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Abstract

Trust is a critical factor in establishing a successful relationship between consumers and vendors. This paper investigates the impact of the product type being sought on consumers' trust within an online environment. An empirical study involving 227 online shoppers was conducted to develop and validate a structural equation model for online trust incorporating the factors of perceived usefulness, perceived ease of use and enjoyment as representative variables of a consumer's experience within a company's Website. Results from this study indicate significant variations in the experience and trust levels of tangible versus intangible product shoppers.

1. Introduction

The Internet has provided businesses of all sizes with opportunities to expand their market base, improve operational efficiency, create new links with trading partners, and provide better customer service. However electronic commerce (e-Commerce) has, in many cases, failed to live up to its potential. In particular, business-to-consumer e-Commerce transactions have not reached a point of critical mass, largely due to a lack of online consumer trust (Baldwin & Currie, 2000; Görsch, 2001; Head & Hassanein, 2002). Trust is a critical component for any business transaction, and is particularly essential in the e-Commerce environment, where transactions are more impersonal, anonymous and automated.

A few studies have examined the impact of product characteristics on the adoption of online shopping (Fenech & O'Cass, 2001; Phau & Poon, 2000; Vijayasarathy, 2002). However, little research has been conducted to examine the impact of product type on trust in the online environment. It has been suggested that online trust antecedents that relate to the user's Website experience may be impacted by the influence of product type (Jarvenpaa, 1996-1997; Vijayasarathy, 2002). Therefore, this paper seeks to explore the impact of product type on online trust and the Website experience antecedents of trust. Such exploration can help researchers and practitioners to gain a better understanding of the differences that may exist for supporting online shoppers for different types of products.

The structure of the paper is as follows: The concept of online trust is briefly discussed in Section 2 along with a review of various online trust models proposed in the literature. A

model for studying the impact of product types on online trust is introduced in Section 3 along with the various hypotheses for this study. Sections 4 and 5 outline the methodology and data analysis of an experimental study designed to test the impacts of product type on online trust. Finally, Section 6 contains a discussion of our findings and some conclusions.

2. Online Trust

Trust is a complex concept that has been widely studied. However, it remains a difficult concept to describe due to its dynamic, evolving and multi-faceted nature (Ambrose & Johnson, 1998; Lewicki & Bunker, 1996; Rotter, 1980). Although online and offline trust have many commonalities, they differ in some key aspects. The main differences are (Doney & Cannon, 1997; Furnell & Karweni, 1999; Head*, et al.*, 2001; Jarvenpaa*, et al.*, 1999; Phau & Poon, 2000; Roy*, et al.*, 2001; Yoon, 2002):

- The parties involved may interact across different times and locations, and the rules and regulations may vary across these zones.
- There is less data control during and following its transfer.
- There are lower barriers to entry and exit for online businesses.
- Physical trust cues (such as investments in physical buildings, facilities and personnel) are not visible in the online environment.
- The physical evaluation of products is difficult in an online setting, as consumers can only rely on the senses of vision and sound.
- Electronic transactions are generally more impersonal, anonymous and automated than person-to-person off-line transactions.

Trust has been shown to have a positive effect on consumers' attitudes towards a company and customers who trust a company are more likely to buy from its Website (Gefen*, et al.*, 2003; Koufaris & Hampton-Sosa, 2004). This effect can be direct or can be mediated through a decrease of perceived risk when interacting with the online company (Jarvenpaa*, et al.*, 2000; Pavlou, 2003).

