TRUST-COMMITMENT IN E-COMMERCE: A CROSS –CULTURAL EXPLORATION

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Abstract : We investigate the issues of online trust and commitment in a cross-cultural setting. We hypothesize trust to be driven by perceived reputation, perceived security control, perceived privacy control, fulfillment and delivery, sensory characteristics and perceived risk. Trust in turn is hypothesized to drive affective and calculative commitment, which in turn drives willingness to buy. We conducted a survey of 1,094 undergraduates in seven countries (both collectivist and individualistic; five Asian and two Western) to collect data. The model we tested is common to all countries. We find broad support for our model across different cultures.

Keywords: Online Trust, E-Commerce, Cross-Culture, Willingness to Buy.

Growing number of Internet users are making purchases online. According to eMarketer report released on June 27, 2013 global e-commerce revenue is at US$1.22 trillion in 2013, a 17.1% increase over 2012. It is forecasted to grow to US$ 2.35trillion worldwide by 2017. Growth will come primarily from the rapidly expanding emerging markets. Numerous companies (e.g. Amazon.com, ebay.com) conduct electronic commerce activities across borders i.e. they use their websites to hawk their wares internationally.

One factor that could potentially inhibit the growth of international e-commerce is the lack of consumer trust and commitment (Saleh et al., 2014; McCole et al., 2010; Eastlick *et al.*, 2006), which acts to discourage consumers from entering into relational exchanges with Internet vendors (Cheung and Lee, 2000). The trust-commitment theory of relationship marketing argues that trust and commitment must exist for a successful relationship (Morgan & Hunt, 1994). Given that many firms are formulating global Internet strategies, understanding of determinants of trust and commitment common across countries is important. This will help in firms developing a worldwide site with a common backbone that

then can be morphed across countries to capture the cultural differences. Owing to the above reasons, an issue of extreme managerial importance is the study of online trust and commitment in an international context with a special focus on Asia, since the Net and e-commerce are taking off in a big way here. In this study, we therefore study the antecedents and consequences of online trust and commitment in an international setting with a special focus on Asia.

MOTIVATION AND OBJECTIVES

The extant literature on online trust (see Shankar et al., 2002 for an excellent review reveals that numerous factors have been found to contribute to online trust. These include beliefs about structural assurances (Chandra et al., 2010; Zhu et al., 2011; Gefen et al., 2003), state-of-the-art security (Bart et al., 2005), knowledge and experience (Saleh et al., 2014), degree of control (Hoffman et al., 1999), reliability (Urban et al., 2000), reputation (Eastlick et al., 2006; Yoon, 2002), perceived reputation (Jarvenpaa et al., 2000), security (McCole et al., 2010), and privacy (McCole et al., 2010; Bart et al., 2005; Smith et al., 2000). One problem however with most of these studies is that most of them were conducted in the West. With few exceptions (e.g. Wright and Grace, 2011; Greenberg et al., 2008; Gefen and Heart, 2006; Chong et al., 2003), there has been little work on online trust in an international context. This is important given that trust and trust formation differs across cultures (Greenberg et al., 2008), there is need to examine the notion of trust and identify its determinants and consequences in the context of different cultures and markets (Lee and Turban, 2001). In this study, we fill this gap in literature.

From a managerial viewpoint also, our study is important since it attempts to answer the question, "How do we build trust online, given the fact that we e-operate in many countries?" In fact, Urban et al. (2009), while offering directions for future research, suggest looking at online trust in an international setting. In this study, we take up their suggestion. The "globalization" vs. "localization" debate in international marketing has been raging ever since corporations started having operations in many countries. Most companies nowadays however, want to globalize as much as possible and adapt only when absolutely necessary to local conditions (pp. 320-322, Cateora and Graham, 2001), as Levitt (1983) envisaged. In line with this thinking, in this paper, we attempt to come up with a common model across collectivist and individualistic countries.

TRUST AND E-COMMERCE

Trust

Trust is a highly complex and multi-dimensional phenomenon (Lewis and Weigert, 1985). Fassnacht and Kose (2007) observe that trust is more strategic and is instrumental in the development of customer relationship (Urban, 2005). If e-vendors are not considered trustworthy, they will lose their customers (Zhu et al., 2011). Its importance to interpersonal and commercial relationships is evidenced by a large body of research efforts within various disciplines such as marketing (Saleh et al., 2014;Hong & Cho, 2011; McCole et al., 2010; Angriawan and Thakur, 2008; Bart *et al.*, 2005; Eastlick *et al.*, 2006; Pavlou and Fygenson, 2006; Urban *et al.*, 2009; Moorman *et al.*, 1992; 1993), social psychology (Deutsch, 1960; Lindskold, 1978; Lewicki and Bunker, 1995), sociology (Lewis and Weigert, 1985; Strub and Priest, 1976), and economics (Dasgupta, 1988; Williamson, 1991).

We define trust in E-commerce context as "a consumer's willingness to confidently rely on the Internet vendor and the Internet vendors' actions." Our definition mirrors that of Jarvenpaa *et al.* (2000): "a consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller" and is generally in line with those described above.

