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CUSTOMER RELATIONSHIP MANAGEMENT.COM: A CROSS-CULTURAL EMPIRICAL INVESTIGATION OF ELECTRONIC COMMERCE

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Abstract

Globalization and the ubiquitous nature of the Internet facilitate e-commerce activities across nations. These activities demand a new conceptualization of online customer relationship management (CRM) that transcends national boundaries and considers cross-cultural aspects. To better understand cross-cultural CRM, we apply a theory of planned behavior (TPB) perspective to capture behavioral intentions to transact online in two dissimilar countries – China and the United States. We develop a cross-cultural e-commerce adoption model, which first draws upon the TPB to interrelate online transaction intention with attitude, subjective norm, and perceived behavioral control. Second, given the uncertainty present in e-commerce, trust in a Web retailer is hypothesized as a salient belief that influences transaction intentions, both through attitude and also through perceived behavioral control.

The model incorporates Hofstede’s (2001) cultural dimensions – (a) individualism/collectivism, (b) power distance, and (c) long-term orientation. We argue that these cultural differences moderate key relationships in the proposed model. To test the model, an empirical study was conducted using data from Chinese and U.S consumers. Results support the proposed hypotheses, emphasizing the role of cultural differences on consumer e-commerce adoption. The paper discusses several insights from this exploratory study that enrich the cross-cultural CRM literature. Finally, we discuss the study’s implications for theory and practice and conclude with suggestions for future CRM research.

Introduction

Access to the Internet gives customers new power because of the relative ease of information gathering and brand switching (Shapiro and Varian 1999). As a result, Web-based product and service providers recognize customer relationship management (CRM) to be critical to their marketing strategies. Fundamentally, CRM involves a shift from a product focus to a customer focus by taking customers’ views into account in all aspects of a business (Yu 2001).

In the global context, CRM has taken on a new level of importance with the advent of the Internet, and Web shopping has given customers new power. In the words of Hamel and Sampler (1998: 88), we are in “... a world where customers are no longer hostages to geography.” Although some have maintained that global tastes have become homogenized through the ubiquity of McDonalds hamburgers and Toyota cars (Levitt 1983), others have persuasively argued that many international companies have a customer base desirous of customization (Bartlett and Ghoshal 1989). Demands for worldwide local responsiveness translate into pressures for careful CRM. To account for the increasing globalization of CRM, this research includes an examination of the cultural dimension by using Hofstede’s (1980) categorization of national societies. At both the national and international levels, the pressing need for CRM translates into a requirement for understanding what leads customers to transact with a Web retailer. Important unanswered questions are: (1) What factors lead customers to online transactions? (2) How can firms influence customers to transact with them? (3) How does national culture influence customer intentions to transact with Web retailers? This paper provides a theoretical justification and an empirical investigation into these questions.
E-commerce provides the ability of consumers to make online purchases of products and services using Internet technologies (Olson and Olson 2000). In contrast to traditional consumer behavior, e-commerce has some notable differences, such as (a) the distant and impersonal nature of the online environment, (b) the ease by which information can be collected, processed (data-mined), and used by multiple parties, (c) the implicit uncertainty of using an open technological infrastructure for transactions, and (d) the newness of the transaction medium. These unique differences increase uncertainty and reduce consumer perceptions of the value of e-commerce transactions, imposing a barrier to online CRM. The aim of this research is to predict consumer adoption of e-commerce by employing trust and the major constructs of the theory of planned behavior (TPB): attitude, subjective norm, and perceived behavioral control (Ajzen 1985, 1988, 1991). In addition, the global reach of the Internet necessitates that cultural factors be considered in understanding online CRM.

The United States and China were chosen for this study because they represent nearly reverse positions on important cultural dimensions. The United States is high on individualism, moderate to low on power distance, and short-term oriented. China is high on collectivism, high on power distance, and has a long-term orientation. These distinct cultural dimensions are suggested to moderate the proposed e-commerce adoption model, which mainly draws from the TPB with the inclusion of trust.

Conceptual Development

Figure 1 presents the proposed research model. The dependent variable—transaction intentions—is posited as a three-dimensional construct that captures consumer e-commerce adoption intentions. Drawing from the TPB, attitude toward the transaction, subjective norm and perceived behavioral control directly influence transaction intentions. Trust has a direct effect on perceived behavioral control and attitude. Image is included as an explanatory variable because people's status-seeking and their attempts to conform with society's judgment are important potential forces in consumer behavior (Sparks and Shepherd 1992). These relationships are examined in terms of cultural differences on the dimensions of (a) individualism/collectivism, (b) long/short term orientation, and (c) high/low power distance.