Researchers have proposed several models to conceptualize online trust (Åberg & Shahmehri, 2000; Head & Hassanein, 2002; Lee*, et al.*, 2000; Papadopoulou*, et al.*, 2001; Roy*, et al.*, 2001; Salam*, et al.*, 1998; Yoon, 2002). Some of the antecedents to online trust that have been explored conceptually and/or empirically include trusted third parties (Head & Hassanein, 2002; Van Den Berg & Van Lieshout, 2001) and online reputation systems (Koufaris & Hampton-Sosa, 2004; Lohse & Spiller, 1998); perceived organizational reputation (de Ruyter*, et al.*, 2001; Jarvenpaa*, et al.*, 2000; McKnight*, et al.*, 2002; Pavlou, 2003); perceived organizational size (Jarvenpaa*, et al.*, 2000); social presence of the Website (Gefen & Straub, 2000); perceived privacy (Pavlou & Chellappa, 2001) and security (Koufaris & Hampton-Sosa, 2004); Website design features (Egger, 2000; Nielsen*, et al.*, 2001; Roy*, et al.*, 2001); and Website experience factors such as perceived ease of use (Gefen*, et al.*, 2003; Koufaris & Hampton-Sosa, 2004; Pavlou, 2003), perceived usefulness (Koufaris & Hampton-Sosa, 2004; Pavlou, 2003) and enjoyment (Dahlberg*, et al.*, 2003). Gefen et al. (Gefen*, et al.*, 2003) and Grabner-Kräuter and Kaluscha (Grabner-Kräuter & Kaluscha, 2003) provide a comprehensive meta-review of online trust models.

3. Research Model

Vijayasarathy (2002) argues that it is essential to incorporate product differences and the concept of congruence between product and channel characteristics when evaluating the merit of the Internet as a commercial medium. As outlined in the previous section, trust is seen as a critical antecedent for consumers' adoption of the Internet as a shopping medium (Gefen*, et al.*, 2003; Grabner-Kräuter & Kaluscha, 2003). It is therefore reasonable to expect that trust is in turn impacted by the characteristics of the product/service being sought in any shopping experience. A few studies have examined the impact of product characteristics on the adoption of online shopping (Fenech & O'Cass, 2001; Phau & Poon, 2000; Vijayasarathy, 2002). However, little research has been conducted to examine the impact of product type on trust in the online environment.

In this section we start by outlining various online product type classifications found in the literature. Then we present a model for studying the impact of one product type classification (tangible/intangible) on online trust through the mediating variables of PU, PEOU, and enjoyment as representatives of the online shopping experience.

3.1 Online Product Types

Several classification schemes for categorizing products have been proposed, some of which are outlined below:

- Search versus Experience products: Nelson (1974) first proposed classifying products based on their search and experience attributes. Search attributes can be assessed indirectly (e.g. size and price), whereas experience attributes require direct contact for assessment (e.g. taste and fit). This classification scheme has also been adopted by several other authors (Gorsch, 2001; Lal & Sarvary, 1998; Wright & Lynch, 1995).
- Complex Usage versus Simple Usage products: Brucks (1985) proposed dividing products by their intended usage. However, this classification scheme can be rather subjective as individual consumers may have differing views on what makes product usage complex. "High involvement" and "low involvement" products (Lal & Sarvary, 1998; Poon & Joseph, 2001) are similar to Brucks conceptualization of product complexity.
- Geometric, Material or Mechanical products: This classification is based on the sensory dimensions used by customers to evaluate products (Klatzky*, et al.*, 1991; Li*, et al.*, 2002; McCabe, 2001). Geometric products can be evaluated visually (such as utensils and picture frames), material products are typically evaluated with the sense of touch (such as towels and clothing), and mechanical products are typically evaluated via interaction (such as cell phones and toys).
- Tangible and Intangible products: Lal and Sarvary (1998) proposed that there are tangible and intangible attributes that define products. Others (Peterson*, et al.*, 1997; Poon & Joseph, 2001) have also outline tangibility as a key attribute for product classification. Many intangible products are digital in nature and cannot be touched (such as software), whereas tangible products often entail physical inspection (such as clothing).

For this study, tangibility was chosen as the product defining attribute. Tangible and intangible product categories are broad and simple. Therefore, classification subjectivity should be minimized.