The literature shows trust as a major determinant for successful relationships for any type of business transaction, be it traditional (Morgan and Hunt, 1994; Doney and Cannon, 1997; Moorman *et al.*, 1992; 1993) or electronic (Saleh et al., 2014; Zhu et al., 2011; Pavlou and Fygenson, 2006; Suh and Han, 2003). The role of trust is even more important in E-commerce as (1) business partners often do not know each other, (2) there is limited amount of control over data during their transfer, and (3) partners may be located in different locations where rules and regulations vary (Roy *et al.*, 2001).

Services marketing research found that "customer-company relationships require trust", contending that "effective services marketing depends on the management of trust because the customer must typically buy a service before experiencing it" (Berry and Parasuraman, 1991). Hence, we believe that trust is a vital factor in E-commerce because consumers have to purchase the goods online before they can experience them fully. This will be all the more true in the Asian context, given that customers here are typically risk averse.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Perceived Reputation and Size

According to Doney and Cannon (1997), reputation is the extent to which consumers believe that the selling organization is honest and concerned about its customers. It is a valued asset and requires a long-term investment of resources, effort, and attention to customer relationships. The reputation and size of an organization convey information on the seller's motivational investment in being in the business. Motivational investment implies the level of trustworthiness of the seller in dealing with its customers. Ganesan (1994) sums it up when he asserts that favorable size and reputation enhances vendors' credibility.

Quelch and Klein (1996) along with Lohse and Spiller (1998) speculated that the relationship among the reputation and size of a physical store and trust could be applied to an online store. Jarvenpaa *et al.* (2000) found that perceived size had a markedly weaker effect on consumers' trust compared to perceived reputation. Therefore in this study, perceived size will not be considered as an antecedent of trust.

McCole (2002) asserts that online consumers, especially when parties have not interacted before, prefer to purchase products from reputable Internet vendors as they provide greater assurances that help to engender trust. Many Internet vendors attempt to promote their reputation in various ways such as publishing customer testimonials on their sites or carrying seals of approval by third parties (Jarvenpaa *et al.*, 2000). Other attempts employed are the design, ease of use, aesthetics, and website language.

H_1: There is a positive relationship between an Internet vendor's perceived reputation and consumer's trust in that Internet vendor.

Perceived Security Control

According to Udo (2001), security and privacy concerns are the number one reasons why Internet users are not purchasing online. This is because security and privacy are important conveyors of trust (Bart *et al.*, 2005; Pollach, 2005). We define security as the protection of data against accidental or intentional disclosure to unauthorized persons (Grandinetti, 1996). Perceived security control, in our context, refers to the Internet users' perception of Internet vendors' ability in fulfilling security requirements such as authentication, integrity, encryption, and non-repudiation.

Internet users may be reluctant to make purchases online because of the lack of security in the transactional processes. Many still question security when disclosing their credit card numbers and other personal information over the Internet. Janal (1998) explained further that security concerns and threats also consist of break-ins, technology disturbance, stalking, impersonation, identity theft and computer hacking. Internet shoppers are concerned about the possibility of incurring losses in the event of fraudulent actions (Fox, 2000). It is thus not surprising to find that Perceived Security control has been operationalized as an antecedent of trust in many contemporary literatures (e.g., Bart *et al.*, 2005; Cheung and Lee, 2000). Hence we posit that,

H_2: There is a positive relationship between an Internet vendor's perceived security control and consumer's trust in that Internet vendor.

Perceived Privacy Control

According to Martin (1973), privacy refers to the rights of individuals and organizations to determine for themselves when, how, and to what extent information about them is to be transmitted to others. In this paper, perceived privacy control is defined as the influence consumers feel they have on the personal information that the cyber merchant possesses on them (Bateson and Hui, 1992). Concerns about privacy are not new; businesses have been collecting customer information for decades. However, with technology (database marketing) and especially with the development of the internet, that enhances capabilities for collection, storage, use and communication of personal information, new challenges to privacy have emerged. Personal information about consumers can be collected, monitored and shared without their knowledge and they can lose control over the diffusion of their personal information. This loss of control is perceived as a major threat of the net by consumers (Nakra, 2001).

The majority of Internet users fear that disclosing personal information in online transactions may lead to Internet vendors' (or unsolicited third-parties') dissemination of unwanted information (i.e., spam) to them (Business Week, 2000); or unethically release the personal information to other business organizations that "buy" them for their own use (Better Business Bureau, 2001).

Extant literature suggests that trust influences consumers' willingness to provide private personal information (Chellappa and Sin, 2005; Liu *et al.*, 2005). Hoffman *et al.* (1999) emphasized that many consumers do not trust the Internet vendors with their personal information enough to engage in relational exchanges. Pollach (2005) cautions that lack of transparency in the privacy policy statements can be a trust buster. Increasing perceived control over personal information has

been shown to reduce privacy concerns (Milne and Boza, 1999) and to increase trust in the internet environment (Pavlou, 2003). Hence, Internet vendors have to establish a certain level of trust with customers, by promoting perceived privacy control, in order to make the Internet a viable commerce medium. Hence,

H_3: There is a positive relationship between an Internet vendor's perceived privacy control and consumer's trust in that Internet vendor.