![Figure 1. The Conceptual Model](image)

**Intention to Transact**

Intention to transact online is defined as the consumer's objective to engage in an electronic exchange relationship with a Web retailer, such as sharing business information, maintaining business relationships, and conducting business transactions. Based upon the description of the online transaction process, consumer e-commerce adoption essentially necessitates that the consumer...
uses a Web retailer’s website to receive and provide information, and then complete a purchase. According to a recent study, more than 75% of online consumers abandon their shopping carts before purchase (BizRate 2000). This poses a problem for Web retailers who prefer buyers and not browsers. Nevertheless, even if consumers finally decide not to purchase, similar to traditional shopping, it is important for marketers to know how to bring them to the (online) store, initiate communication, collect valuable feedback information, and encourage future transactions (Hoyer and MacInnis 2001).

The Theory of Planned Behavior

The TPB is a well-established general theory of social psychology, which asserts that specific salient beliefs influence behavioral perceptions and subsequent actual behavior (Ajzen 1985, 1988, 1991). The TPB extends the theory of reasoned action (TRA) (Fishbein and Ajzen 1975) to account for conditions where individuals do not have full control over the situation (Madden et al. 1992). Following TPB, there are three types of beliefs that impact three perceptual constructs: Behavioral beliefs that influence attitudes, normative beliefs that affect subjective norm, and control beliefs that shape perceived behavioral control. In turn, these three perceptual constructs determine behavioral intentions.

Following Pavlou (2001), this study applies the major TPB constructs to predict consumer intentions to transact online.

Cultural Differences

According to Dutch psychologist Geert Hofstede (1980, 2001), there are five key dimensions that differentiate culture. Three of these were used in the present study. First, individualism/collectivism refers to the basic level of behavior regulation. People high on individualism view self and immediate family as relatively more important than the collective. Second, power distance is the degree to which the less powerful accept the prevailing distribution of power, and the extent of adherence to formal authority channels. High power distance cultures have members who are much more comfortable with centralized power than low power distance cultures. Third, short versus long-term orientation is people’s basic reference time frame; short-term involves the tendency toward consumption and maintaining materialistic status, and long-term suggests thrift, perseverance, following tradition, and deferred satisfaction. These cultural differences are examined in the proposed e-commerce adoption model as key moderators.

Attitude

Attitude is defined as the overall evaluation of the desirability of a potential transaction with a specific Web retailer. Attitude has been proposed to influence behavioral intentions in multiple theories, such as the TPB (Ajzen 1991) and the TRA (Fishbein and Ajzen 1975). The theoretical predictions of these theories have received substantial empirical support in multiple contexts. Hence, applied to the online consumer behavior context of this study, favorable attitude toward a Web retailer is likely to encourage consumers to acquire information, to facilitate the act of providing information, and also to conduct monetary transactions with a given Web retailer.

A cultural dimension is relevant to attitude toward Web retailers. Collectivist societies have strong relations within the “in-group” – the extended family and familiar acquaintances (Hofstede and Bond 1988). In-group relations focus on maintaining harmony by going along with the group’s wishes and promoting long-term relationships (Bond and Smith 1996). The implicit assumption is that the best thing for the individual is to guarantee the group’s well-being. In general, once collectivist societies establish a positive attitude toward something, they tend to internalize it and take it into their in-group circle. Thus, the extended group can be taken to include e-commerce vendors, and we would then expect that a collectivist culture would influence its members to want to maintain harmonious relations with those vendors. This would include the mutual exchange of information as well as the intention to purchase. Member of individualist cultures should feel no natural influence toward the maintenance of group harmony.

H1: The relationship between attitude and transaction intention is stronger in collectivist than in individualist societies.

Subjective Norm

Beliefs arising from social pressure are termed normative (Ajzen 1991). Subjective norm is the influence of a person’s normative beliefs that others approve or disapprove of performing a particular behavior. For the TPB, people’s intentions to perform a
particular action are a function of subjective norm, or their perception that important others think they ought to do so. The research literature shows support for the role of subjective norm on system usage. For example, Karahanna et al. (1999) found that top management, supervisors, and peers significantly influenced adoption intention for both potential technology adopters and actual users. Chiasson and Lovato (2001) reported that subjective norm is a significant antecedent of IS adoption intention, and Morris and Venkatesh (2000) found that IS workers were strongly influenced by subjective norm. Thus, it is expected that subjective norm will have an influence on the intentions of consumers to engage in online transactions.