3.2 Proposed Model and Hypotheses

Corritore et. al. (2003) posit that Websites could be objects of trust. From this perspective, Websites could be seen as a technology that mediates trust between consumers and an online vendor in much the same way that a salesperson is seen as mediating trust between a consumer and an offline business (Andaleeb & Anwar, 1996; Crosby, *et al.*, 1990; Doney & Cannon, 1997). Therefore, it is reasonable to expect that customers' experience while visiting a Website would influence their trust in an online vendor. This view is shared by Koufaris & Hampton-Sosa (2002) who employed a variation of the TAM model to assess the impact of Website experience. In their model, they integrate the TAM variables of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) with an enjoyment variable to represent a customers experience with a company's Website. Here we propose a variation of this model which deviates from the original Kofaris and Hampton-Sosa model (2002) in two aspects. First, we reverse the direction of causality between the constructs of enjoyment and PEOU, so that the enjoyment is an antecedent to PEOU instead of the other way around. This is in line with a Web usage model proposed by Moon and Kim (2001) in which TAM is extended to incorporate the impact of playfulness, a construct incorporating enjoyment, on both PU and PEOU. Second, we incorporate the construct of product type to study its impact on various constructs in the proposed model. Figure 1 provides an overview of the proposed model, followed by the hypotheses statements for our study. The research model includes the standard TAM link between PEOU and PU (Davis, 1989), as well as a link between enjoyment and PU, as per (Agarwal & Karahanna, 2000). Initial results from a previous study (Hassanein & Head, 2003) did not provide support for a causal path between product type and PEOU. Thus, this connection is omitted in our research model.
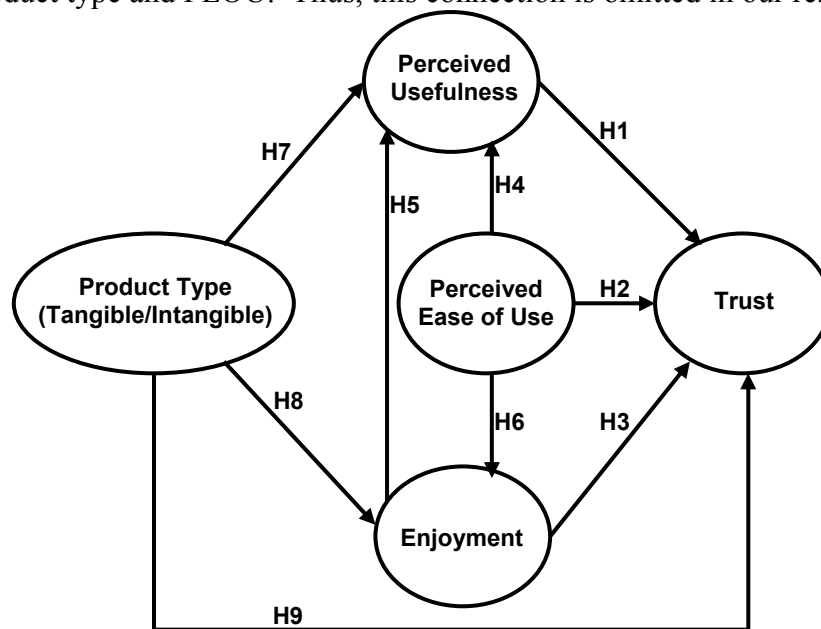

Figure 1: Research Model for Product Type Impact on Online Trust Model

Based on the foregoing discussion, we hypothesize the following:

H1: *Perceived usefulness of a Website is positively related to a customer's trust in an online vendor.*

H2: *Perceived ease of use of a Website is positively related to a customer's trust in an online vendor*

H3: *Enjoyment of a Website is positively related to a customer's trust in an online vendor.*

H4: *Perceived ease of use of a Website is positively related to a customer's perceived usefulness of that Website.*

H5: *Enjoyment of a Website is positively related to a customer's perceived usefulness of that Website.*

H6: *Perceived ease of use of a Website is positively related to a consumer's enjoyment of that Website.*

H7: *The type of product (tangible/intangible) being sought at a Website influences a customer's perceived usefulness of that Website.*

H8: *The type of product (tangible/intangible) being sought at a Website influences a customer's enjoyment of that Website.*

H9: *The type of product (tangible/intangible) being sought at a Website influences a customer's trust in an online vendor.*

4. Methodology

4.1 Subjects

Subjects for this study were experienced online shoppers. An initial screening process was conducted to ensure all study participants had purchased either a tangible or intangible product from an online vendor in the past. Respondents were asked to complete the questionnaire with regards to their last online purchase. Respondents were also asked to state the name of that product and online vendor. The purchased products were then divided into tangible and intangible categories by the investigators. Similar study designs have been advocated and employed by researchers investigating consumer online experiences (Gefen*, et al.*, 2003).