Fulfillment and Delivery

In a conventional transaction, the product sold must be transferred to the buyer and payment transferred to the seller after the transaction is agreed upon (Bakos, 1998). With E-commerce, consumers are unable to receive their purchases immediately. Online shopping provides consumers with the convenience of being able to shop from home. To the extent that consumers have to wait for their purchases to be delivered, the risk of not getting what they have ordered increases and benefits from the convenience of purchasing online are reduced (Nielsen Media Research, 1997). Olson and Olson (2000) found that people learn to trust others by noting their behaviors: promising to do something and fulfilling the promise earns trust between transacting parties.

In the e-commerce context, Bart *et al.* (2005) found that order fulfillment affects consumers' trust. Hence we posit that the accurate delivery of products purchased online in a timely manner will increase consumers' trust towards the Internet vendor and their purchasing decision.

H_4: There is a positive relationship between a consumer's perceived fulfillment and delivery ability of the Internet vendor and consumer's trust in the Internet vendor.

Sensory Characteristics of Products

Studies in Clinical and Consumer Psychology suggest the importance of stimulus to organisms (Kagan *et al.*, 1984), especially human beings (Bexton *et al.*, 1954), and that organisms actively seek sensory stimulation. Sensory stimulation has been known to be, and is, actively used in the marketing of products or services (McKenna, 1987).

Much of human beings' physical and mental experiences originate from and/or are formed through sensory stimulation, which is activated when sensory receptors are activated in the five senses (Kagan *et al.*, 1984). E-commerce, at its present state, activates only two of the five senses: vision and, to a limited extent, hearing. Conventional shopping, in contrast, can activate all five senses.

Consumers' evaluation of products using multiple sensory receptors leads to perceived improvement in consumers' evaluative ability. For some products (fresh groceries, clothing), being able to evaluate using multiple senses is important (Mooy and Robben, 2002), akin to the context of telephone shopping in the 1960s, potential online customers perceive "a fear of not getting what was wanted" (Cox, 1967).

We thus theorize that Internet vendors' impeding of customers' evaluative ability will have a negative impact on consumers' trust toward the vendor.

H_5: There is a negative relationship between a product that requires a significant level of sensory stimulus and consumer's trust in the Internet vendor.

Perceived Risk

Risk perception is an important factor in explaining customers' behavior towards Internet purchase (Jarvenpaa *et al.*, 2000; Cheung and Lee, 2000). Risk is defined as a customer's perception of the uncertainty and adverse consequences of engaging in an activity (Dowling and Staelin, 1994). Past literature show that customers perceive financial, performance, psychological, physical, social and time risks when making purchases (Jacoby and Kaplan, 1972; Mitchell, 1992; Schiffman and Kanuk, 2000).

The Internet is an open, global, heterogeneous, and constantly changing marketing channel. The E-commerce channel makes it difficult for physical goods to be inspected. As such, many consumers harbor the "fear of not getting what was wanted." These reasons increase consumer's perceived risks and when risk is present, trust is needed to make transactions possible. This is supported by the recent work of Buttner and Goritz (2008) where they found that trust mediates perceived risk and intent to buy. Trust also reduces uncertainty lowering perceived risk (Angriawan and Thakur, 2008). Hence, it is reasonable to expect a high level of consumer's perceived risks will lead to a lower level of consumer's trust towards Internet vendors.

H_6: There is a negative relationship between consumer's perceived risks associated with an Internet vendor and consumer's trust towards the Internet vendor.

Trust-Commitment

Drawing on Morgan and Hunt's (1994) "Commitment-Trust Theory", trust and commitment are central to understanding commercial relationships because

they distinguish fruitful relational exchanges from those that are unproductive and ineffective. Those concerned with information security and E-commerce has increasingly used the term trust. Trust and commitment are known to lead directly to cooperative behaviours that are conducive to the success of commercial relationships.

Achrol (1991) asserted that trust is a major determinant of relationship commitment and Morgan and Hunt (1994) argue that both trust and commitment go hand in hand towards ensuring relationship success. In the E-commerce context online trust and commitment have the strongest influence in online purchase intent (Eastlick *et al.*, 2006). Two views of commitment have dominated. According to one view, commitment is an affective state of mind an individual or partner has toward a relationship with another individual or partner. This kind of commitment is called affective commitment. Affective commitment is brought about by a person sharing, identifying with, or internalizing the values of the organization (Morgan and Hunt, 1994): it is based on a sense of liking and emotional attachment to the partnership.

Another view sees commitment as being more behavioral than affective. This form is referred to as calculative commitment and stems from a cognitive evaluation of the instrumental worth of a continued relationship (Morgan and Hunt, 1994). In other words, calculative commitment is based on inputs like investments transaction costs which are made in the anticipation of economically benefiting from the input action (Williamson, 1975). Hence,

H_7: There is a positive relationship between consumer's trust towards an Internet vendor and consumer's affective commitment towards the Internet vendor.

H_8: There is a positive relationship between consumer's trust towards an Internet vendor and consumer's calculative commitment towards the Internet vendor.