Collectivism refers to the extent to which individuals are integrated into groups and form their judgments based on group norms (Hofstede and Bond, 1988). Members of individualistic societies prefer self-sufficiency, while those in collectivistic cultures acknowledge their interdependent natures and obligations to the group (Hofstede 1980). Other studies have replicated Hofstede’s cultural dimension of collectivism, finding that it places relatively greater importance on the group's needs and norms than individualism (Triandis, 1990).

H2: The relationship between subjective norm and transaction intention is stronger in collectivist than in individualist societies.

**Perceived Behavioral Control**

Perceived behavioral control is a general construct dealing with consumer perceptions of whether an action is within their control (Ajzen 1991). Perceived behavioral control is defined here as the consumer perception of control over a potential transaction, drawn from facilitating conditions that render such control (Triandis 1979). Research literature shows support for the role of perceived behavioral control on behavioral intention. For example, Mathieson (1991) shows that behavioral control influences intention to use an information system. A positive relationship between control and intentions is also found in Taylor and Todd (1995) who examine users in a computer resources center. Behavioral control should have a positive effect on online transaction intention.

According to Hofstede (2001), China is extremely high on long-term orientation, a cultural dimension reminiscent of the teachings of Confucius. Confucian thinking emphasizes persistence and thrift, in addition to respect for tradition. These qualities are translated into the long-term orientation dimension, which also includes personal steadiness and stability. Long-term orientation means that people feel free to put off making a decision until they are comfortable with its ramifications. In essence, this gives such people more control over their actions.

H3: The relationship between perceived behavior control and transaction intention is stronger in societies characterized by long versus short-term orientation.

**Trust**

Trust in a Web retailer is defined as the subjective probability by which consumers expect that a Web retailer will perform a given transaction in accordance with their confident expectations (Tan and Thoen 2001). Consumers have not widely adopted e-commerce (Hoffman et al. 1999), primarily because of trust-related issues (Palmer, Bailey, and Faraj 2000). Therefore, trust regarding consumer online transaction activities is fundamental in predicting e-commerce adoption. The practical utility of proposing trust as a salient belief stems from the fact that Web retailers have the chance to behave in an opportunistic manner by taking advantage of the distant and impersonal nature of e-commerce.

Trust and Perceived Behavioral Control. Given that trust in a Web retailer describes confidence in the behavior of another party, trust gives consumers some control over the transaction since the actions of the Web retailer are expectable. Trust does not influence control through self-efficacy, but through facilitating conditions (Triandis 1979), which give consumers perceptual resources and opportunities (trust beliefs) to gain control over their online transactions. Hence, trust beliefs provide the resources that consumers desire to gain control over a potentially uncertain transaction. Following Ajzen (1991), trust will indirectly influence transaction intentions and actual transaction behavior. In general, perceived behavioral control over online transactions is likely to be influenced by trust in the Web retailer. No cultural dimension seems to moderate the effect of trust on control.

H4: Trust influences perceived behavioral control across cultures.
Trust and Attitude. Trust in a Web retailer is viewed as a salient behavioral belief that directly influences consumer attitude, and indirectly affects behavioral intentions for online transactions with Web retailers. The proposed relationship between trust and attitude is justified by placing trust in the context of the TPB as a behavioral belief (Ajzen 1985, 1988). There is a general consensus that trust is related to positive feelings, beliefs, and attitudes (McKnight and Chervany 2002). Hence, consumers would be hesitant to transact with a Web retailer that fails to signal a sense of trustworthiness (behavioral belief) because of fears of seller opportunism. On the other hand, trust creates positive feelings towards transactions with Web retailers, providing expectations for a satisfactory transaction. This strong relationship between trust and attitude is likely to hold across cultures.

**H5: Trust influences favorable attitude across cultures.**

Image and Transaction Intentions

Image refers to status-seeking and conformity with society’s judgment (Sparks and Shepherd 1992). Image closely relates to power distance (Hofstede 1991), which refers to the extent that people accept a hierarchical system with an unequal power distribution. High power distance means that less powerful society members accept large status differences. Superiors tend to be autocratic and paternalistic, and subordinates willingly do as they are told (Hofstede 1991). China is high on power distance, while the United States is relatively low. As a result, ‘power distant’ societies find it self-evident that “all men are born unequal” (Bond 1986), whereas the opposite sentiment is fundamental in low power distance societies.