A total of 227 online shoppers participated in this study. The sample was a mix of employees at a large Canadian utility company and graduate students in an MBA program. The male-female split was 64%-36% and the tangible-intangible product split was 59%-41%. The most popular tangible product was books and the most popular intangible product was tickets (airline, concert). Subjects were asked to complete an initial questionnaire, which was designed to gain an understanding of their demographics and prior exposure to the Internet and online shopping. Table 1 summarizes the profile of the 227 respondents.

Table 1: Profile of the respondents

Characteristics	Statistics
Gender	
Male	146 (64%)
Female	81 (36%)
Age	
18-24	50 (22%)
25-29	50 (22%)
30-34	38 (17%)
35-39	19 (8%)
40-44	17 (7%)
45+	53 (24%)
Education	
High school	8 (4%)
Some College/University	22 (10%)
Undergraduate Degree	123 (54%)
Graduate Degree	74 (32%)
Occupation	
Administrative Assistant	13 (6%)
Engineer	26 (11%)
Manager	27 (12%)
Student	104 (46%)
Analyst	28 (12%)
Other	29 (13%)
Hours online/week	
0-5	48 (21%)
6-10	68 (30%)
11-20	59 (26%)
21-30	21 (9%)
31+	31 (14%)
Number of Online Purchases	
Mean=13.4. S.D.=25.8	
Average Spent/Online Purchase	
$1-25	16 (7%)
$26-50	50 (22%)
$51-75	40 (18%)
$76-100	44 (19%)
$101+	77 (34%)
Reasons for Shopping Online	
Convenience	192 (85%)
Better Price	113 (50%)
Offline Unavailability	103 (45%)
Better Selection	72 (32%)
Trial	35 (15%)
Prefer Online Environment	16 (7%)

As expected, this group was Internet-savvy where half of the respondents spent more than 10 hours online per week. On average, they made 13.4 previous online purchases and the majority of the respondents (71%) spent over $50 per online purchase. There were no significant differences in the amount of time the men and women spent online, the number of online purchases they had made, or how much they spent in their average online purchase. Convenience and price were cited as being the most popular reasons for buying online among the women respondents, while the men cited convenience and offline unavailability as their most common reasons.

4.2 Content validity

Content validity examines how representative and comprehensive the items are in creating the constructs in a given model. It is assessed by examining the process by which the items were generated (Straub, 1989). A construct valid in content is one that has drawn representative questions (items) from a universal pool (Cronbach, 1971; Kerlinger, 1964). In this research, definitions for PEOU, PU, enjoyment and trust came from existing validated literature. Table 2 summarizes the construct items used in the questionnaire and provides literature sources for each question.

Table 2: Sources for Construct Items

Item	Wording	Source
Perceived Ease of Use (PEOU)		
PEOU-1	Learning to use this Website was easy for me	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Hackbarth, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Moon & Kim, 2001; Pavlou, 2001; Teo, 2001)
PEOU-2	I found it easy to use this Website for searching and buying	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Davis, 1989; Hackbarth, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003; Moon & Kim, 2001; Teo, 2001)
PEOU-3	It would be easy for me to become skilful at using this Website	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Moon & Kim, 2001; Teo, 2001)
PEOU-4	My interactions with this Website are clear and understandable	(Chen, *et al.*, 2002; Davis, 1989; Gefen, *et al.*, 2003; Hackbarth, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Moon & Kim, 2001; Pavlou, 2001)
PEOU-5	I found this Website easy to use	(Agarwal & Karahanna, 2000; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Hackbarth, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003)
PEOU- 6	Using this Website required a lot of mental effort	(Moon & Kim, 2001; Pavlou, 2001)
PEOU-7	I found this Website to be flexible to interact with	(Chen, *et al.*, 2002; Davis, 1989; Gefen, *et al.*, 2003; Heijden, *et al.*, 2003)
PEOU-8	It is easy to navigate around this Website	(Van der Heijden, 2003)
PEOU-9	I can quickly find the information that I need on this Website	(Pavlou, 2001; Van der Heijden, 2003)