Relationship Commitment

Relationship commitment is defined as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it (Morgan and Hunt, 1994). This definition closely mirrors that developed by Moorman *et al.* (1992): "commitment to the relationship is defined as an enduring desire to maintain a valued relationship"; and mirrors also that of Dwyer *et al.*(1987): "an implicit or explicit pledge of relational continuity between exchange partners".

In marketing-practice and research it is agreed that mutual commitment among partners in business relationships produces valuable outcomes for themselves and, partners, as such, seek to develop and maintain commitment as a relationship attribute (Wong and Sohal, 2002; Rowden, 2000; Boyle, 1997). Commitment, if neglected and lacking, will cause the relationships to end rapidly (Wetzels and de Ruyter 2000).

Commitment is seen as a sentiment that is critically important in the development of long-term channel relationships or as a favorable affective reaction (Kumar *et al.,* 1994). These two forms of commitment are thus a psychological sentiment through which attitudes are formed towards continuing a relationship with a business partner.

Commitment can be viewed as a proxy for loyalty: Kamins and Assael (1987) define loyalty as commitment toward a certain brand. In other words, loyalty effectively encompasses the Willingness to Buy (WTB) a certain brand. We believe that there will be positive relationships between WTB and both affective and calculative commitment.

H_9: There is a positive relationship between a consumer's affective commitment towards an Internet vendor and consumer's WTB from the Internet vendor.

H_{10}: There is a positive relationship between a consumer's calculative commitment towards an Internet vendor and consumer's WTB from the Internet vendor.

This conceptual E-commerce Trust-Commitment model (***Figure 1***) based on these hypotheses is proposed. The model is common to both individualistic and collectivist countries as there are no finding to the contrary, to the best of our knowledge. In the lack of contrary findings, we assume a parsimonious model for all countries, in line with Miller and Pedersen's (1999) reasoning – one assumes a state of "no difference" unless shown otherwise. This is also the norm in any hypothesis testing exercise. Moreover, according to Kahnemann *et al.* (1982), risk aversion tendencies are universal and not culture specific. Online trust is closely allied with risk aversion and we therefore, hypothesize a common model.

Insert figure 1 here

RESEARCH METHODOLOGY

Sample

Given the cross-cultural nature of our study and that differences in culture can be discussed using the individualism/collectivism dimension (Hofstede, 1991), we identified and chose countries characterized by Hofstede as individualistic or collectivistic. We specifically chose five Asian countries not just because they are collectivist but also because the Internet is growing by leaps and bounds here. We also choose two prominent Western countries since these are representative of individualistic ones. The five collectivistic countries were Indonesia (score 14 rank 47/48), Malaysia (score 26 rank 36), Singapore (score 20 rank 39/41), Thailand (score 20 rank 39/41) and China (score 20 rank 39/41). Score is the countries actual rating on the (about) 1 – 100 scale and the rank is its place in the ordering of the countries in the study. Higher numbers are Individualistic and lower numbers Collectivistic. Two countries the United States (score 91 ranks 1) and the United Kingdom (score 89 ranks 3) were chosen to represent individualistic culture owing to their suitable individualism scores and ease of access to their population. The UAI ranks also varied considerably (ranks within parentheses): UAI of Indonesia (48), Malaysia (36), Singapore (8), Thailand (64), China (40), United States (46) and United Kingdom (35).

Data Collection

Online *and* offline surveys were conducted in this study. In the U.K., Singapore, Indonesia and Malaysia, both online and offline surveys were conducted. In U.S., Thailand and China, only online surveys were conducted due to a lack of resources to distribute offline surveys.

The survey URL was disseminated to native undergraduates at each university. Online respondents were all current students of University of Kansas (Kansas, U.S.), Surrey University (Surrey, U.K.), Universitas Katolik Indonesia Atma Jaya (Jakarta, Indonesia), Peking University (Beijing, China), University Teknologi Malaysia (Kuala Lumpur, Malaysia), National University of Singapore and Nanyang Technological University (Singapore), and Sirindhorn International Institute of Technology (Bangkok, Thailand). Completed online survey data were collected using CGI-bin software.

Offline survey data was collected using convenience sampling by in each country. Completed offline survey questionnaires were mailed to Singapore. Offline respondents are native students of the University of Bath (Bath, U.K.),

Universities Pelita Harapan (Jakarta, Indonesia), University Malaya (Kuala Lumpur, Malaysia) and Nanyang Technological University (Singapore). All data collection was completed in 33 days.

Questionnaire Design

Some measurement items were adapted from Doney and Cannon (1997), Chow and Holden (1997), Jarvenpaa *et al.* (2000) and Cheung and Lee (2000); the majority of measurement items were self-developed. A 7-point Likert scale response formats to operationalize all variables. The specific measurement items operationalizing each construct and the reliability of each item are summarized in ***Table 1***.

Insert Table 1 here

Measurement items were then put through two phases of pre-testing to assess clarity and reliability before the final field test was done. The tests were assessed for reliability using Cronbach's Alpha. Cronbach argued the more reliable items are the more accurate is the sample's generalizability to the universe (Cronbach *et al.*, 1972). Nunnally (1967) echoed this view and argued that a measurement item with a Cronbach's Alpha value of 0.60 is adequate. Each of our measurement items reported a Cronbach's Alpha value of well beyond Nunnally's cut-off of 0.60.

