Building Trust in Online Shopping: The Moderating Effect of Individualism and Collectivism

Sze Hang Cheung
Man Kit Chang
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BUILDING TRUST IN ONLINE SHOPPING: THE MODERATING EFFECT OF INDIVIDUALISM AND COLLECTIVISM

Sze Hang Cheung¹, Man Kit Chang²
Department of Finance and Decision Sciences
Hong Kong Baptist University, Hong Kong
¹ceciliamint@gmail; ²mkchang@hkbu.edu.hk

Abstract
As online shopping becoming more global, consumers with different culture had different consideration when shopping online. Thus, this study attempts to investigate how one specific dimension of culture, individualism-collectivism, moderates the relationship between online trust and its determinants. The determinant factors under investigation include perceived risk, privacy, security, social exchange and information content. Data collected from customers of online shops from Hong Kong and Switzerland were used to test the research model. The result indicated that perceived risk had a negative relationship with Trust. Perceived risk had a stronger effect on trust for collectivists than individualists. Also, Security had a positive relationship with trust. The study showed that information content was positively related to trust of online vendors. Information content had a stronger effect on trust for individualists then collectivists.

Keywords: Culture, Individualism-Collectivism, Online Shopping.

Introduction
Online shopping is getting very popular and becoming more global. Consumer from different countries may shop at the same website. IS researchers have long been interested in how culture affects various aspects of information systems, such as utilization and development. In a review of the application of Hofstede’s theory to IT research, Gaspay et al. [1] conclude that research on how culture affects e-commerce is lagging behind other research areas.

Many studies have examine the role of trust in electronic commerce [2],[3]. There is a question that whether trust differs in different culture. Some studies have claimed that different cultures exhibit differing social norms and propensities to trust [4],[5]. Greenberg et al. [6] found that Hong Kong consumers showed lower trust than U.S. consumers. These indicate that cross-culture differences do exist in online shopping. Most of the studies compare subjects from different countries in order to understand the impact of culture on e-commerce consumer behavior. However, as pointed out by Doney et al. [5], different cultural dimensions may have different impact on the trust building processes. Thus, this study attempts to investigate how one specific dimension culture, individualism, moderates the relationship between online trust and its determinants.

The study compared the consumer behavior of individualists and collectivists. The data from Swiss and Hong Kong people was collected. About 88% of Swiss shops online. This percentage shows that Switzerland is one of top twenty countries with high internet purchase rate [7]. On the other hand, Hong Kong has a high level of Internet use but lower rate in online purchase [8]. This study can test whether the dimensions of culture affects the trust of online shopping. Online vendors may need to fine tune their strategies for different countries to meet consumers’ need

Literature Review
Individualism-Collectivism Cultural Dimension
According to Hofstede [9], culture is the collective programming of the mind that distinguishes the members of one group or category of people from another.

Based on Hofstede [10] and Franke, et al. [11], there are Five Dimensions of Culture. They are Power Distance, Individualism and Collectivism, Uncertainty Avoidance, Masculinity and Femininity and Long versus Short term Orientation. Williams et al. [12] suggested that Individualism/Collectivism is widely studied dimension and highly relevant to the cross-nationals business relationships. Hui et al. [13] and Parks et al. [14] have claimed that one’s propensity to trust in most cultures is influenced by the culture’s collectivist and individualist orientations. Chau et al. [15] and Okazaki et al. [16] have also examined the consumer behavior of individualists and collectivists towards trust. Doney et al. [5] has put forward a model which postulates that individualism-collectivism dimension affects the trust building processes.

In an individualist culture, people would like to achieve his/her own interests and neglect others’ welfare. While in a collectivist culture, people would give a high priority to groups’ interests and norm [17]. Triandis [18] has a further explanation...
about individualism and collectivism. He suggested that individualism and collectivism are multidimensional. They can be divided into 4 dimensions, either vertical or horizontal. Vertical Collectivism means that people are willing to sacrifice their personal identity to their in-group (family, coworkers). In contrast, Horizontal Collectivist is merged with the in-groups. In-groups are important to them but they are not subordinate to the in-groups. On the other hand, Vertical Individualists think that competition is the law of nature and they have a strong desire to win all the competition. For the Horizontal Individualists, people would not compare with others. They tend to do their own thing and seek individuality.

### Trust

Divergent meanings and operationalizations of trust have been used in the studies of trust in the area of electronic commerce. One study’s trust is another study’s antecedents to trust. Some researchers use the term “trust” when they mean other things [19]; and some confuse trust with other concepts, such as honesty, confidence, and faith [20]. Mayer et al. [21] summarize the problems of the study of trust as the lack of clarity in the relationship between risk and trust; confusion between trust, its antecedents and outcomes; lack of specificity of trust referents; and failure to consider both the trustee and the trustor. Similar criticism has been raised in the area of electronic commerce studies involving trust. As pointed out by Shankar et al. [22], most of the studies on online trust do not make a clear distinction between the underlying dimensions and antecedents of online trust.

This study use the definition of trust offered by Rousseau et al. [23] after an extensive cross-disciplinary review of the concept of trust. Trust is defined here as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another”. This definition separates the construct of trust itself from its antecedents and its outcomes, and thus is more appropriate for the objective of the current study.

### Research model and Hypothesis

Trust is a crucial predictor of Internet use because the Internet environment is characterized by uncertainty and risk [24],[25]. There are a lot of factors affecting consumer trust towards online shopping. Perceived risk, privacy, security, social exchange and information content have been found to be important in previous studies. How the individualism-collectivism dimension moderates the effect of these factors will be discussed.