PEOU-10	I think that this is a user-friendly Website	(Van der Heijden, 2003)
Perceived Usefulness (PU)		
PU-1	Using this Website improves my performance in searching an buying	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Moon & Kim, 2001; Teo, 2001)
PU-2	Using this Website increases my effectiveness in searching and buying	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Teo, 2001)
PU-3	I find using this Website useful for searching and buying	(Agarwal & Karahanna, 2000; Chen, *et al.*, 2002; Choi, *et al.*, 2003; Davis, 1989; Gefen, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003; Koufaris, 2002; Koufaris & Hampton-Sosa, 2002; Pavlou, 2001; Pavlou, 2001; Van der Heijden, 2003)
PU-4	Using this Website enables me to quickly search and buy	(Chen, *et al.*, 2002; Davis, 1989; Gefen, *et al.*, 2003; Moon & Kim, 2001)
PU-5	This Website provides high quality information	(Moon & Kim, 2001)
PU-6	This Website creates value to me	(Pavlou, 2001; Pavlou, 2001)
PU-7	This Website is highly functional	(Pavlou, 2001; Pavlou, 2001)
PU-8	The information on this Website is interesting to me	(Van der Heijden, 2003)
Enjoyment		
E-1	When interacting with this Website, I do not realize that time has elapsed	(Moon & Kim, 2001)
E-2	When interacting with this Website, I am not aware of any noise	(Moon & Kim, 2001)
E-3	When interacting with this Website, I often forget the work I must do	(Moon & Kim, 2001)
E-4	I enjoyed search and buying on this Website	(Agarwal & Karahanna, 2000; Moon & Kim, 2001)
E-5	I had fun searching and buying on this Website	(Agarwal & Karahanna, 2000; Moon & Kim, 2001)
E-6	I felt happy while searching and buying on this Website	(Moon & Kim, 2001)
E-7	This Website stimulates my curiosity	(Moon & Kim, 2001)
E-8	This Website arouses my imagination	(Moon & Kim, 2001)
E-9	When using this Website, I feel spontaneous	(Agarwal & Karahanna, 2000)
E-10	When using this Website, I feel creative	(Agarwal & Karahanna, 2000)
E-11	When using this Website, I feel playful	(Agarwal & Karahanna, 2000)
E-12	I found this Website to be entertaining	(Heijden, 2003)
E-13	I browse this Website for pleasure	(Heijden, 2003)
Trust		
T-1	I feel that this online vendor is honest	(Ba & Pavlou, 2002; Gefen, *et al.*, 2003; Walter, *et al.*, 2000)
T-2	I feel that this online vendor cares about customers	(Gefen, *et al.*, 2003)
T-3	I feel that this online vendor is not	(Gefen, *et al.*, 2003)

	opportunistic	
T-4	I feel that this online vendor provides good service	(Gefen, *et al.*, 2003)
T-5	I feel that this online vendor is not predictable	(Gefen, *et al.*, 2003; Roy, *et al.*, 2001)
T-6	I feel that this online vendor is trustworthy	(Gefen, 2002; Gefen, *et al.*, 2003; Heijden, *et al.*, 2001; Heijden, *et al.*, 2003; Jarvenpaa, *et al.*, 2000; Koufaris & Hampton-Sosa, 2002; Pavlou, 2001; Pavlou, 2001)
T-7	I feel that this online vendor knows its market	(Gefen, *et al.*, 2003)
T-8	I believe that this online vendor will deliver a product or service that meets my expectations	(Ba & Pavlou, 2002; Heijden, *et al.*, 2003; Jarvenpaa, *et al.*, 2000)
T-9	I feel confident that my privacy will not be compromised during or after a transaction with this online vendor	(Pavlou, 2001)
T-10	I believe that this online vendor will keep my information secure	(Borchers, 2001; Gefen, 2002; Koufaris & Hampton-Sosa, 2002)