To ensure clarity and equivalent validity for each country's respondents, a back-translation approach was taken (Makhija and Stewart, 2002). The questionnaire was translated into Bahasa Indonesia, Bahasa Melayu, Thai and Mandarin by a bilingual native of each respective country and re-translated into English by a second bilingual native. Each item was then compared with the original for both consistency and clarity.

Household incomes in each country were adjusted using the Purchasing Power Parity (PPP) index to facilitate a more objective comparison. This adjustment was advocated by Summers and Heston (1991) and has been practiced in over 1,000 empirical studies (Quah, 2001).

ANALYSIS AND RESULTS

First, we found that online and offline respondents did not vary overall. Therefore, we pooled the samples for analyses. Results of this study were analyzed using structural equations modeling with confirmatory factor analysis using EQS version 5.7b as the statistical program.

We first purified the measurement model by adding error co-variances. Error co-variances were added only when deemed theoretically defensible (Wagner *et al.,* 2001).

The standardized estimate, *z*-value and significant level for each structural path are presented in ***Table 2***. The model has a significant chi-square value ($\chi^2_{(619)}$= 3024.293, $p < 0.001$), model fit was acceptable as indicated by four indices [CFI = 0.910, IFI = 0.910, RMSEA = 0.060, 90% Confidence Interval of RMSEA (0.057, 0.062)], suggesting that the proposed model adequately explains the collected data. The initial results lent support to all hypothesized relationships, save for one. The hypothesized paths are described in ***Figure 2***.

Insert Table 1 here

Insert figure 2 here

As predicted in H_1, there is a positive relationship between an Internet vendor's Perceived Reputation and consumer's Trust in that Internet vendor (β^1= 0.483, *z*-value = 9.313, $p < 0.01$). As proposed in H_2, there is a positive relationship between an Internet vendor's Perceived Security Control and consumer's Trust in that Internet vendor ($\beta = 0.167$, *z*-value = 4.045, $p < 0.01$). H_3 is not supported, the model found that there is a negative relationship between an Internet vendor's Perceived Privacy Control and consumer's Trust in that Internet vendor ($\beta = -0.113$, *z*-value = –2.366, $p < 0.01$). This is subject to some interpretation due to significant correlation – see the Discussion and Implications section. As suggested in H_4, there is a positive relationship between a consumer's

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β^1 β refers to path coefficients.

Perceived Fulfillment and Delivery ability of the Internet vendor and consumer's Trust in the Internet vendor (β = 0.183, z-value = 5.395, $p < 0.01$). Likewise, support is also provided for H_5, there is a negative relationship between a product that requires significant level of Sensory Stimulus and consumer's Trust in the Internet vendor (β = –0.181, z-value = –6.134, $p < 0.01$). Support for H_6 was also found, there is a negative relationship between consumer's Perceived Risks associated with an Internet vendor and consumer's Trust towards the Internet vendor (β = –0.274, z-value = –6.097, $p < 0.01$). As theorized in H_7, there is a positive relationship between consumer's Trust towards an Internet vendor and consumer's Affective Commitment towards the Internet vendor (β = 0.895, z-value = 13.184, $p < 0.01$). Similarly, as advocated in H_8, there is a positive relationship between consumer's Trust towards an Internet vendor and consumer's Calculative Commitment towards the Internet vendor (β = 0.474, z-value = 14.168, $p < 0.01$). As expected in H_9, there is a positive relationship between a consumer's Affective Commitment towards an Internet vendor and consumer's WTB from the Internet vendor (β = 0.669, z-value = 11.484, $p < 0.01$). Finally, there is a positive relationship between a consumer's Calculative Commitment towards an Internet vendor and consumer's WTB from the Internet vendor ($\beta = 0.297$, z-value = 9.345, $p < 0.01$), as per H_{10}.

Correlations among Exogenous Constructs

Since the instrument was a survey, as opposed to a factorial design, it was inevitable for constructs to be correlated. Three particularly strong correlations were found between Perceived Security Control and Perceived Privacy Control (β^2= 0.766); Perceived Reputation and Perceived Risk ($\beta = -0.677$); and Sensory Characteristics and Perceived Risk ($\beta = -0.599$).

Perceived Security Control and Perceived Privacy Control have often been discussed hand-in-hand in literature (Bensassi, 1999; Hoffman *et al.*, 1999) thus a correlation between the two constructs is logical and expected as it fits in mainstream literature. Perceived Reputation has been found to mitigate Perceived Risk. As such it follows that the two constructs are correlated. Being able to evaluate using multiple senses has been found to be important (Mooy and Robben, 2002) because it mitigates Perceived Risk (Cox, 1967).

β^2 β here refers to the standardized path coefficients which, in this case, are equivalent to the correlations.

DISCUSSION AND IMPLICATIONS

Although Trust has often been viewed as a central factor to the ongoing process towards positively influencing Willingness to Buy (WTB), there is limited understanding of the specific antecedents of trust towards Internet vendors. There is also paucity of literature on the role that Commitment plays in the process of influencing WTB. This study adds to the contemporary knowledge base of Trust and Commitment by providing an explanation of how they develop in the cross-cultural context of Internet purchase. . This we believe will provide insights to develop a basic worldwide website which can then be morphed to cater to the cultural differences within and across the countries.

