	1.433	1.103	1.382	1.247	1.623	1.882
Treatment 4: A2B Tek / Appex Tablet	Mean	4.472	4.296	3.62	4.065	3.991	4.019	3.713
	Standard Deviation	1.105	1.139	1.189	1.314	1.23	1.339	1.176

Table 5c  
Survey including risk questions only

		<b>Trust in Vendor</b>	<b>Trust in Brand/Product</b>	<b>Risk in Vendor</b>	<b>Risk in Brand/Product</b>	<b>Willingness to Transact Vendor</b>	<b>Willingness to Transact Store</b>	<b>Willingness to Transact Brand/Product</b>
Treatment 9: Best Buy / Apple iPad	Mean	-	-	2.531	2.677	4.563	4.42	4.5
	Standard Deviation	-	-	1.286	1.511	1.535	1.609	1.762
Treatment 10: Best Buy / Appex Tablet	Mean	-	-	2.635	3.917	4.875	4.56	3.385
	Standard Deviation	-	-	1.32	1.492	1.183	1.398	1.191
Treatment 11: A2B Tek / Apple iPad	Mean	-	-	3.709	2.488	3.593	4.02	4.628
	Standard Deviation	-	-	1.283	1.193	1.197	1.472	1.372
Treatment 12: A2B Tek / Appex Tablet	Mean	-	-	3.808	4.01	3.558	3.67	3.452
	Standard Deviation	-	-	1.288	1.33	1.207	1.618	1.185