**H6: The relationship between image and transaction intention is stronger in societies characterized by high versus low power distance.**

Research Method

This study uses an experiential survey method, in which participants were asked to rate their responses regarding a self-selected Web retailer. The survey instrument was administered to randomly selected online consumers from the U.S. and China. 1,500 e-mail messages were sent to people in both countries, asking them to complete an online instrument. A total of 58 responses were received from China, and 55 from the U.S. Participation in this study was voluntary; the response rate was approximately 8% overall.

Measure Development

The principal constructs were developed based on existing measures where possible, or adapted from similar scales. Although most items are based on previous empirical studies, the actual scales were developed to capture the context of this study. The instrument was pretested, and the questionnaire was progressively refined, simplified, and shortened. The questionnaire was translated from English to Chinese by a bilingual expert.

Results

Measure Validation

Reliability was conducted by computing Cronbach’s alpha coefficient for each construct. All measures have high levels of reliability; both for China and the United States, all were above the recommended 0.7 levels. Discriminant and convergent validity of the scales showed that all items load significantly on their hypothesized factors, all cross-loadings are low, and the resulting solution explains 81% of the total variability. Using Partial Least Squares (PLS), a confirmatory factor analysis was conducted to establish discriminant validity of the principal constructs.

Hypothesis Testing

The proposed hypotheses were examined with PLS 3.0, which provides a simultaneous analysis of both the hypothesized relationships at the theoretical level and the measures’ relation to each construct (Chin 1998). As shown in Figure 2, the results
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in both countries broadly support the role of the TPB and trust in explaining consumer adoption of e-commerce. The model is particularly comprehensive in China where it explains 77% of the variation in transaction intentions; 33% variation is explained for the U.S.

H1 posits that attitude would have a stronger effect in collectivist than in individualist cultures. In fact, in China (b=.55, p<.01) attitude has a substantially greater effect on intentions than the U.S., validating H1. However, H2 that argues that subjective norm is more important in collectivist societies has received support since Chinese consumers (b=.14, p<.05) are influenced by their society’s norms, as opposed to U.S. consumers where subjective norm does not influence their transaction intentions. H3 posits that the relationship between perceived behavioral control and transaction intentions would be higher in countries with long-term orientation. However, this hypothesis is not supported. On the contrary, control has a stronger effect on intentions among U.S. consumers (b=.56, p<.01) than among Chinese consumers (b=.19, p<.05). As expected, H4 and H5 receive strong support since the role of trust in influencing attitude and perceived behavioral control is particularly significant in both cultures. Finally, H6 posits that the relationship between image and transaction intention would be higher in high power distance societies. Indeed, image is a significant predictor of e-commerce adoption in China (b=.22, p<.05), but not in the U.S., supporting H6.

Figure 2. Results of Partial Least Squares Analysis

Discussion

One of the most basic concerns of CRM is finding and retaining customers. CRM begins with finding new customers and continues by retaining existing customers (Fornell 1992, Kotler 2000). Although finding new customers is very important, it is also very expensive, at least compared to the costs of keeping current customers (Blattberg and Deighton, 1996). Retaining customers through customer loyalty can overall be an effective way of cutting costs (Reichheld and Sasser 1990). Because customer loyalty is a function of their satisfaction, it is critical that firms engage in CRM with current customers. Research has shown that relatively small increases in customer retention rates can produce dramatic effects on profits (Reichheld 1996).

The results of this study show that most of the research hypotheses are supported. The relationship between attitude and transaction intention is found to be significant for the collectivist culture, but insignificant for the individualistic culture. However, subjective norm was not related to transaction intentions, suggesting that it may not be an e-commerce driver. Whereas perceived behavioral control was a significant driver of e-commerce transactions in both countries, the expected higher effect for the Chinese culture with long-term orientation was not evident in this sample. Trust is found to be a significant predictor of attitude and perceived behavior control in both countries, implying that the role of trust is not moderated by cultural idiosyncrasies. Finally,
the impact of high power control was also important. The relationship between image and transaction intention was significant in the Chinese society, but not in the North American society. In sum, the role of cultural differences is found to be a strong moderator in the proposed e-commerce adoption model, emphasizing the role of cultural aspects in e-commerce research.