Results suggest that Perceived Reputation promotes Trust. This finding mirrors that of Jarvenpaa *et al.* (2000). Perceived Security Control and Perceived Privacy Control are found to engender Trust, as were asserted by Bart *et al.* (2005) and Cheung and Lee (2000). Perceived Fulfillment and Delivery is found to promote Trust, a finding echoed by Bart *et al.* (2005) and Kim *et al.* (2001). Perceived Risk is found to mitigate Trust, in line with Buttner and Goritz (2008) and Sjöberg (1996).

While little has been written on Sensory Characteristics being an antecedent of trust, this study found that such characteristics mitigate trust.Further, Trust is found to promote Affective and Calculative Commitment – a finding generally shared with Morgan and Hunt (1994). Affective and Calculative Commitments, in turn, drive WTB.

Although Perceived Privacy, *prima facie*, also mitigates Trust, we believe that inter-correlation among the constructs has masked the true relationship between Perceived Privacy and trust. We believe that Perceived Privacy provides an undeniably positive net effect (β = 0.562) on Trust (Refer to ***Figure 3***).

Insert figure 3 here

Taken together, the evidence of this research underscores the key mediating roles of Trust and Commitment in encouraging WTB in the cross-cultural context of Internet purchase. We now turn our discussion towards the implications our findings may have for international business theory and practice.

Since the developed model adequately fits the data from both collectivistic as well as individualistic countries, the model may serve as a valuable tool to help online companies to develop a backbone worldwide website which can then be morphed to cater to the cultural differences within and across countries. This will help in formulating a global online policy which will reduce the cost. The application of this developed cross-cultural model may be attractive. We find support for Levitt's (1983) notion that corporations need to find globalization strategies due to a convergence of consumer preferences worldwide. Managerially, our model is reassuring and attractive owing to its simplicity, potential cost effectiveness and ease of operation from a logistical point of view i.e. it is easier to have one type of website rather than twenty. An examination of some leading e-commerce websites reveals real-world support for our model. For instance, Dell and Amazon, have operations in many diverse countries. Still, their individual country websites are remarkably similar.

Since Internet vendors are constrained by budgets, it may be in the best interest of the vendors to initially concentrate on a number of antecedents. To this end, we recommend that initial budgets be spent on ways to promote Perceived Reputation as it is, by far, the strongest predictor of Trust ($\beta = 0.483$) compared to other antecedents. Advertising, encouragement of Word-of-Mouth, and Public Relations initiatives may be undertaken to improve Perceived Reputation.

The second strongest predictor of trust is Perceived Risk ($\beta = -0.274$). Since Perceived Risk mitigates Trust, Internet vendors should strive to lessen the risks customers' perceive when shopping online. To this end, the application of up-to-date technologies, such as data encryption or Secure Sockets Layer (SSL), coupled with Public Relations initiatives, may be implemented.

From a theoretical viewpoint, our study has significant contributions as well. We add to the extant literature on online trust; mostly, research in this area has been conducted in the West. With rare exceptions (e.g. Chong *et al.*, 2003; Greenberg *et al.*, 2008), there is hardly any research in Asia. We add to this body of literature. Moreover, we study online trust in a cross cultural setting – we are among the very few to do this.

LIMITATIONS AND FUTURE RESEARCH

Our results should be interpreted in light of some limitations inherent in this research. The vast majority of respondents in this study are undergraduates. Caution should thus be exercised in attempts to generalize these results to general populations. Notwithstanding the daunting practical problems in yielding responses from a representative cross-section of the general population, future research should undertake such an endeavor to better allow for generalization of results to wider populations.

The study has elicited an E-commerce Trust-Commitment model that describes the data of both collectivistic and individualistic countries. Emphasis must be made that the model is a general one. Our focus was for starters, coming up with one model that fits in both collectivist and individualistic countries. While we obtained a good fit, future research may focus on finding some subtle differences between cultures. Cultures may yet vary on some factors we did not study in this research, like the amount and type of information consumers require and language specific details (e.g. Mandarin sites Vs. English sites).

Commitment in E-commerce remains under-explored in literature. There was difficulty in proposing more antecedents to Commitment in this study from the literature. The identification of such should shed more light on how to more effectively influence Commitment (and thus WTB). It is our belief that there are more antecedents of Commitment than is presented in this study. Future research may thus extend our model by including more antecedents to Commitment.

Literature has shown that some cultures are more relationship-oriented and long-term in nature than others (Fukuyama, 1995). This may influence customers' Commitment toward Internet vendors. The incorporation of more dimensions of culture, however, is beyond the scope of this study. We propose that future studies may examine other dimensions in addition to the one discussed in this study.