4.3 Construct validity

Construct validity examines the extent to which a construct measures the variable of interest. If constructs are valid in this sense, they should demonstrate relatively high correlations between measures of the same construct (convergent validity) and low correlations between measures of constructs that are expected to differ (discriminant validity) (Campbell & Fiske, 1959; Straub, 1989). In this study, construct validity was assessed by performing a principle components factor analysis (PCA), as recommended by Straub (Straub, 1989). A construct is considered to exhibit satisfactory convergent and discriminant validity when items load highly on their related factor and have low loadings on unrelated factors. Table 3 includes the results of the varimax rotation on the original 41 items (outlined in Table 1) constrained to four factors. Hair et al. (Hair, *et al.*, 1995) suggests that an item is significant if its factor loading is greater than 0.50. Following this criteria, 4 items were dropped from various factors in this study. The first factor defined PEOU with 9 items. The second factor defined PU with 7 items. The third and fourth factors defined enjoyment and trust with 13 and 8 items, respectively. Internal consistency of these factors was examined using Cronbach's α-value. As shown in Table 3, α-values ranged from 0.88 (for trust) to 0.92 (for PEOU). Rivard and Huff (1988) suggest that this measure for reliability should be higher than 0.5 and ideally higher than 0.7. Nunnally (1978) also recommends that the Cronbach α of a scale should be greater than 0.7 for items to be used together as a construct. Therefore, all our constructs met the recommended criteria for internal reliability.

The instrument demonstrated convergent validity with factor loadings exceeding 0.50 for each construct. The four factors also emerged with no-cross construct loadings above 0.50, indicating good discriminant validity. To further verify discriminant validity, Fornell and Larcker (1981) advocate that the correlations between items in any two constructs should be lower than the square root of the average variance shared by items within a construct. As shown in Table 4, the square root of the variance shared between a construct and its items was greater than the correlations between the construct and any

other construct in the model, satisfying Fornell and Larker's (1981) criteria for discriminant validity. The above results, therefore, confirm that our instrument encompassed satisfactory construct validity.

Table 3: Principle Components Factor Analysis

Items	Perceived Ease of Use	Perceived Usefulness	Enjoyment	Trust
PEOU-1	0.734			
PEOU-2	0.782			
PEOU-3	0.683			
PEOU-4	0.773			
PEOU-5	0.794			
PEOU-6				
PEOU-7	0.673			
PEOU-8	0.732			
PEOU-9	0.749			
PEOU-10	0.779			
PU-1		0.858		
PU-2		0.880		
PU-3		0.738		
PU-4		0.599		
PU-5		0.514		
PU-6		0.643		
PU-7		0.571		
PU-8				
E-1			0.568	
E-2			0.569	
E-3			0.598	
E-4			0.578	
E-5			0.633	
E-6			0.686	
E-7			0.720	
E-8			0.780	
E-9			0.776	
E-10			0.815	
E-11			0.828	
E-12			0.766	
E-13			0.700	
T-1				0.769
T-2				0.677
T-3				
T-4				0.671
T-5				
T-6				0.709
T-7				0.650
T-8				0.723
T-9				0.735
T-10				0.699
Cronbach α	**0.92**	**0.89**	**0.91**	**0.88**

Note: Only loadings >0.5 are shown.

Table 4: Discriminant Validity of Constructs

	Perceived Ease of Use	Perceived Usefulness	Enjoyment	Trust
Perceived Ease of Use	0.745			
Perceived Usefulness	0.163	0.699		
Enjoyment	0.067	0.357	0.700	
Trust	0.095	0.287	0.332	0.705

The diagonal elements in bold (the square root of average variance extracted) should exceed the inter-construct correlations below and across them for adequate discriminate validity.