As hypothesized, attitude had a significant effect on transaction intention for the collectivist society of China. However, attitude does not significantly affect transaction intention for the individualist society. The lack of association for attitude is contrary to one of the basic postulates of the TPB. An explanation could lie in the influence of individualism itself. Individualists perceive that they are relatively free to follow their own wishes, without regard for others’ opinions. Therefore, these online consumers could very well have a positive attitude toward a Web retailer but, following their self interest, feel no obligation to patronize that retailer. Individualists are also more objective than affective (Hofstede 2001); this would take other elements besides attitude into consideration in forming the intention to patronize. The fact that the variance explained in the U.S. sample (33%) is much lower than the Chinese sample (77%) strengthens this assertion. Collectivist long-term orientation could also account for the disparity in findings for attitude. People in long-term oriented cultures feel an inward moral obligation to follow through with their sentiments. On the contrary, individualists feel no such compulsion.

Another unexpected finding relates to perceived behavior control. While control is found to significantly affect transaction intention for the individualistic culture, as hypothesized, control weakly influences transaction intention for the collectivist sample. Perhaps the reason lies in the utilitarian, pragmatic focus of collectivist people, as opposed to the hedonic focus of individualists (Nakamura 1964). For people with a utilitarian emphasis, being in control of Web shopping would not by itself lead to the intention to transact; questions of thrift, fair price, and value would play a relatively larger role. In addition, long-term orientation emphasizes balance and harmony, so that control alone would have an attenuated effect on transaction intention. Power distance, too, could come into play here, because those in high power distance countries value their own control to a lesser extent than those in low power distance countries.

In terms of theory building, this study attempts to develop new theory by grounding new variables in a well-accepted model and applying it into a cross-cultural context. Empirical results validate the long-standing notion of important cultural differences between China and the United States and show that those differences extend to the e-commerce context. Results of this research additionally suggest that different research models of e-commerce are appropriate for different cultural contexts (Malhotra and McCort 2001).

Implications for Practice

E-commerce is gradually attaining international presence. A common managerial mistake is to assume that all consumer behavior is similar to U.S. consumer behavior (Samli 1995). Although the majority of online shoppers are in the United States, other countries are steadily entering the e-commerce environment, and CRM for online shoppers is acquiring a global dimension. This study has extended our understanding of psychological aspects of cross-cultural online CRM by showing that global customers are different and must be understood in the context of their own culture. Online shopping managers could use the preliminary insights developed here to modify their approaches, depending on the culture they are targeting. For example, managers attempting to penetrate the Chinese market should focus on creating and fostering positive attitudes towards online transactions as well as public image and social norm. For U.S. consumers, building trust and providing a sense of behavioral control may be a more effective way to encourage e-commerce transactions.

Limitations and Suggestions for Future Research

Several limitations of this research should be mentioned, which call for future research. First, this paper deals with intentions, not actual e-commerce behavior. Perceived behavioral control, which is posited in this paper as an important element of e-commerce adoption, has a direct effect (as opposed to attitude and subjective norm) on behavior. Therefore, by not examining actual e-commerce use this potentially substantial effect remains unclear. For example, the expectation that the relationship between control and transactions is higher in societies with long-term orientation may become evident when examining actual behavior. Furthermore, much of e-commerce behavior might occur because of habituation as opposed to intentional behavior (Limayem, Hirt, and Chin 2001).

In addition, uncertainty avoidance, which represents the extent to which a society’s members wish to avoid risky, uncertain situations (Hofstede 1980), could be added to the model as another cultural moderator. Future research could also take into
consideration the interaction effects of different cultural dimensions, providing a deeper and richer understanding of e-commerce in the global setting by conducting studies in multiple countries with different degrees of cultural variation across Hofstede’s dimensions. Finally, the issue of small sample size, due to low response rate could also be alleviated by future research.

Conclusion

This study contributes to our understanding of global e-commerce CRM. A main contribution is that a set of interrelationships between important factors that tend to be associated with transaction intentions in e-commerce was specified, justified, and empirically validated. Another important contribution of this research is the placement of fundamentally important variables – attitude, subjective norm, perceived behavioral control, trust, and image – as determinants of e-commerce adoption, drawing from a well-established model of social psychology. Most importantly, a cultural aspect was added that significantly moderated the proposed model, reflecting the growing importance of e-commerce CRM in a world setting.

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