CONCLUSIONS

This study adds to the contemporary knowledge base of Trust and Commitment by providing an explanation of how they develop in the cross-cultural context of Internet purchase. A major achievement of this rigorous study involving 1094 respondents from seven countries worldwide is a cross-cultural model of Internet purchase that may prove valuable for Internet vendors who wish to effectively influence Trust and therefore Commitment and WTB in the cross-cultural e-marketplace. The cross-validated model asserted that Perceived Reputation, Perceived Security Control, Perceived Privacy Control (net) and Perceived Fulfillment and Delivery engender trust. Perceived Risk and Sensory Characteristics were found to mitigate trust. Further, Trust is found to promote Affective and Calculative Commitment while Affective and Calculative Commitments drive WTB.

Perceived Reputation, Perceived Privacy, Perceived Fulfillment and Delivery, Sensory Characteristics and Perceived Risk are found to be significant predictors of Trust for collectivistic countries. Perceived Reputation, Perceived Fulfillment and Delivery, Sensory Characteristics and Perceived Risk are found to be significant predictors of Trust for individualistic countries. Enriched with these findings, it is hoped that Internet vendors may have a better understanding on the unique antecedents of Trust they may have in a particular culture.

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Table 1

Cronbach's Alpha of the Measurement Instrument

	Pre-test I	(n = 150)	Pre-test II	(n = 36)	Field Test	(n =1094)
Construct	**Items**	**A**	**Items**	**α**	**Items**	**α**
Perceived Reputation	6	0.577	4	0.725	4	0.765
Perceived Security Control	7	0.575	4	0.894	4	0.865
Perceived Privacy Control	6	0.794	4	0.748	4	0.753
Fulfillment and Delivery	7	0.703	4	0.880	4	0.910
Sensory Characteristics	7	0.725	4	0.806	4	0.853
Perceived Risk	6	0.835	4	0.753	4	0.864
Trust	7	0.615	4	0.862	4	0.850
Affective Commitment	5	0.511	3	0.646	3	0.743
Calculative Commitment	5	0.049	5	0.703	4	0.898
Willingness to Buy	4	0.840	3	0.893	3	0.868

Table 2

Structural Equation Model Results

Hypothesized Path	Standardized Estimate	*z*-value	Hypothesis	Support/ No Support
Perceived Reputation → Trust	0.483	9.313***	H_1 (+)	Support
Perceived Security Control → Trust	0.167	4.045***	H_2 (+)	Support
Perceived Privacy Control → Trust	–0.113	–2.366***	H_3 (+)	No Support
Fulfillment and Delivery → Trust	0.183	5.395***	H_4 (+)	Support
Sensory Characteristics → Trust	–0.181	–6.134***	H_5 (–)	Support
Perceived Risk → Trust	–0.274	–6.097***	H_6 (–)	Support
Trust → Affective Commitment	0.895	13.184***	H_7 (+)	Support
Trust → Calculative Commitment	0.474	14.168***	H_8 (+)	Support
Affective Commitment → Willingness to Buy	0.669	11.484***	H_9 (+)	Support
Calculative Commitment → Willingness to Buy	0.297	9.345***	H_{10} (+)	Support

NOTE: $\chi^2_{(619)} = 3024.294$, $p < 0.001$, CFI = 0.910, IFI = 0.910, RMSEA = 0.060, 90% Confidence Interval of RMSEA (0.057, 0.062)