5. Results

A structural equation modeling (SEM) approach was adopted in our data analysis, as it possesses many advantages over traditional methods such as multiple regression. Namely, SEM does not involve assumptions of homogeneity in variances and covariances of the dependent variables across groups; it corrects measurement error in the variable measurements; it allows a more complete modeling of theoretical relations; and it can simultaneously test the structural and measurement models (Bagozzi & Yi, 1989; Gefen, *et al.*, 2000). This provides a more complete analysis for the inter-relationships in a model (Fornell, 1982).

The variance-based Partial Least Square (PLS) method was chosen over covariance-based methods, such as LISREL, for the following reasons: (i) PLS is relatively robust to deviations from a multivariate distribution (Gefen, *et al.*, 2000); (ii) PLS is prediction-oriented and thus gives optimal prediction accuracy (Fornell & Cha, 1994); (iii) PLS can be applied to relatively small sample sizes (Bontis, 1998; Fornell & Bookstein, 1982; Gefen, *et al.*, 2000); and (iv) PLS is appropriate for testing theories in the early stages of development (Fornell & Bookstein, 1982), as it supports both exploratory and confirmatory research (Gefen, *et al.*, 2000). As the examination of the impact of product type on online experience and trust is relatively new, PLS is a more appropriate choice over LISREL.

The results of the PLS analysis of the research model shown in Figure 1, are presented in Figure 2. All path coefficients of the causal links in our hypothesized model are significantly strong. The findings supported all hypotheses at a minimum $p<0.05$ level. Table 5 also provides the *t*-values for all path coefficients. Approximately 40% of the variance in the trust towards Web sites was accounted for by the variables in the model ($R^2=0.398$).
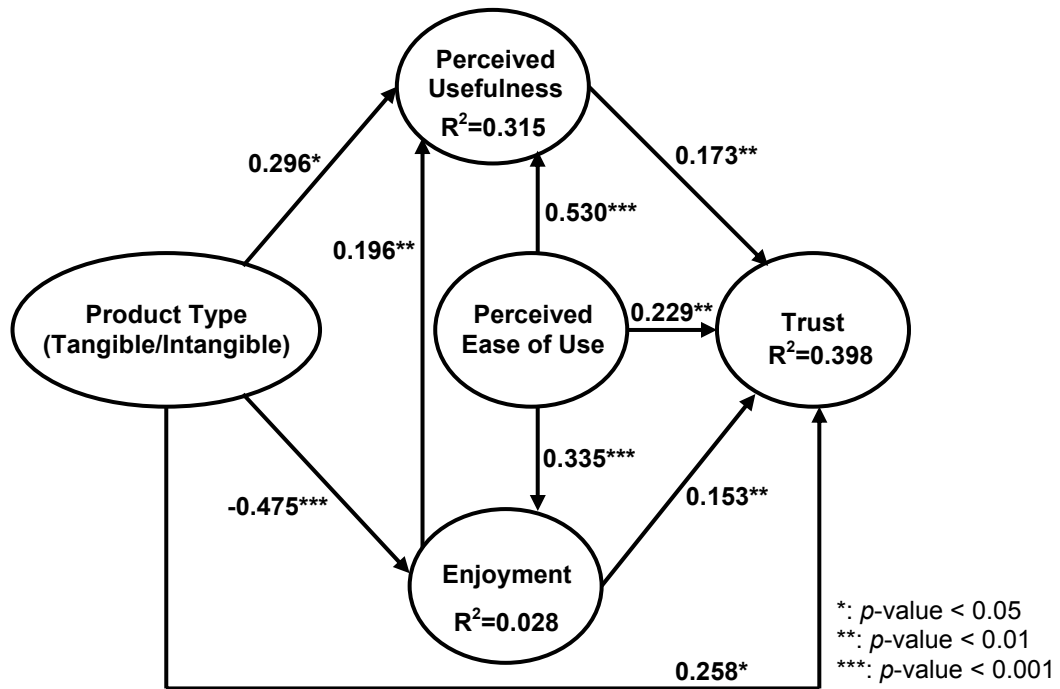
Figure 2: PLS Structural Model