*** $p < 0.01$
** $p < 0.05$
* $p < 0.10$

FIGURE 1

HYPOTHESIZED E-COMMERCE TRUST-COMMITMENT MODEL

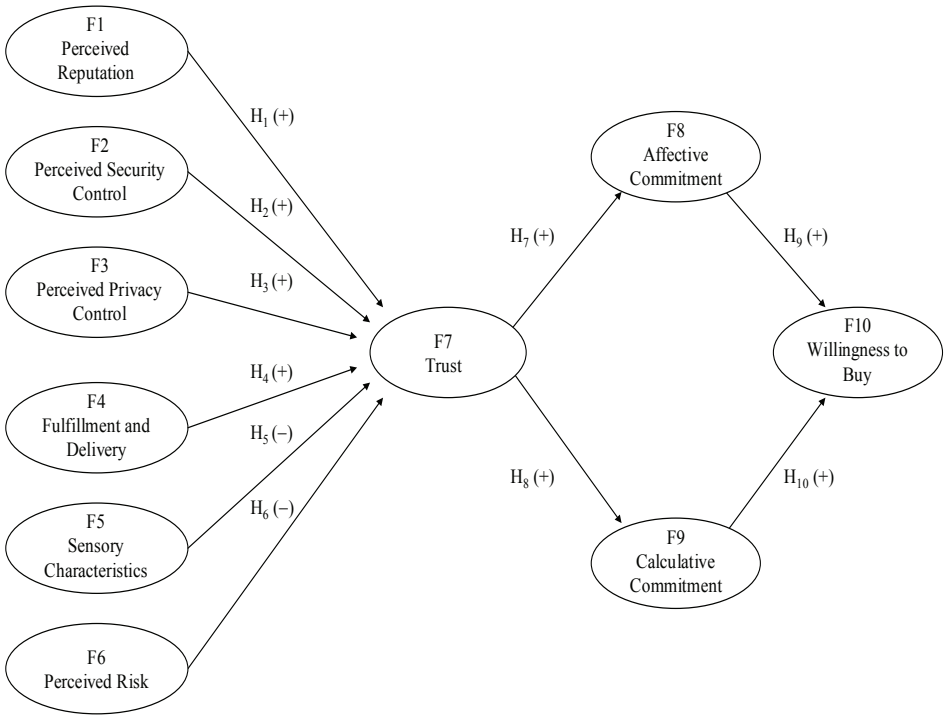
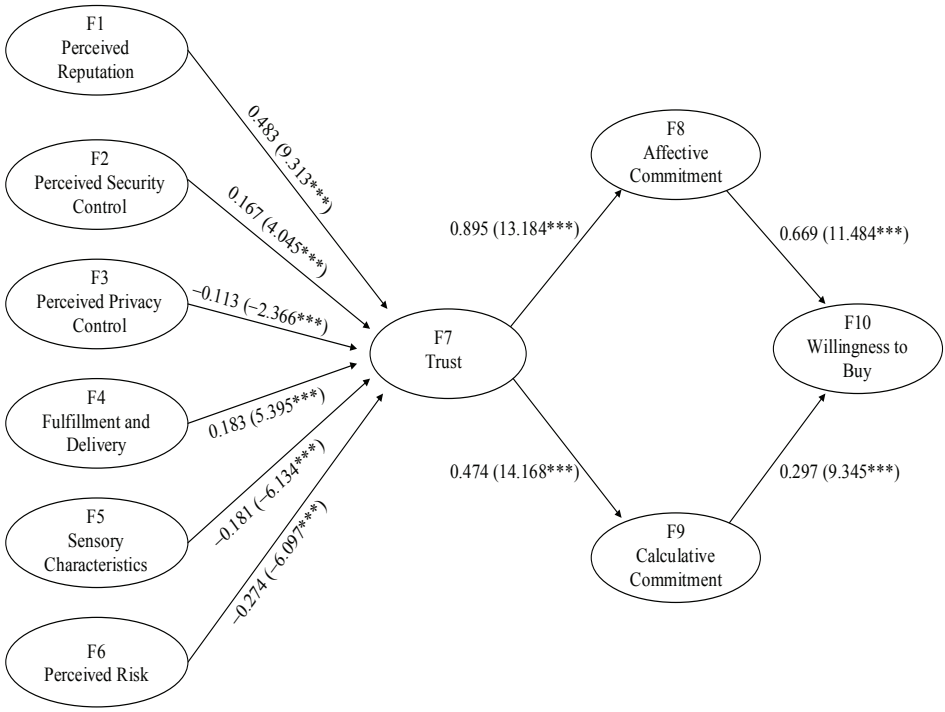


FIGURE -2

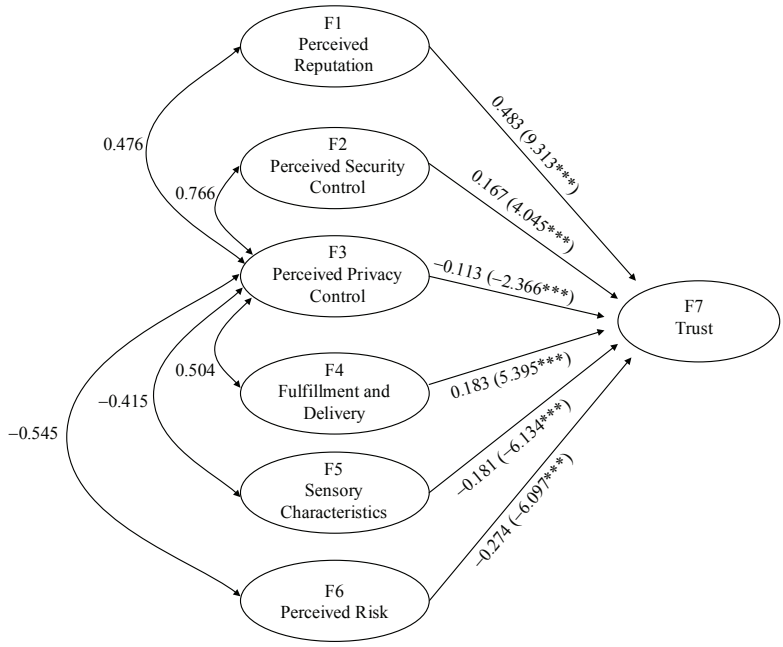
E-COMMERCE TRUST-COMMITMENT MODEL PATH COEFFICIENTS (N=1094)



Notes: Results based on standardised solutions. Numbers in parentheses represent *z*-values associated with each coefficient and their respective significance is denoted as *p < 0.10, **p < 0.05, ***p < 0.01

FIGURE 3

Net Effect of Perceived Privacy Control (F3)



Effect of F3 on F7 = −0.113 + (0.476 x 0.483) + (0.766 x 0.167) + (0.504 x 0.183) + (−0.415 x −0.181) + (−0.545 x −0.274)

≈ 0.562

Notes: Figures based on standardized solutions. Numbers in parentheses represent *z*-values associated with each coefficient and their respective significance is denoted as *p < 0.10, **p < 0.05, ***p < 0.01