Table 5: Results of Hypotheses Testing

Hypothesis	Causal path	Path coefficient	*t*-Values	Supported
H1	Perceived Usefulness → Trust	0.173	2.758**	Yes
H2	Perceived Ease of Use → Trust	0.229	3.368**	Yes
H3	Enjoyment → Trust	0.153	2.836**	Yes
H4	Perceived Ease of Use → Perceived Usefulness	0.530	8.399***	Yes
H5	Enjoyment → Perceived Usefulness	0.196	3.490**	Yes
H6	Perceived Ease of Use → Enjoyment	0.335	4.677***	Yes
H7	Product Type → Perceived Usefulness	0.296	2.557*	Yes
H8	Product Type → Enjoyment	-0.475	-3.551***	Yes
H9	Product Type → Trust	0.258	2.339*	Yes

6. Discussion and Conclusions

This study sought to examine the impact of product type on trust and trust antecedents relating to Website experience. The product type being sold on a Website appears to have an influence on both perceived usefulness (*b*=0.296) and trust (*b*=0.258). This finding supports earlier work (Phau & Poon, 2000; Vijayasarathy, 2002), where intangible goods were better received than tangible ones in an online environment. Although perceived usefulness was high for sites where purchases had been made, irregardless of the product type being sold, it was significantly higher for Websites selling intangible products (mean[tangible]=5.09; mean[intangible]=5.34; *t*=3.689;

p<0.000). Similarly, trust was significantly higher for Websites selling intangible compared to tangible products (mean[tangible]=5.33; mean[intangible]=5.58; *t*=4.42; *p*<0.000). A possible explanation for this result is that consumers tend to receive intangible products in digital form immediately after they are purchased. Websites that facilitate this immediate delivery may be viewed as being more useful and trustworthy.

Our results indicate that product type influences enjoyment (*b*=-0.475). Upon closer inspection, we found that although tangible product sites were more enjoyable than their intangible counterparts (mean[tangible]=4.13; mean[intangible]=3.54; *t*=10.00; *p*<0.00), tangible product sites were not found to be particularly enjoyable and, in fact, intangible product sites were found *not* to be enjoyable. A potential reason for this finding may be the goal of the online shopper's visit. Perhaps visitors to sites selling intangible products were performing purposeful, goal-directed searching. They may have come to the sites with specific purchasing objectives in mind. It is possible that they did not perform browsing activities, which may be more common on tangible product Websites. This would help explain why online shoppers did not feel "curious" (E-7), "creative" (E-10), "spontaneous" (E-8) or "playful" (E-11) on sites selling intangible products. It is also important to note that the low R^2 value for enjoyment in our model suggests that enjoyment is explained by other factors not present in this model. However, the purpose of this research was not to explore all possible antecedents of Website enjoyment, but rather to examine the impact of product type on various Website experience factors leading to trust, including enjoyment.

Our model suggests that perceived ease of use (*b*=0.229) and product type (*b*=0.258) may be the largest contributing factors in forming user's trust of a Website. Perceived ease of use has been shown to positively influence trust in previous work by Gefen et al. (Gefen*, et al.*, 2003), Koufaris and Hampton-Sosa (Koufaris & Hampton-Sosa, 2002), among others. Similarly, our findings are consistent with the many previous TAM studies that showed perceived ease of use positively influencing perceived usefulness (for example, (Davis, 1989; Gefen*, et al.*, 2003; Moon & Kim, 2001; Shih, 2004)). While our results are not consistent with Koufaris & Hampton-Sosa (2002), where Website enjoyment lead to perceived ease of use, they were in line with Moon & Kim (2001) where perceived ease of use was an shown to be an antecedent of playfulness.

This study found that product type can have a significant impact on customer's Website experience and their trust in the online vendor. These findings can help researchers and practitioners to gain a better understanding of the differences that may exist for supporting online shoppers for different types of products. Trust is vital to fostering and improving customer relationships (Speier*, et al.*, 1998), and if vendors are not able to instill customer trust in their e-Commerce operations, they are doomed to online failure.

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