**Perceived Risk**

Perceived Risk is the consumer’s perception of the uncertainty and concomitant adverse consequences of buying a product or service [26]. Some studies found that consumers’ trust is associated with perceived risk [25],[27]. These studies also concluded that there is significant difference in the effect of perceived risk on purchasing goods or service online access difference culture.

According to Jarvenpaa et al. [25], Individualist consumers tend to have higher trust and lower perception of risk. They claimed individualists are willing to trust others normally only when they are given some reasons not to trust. On the other hands, collectivists trust others according to the relationship with first-hand knowledge.

**H1:** Perceived Risk has a negative relationship with consumer trust on Online Shopping.

**H2:** Comparing to Individualists, the Perceived Risk has a stronger effect on trust of Online Shopping for Collectivists.

### Privacy

When consumers purchase online, consumers usually need to provide personal information. Consumers do not want their personal information used by the third party. Privacy means that the right of an individual to be left alone and to be able to control the flow of personal information and providing reasonable assurance that personal information is kept secure. Several studies [28],[29] have addressed that the relationship of privacy and trust in electronic commerce. To gain consumers’ trust, online vendors should convince consumer that the personal information can be protected. If online vendors can use more mechanism to protect privacy, consumers can trust the website more.

However, according to Liu et al. [30], there is no relationship between privacy and culture. Since everyone concerns about their privacy a lot, culture cannot bring any moderate effect to the privacy towards trust.

**H3:** Privacy has a positive relationship with consumer trust on Online Shopping.

### Security

Security can be defined as an online institutional status on its payment system and the consumer’s perceived extent of risk involved [31]. According to some studies [28],[29], security would influence consumer trust. Consumers are worried about credit card fraud. That means if the web site has a better security to protect them from credit card theft, the consumer trust would be enhanced. Liu et al. [30]
also claimed that culture would not affect security towards consumer trust. Security is important for everyone who purchases online.

H4: Security has a positive relationship with consumer trust on Online Shopping.

**Social Exchange**
Social Exchange is that consumers can share their information with one another. Hawkins et al. [32] claimed that stronger development of the social interactions in the use of network communication is likely to put a greater focus on the means of acquiring products and services electronically. That meant it has relationship between social exchange and consumer trust. Trust can be improved if consumers can share their opinion on the website.

Higher levels of trust are evident in social exchanges among group members in collectivist cultures [13],[14]. In these cultures, one is unlikely to be trusting and cooperative with individuals outside of the group. Group membership influences whether a person is trusted. On the other hand, the propensity to trust people in general, including strangers who are not from one’s social group, has been shown to be greater among individuals in societies characterized by higher individualist orientations [33]. Lee et al. [34] mentions that Korean which is a relative collectivist country provides more group-oriented content such as bulletin board and product review than US. They can share similar view. Collectivists would like to have more interaction with other consumers. It can show that collectivists would enhance the trust if they can share the information.

H5: Social Exchange has a positive relationship with consumer trust on Online Shopping.

H6: Compare to individualists, the Social Exchange has a stronger effect on trust of Online Shopping for collectivists.

**Information Content**
Information Content can be defined as the information that gathered by consumer on the website so as to make the purchase decision. They include product/service information, background of company and so on. More comprehensive of the information, the higher trust. That means there is positive relationship with information content and trust. [35].

According to Hofstede [9], Individualist consumer would like to get more product information than collectivist consumer. And Lee et al.[34] has claimed that USA is a relatively individualist country and information of US websites tends to focus on product and purchase specifics and does not reflect the perspective of a reference group.

H7: Information Content has a positive relationship with consumer trust on Online Shopping.

H8: Compare to individualists, Information Content has a weaker effect on trust of Online Shopping for collectivists.

**Research Methodology**

**Subject**
This study emphasizes on the relationship between factors and trust and how individualism/collectivism moderate the factors affecting trust. In order to widen the range of the values of the individualism/collectivism dimension, we chose to collect data in Hong Kong and Switzerland.

Switzerland and Hong Kong have different culture according to Hofstede [9]. Switzerland’s score (68) is higher than Hong Kong’s (25) in the individualism-collectivism dimension. Switzerland ranks 14 and Hong Kong ranks 37 worldwide in this dimension. Switzerland is relatively individualistic than Hong Kong. That means Swiss are expected to consider personal interests over interests of group and value individual decision making. On the other hand, Hong Kong is relatively collectivistic, compared to Swiss. Hong Kong people are interdependent among people. They tend to change themselves to fit in rather than to change the environment. Since the people in these two countries have different in individualism-collectivism dimension, it would be easier to compare the individualists and collectivists.

The target respondents are the individual who has purchased goods and service online. That means they should have the experience on online shopping. Since the study attempts to compare the behavior of collectivists and individualists, data of students and working population from Switzerland and Hong Kong were collected.

Both paper-based questionnaire and Internet-based questionnaire were distributed to the Internet user of Hong Kong and Swiss. A total of 230 usable questionnaires were distributed where 125 of them were from Swiss and 105 of them were from Hong Kong. Swiss questionnaires were mainly paper-based. There were 106 Swiss paper-based questionnaires and 19 internet-based questionnaires. For Hong Kong, 50 of them were paper-based and 55 of them were internet-based questionnaire.

For Swiss respondents, 49.6% of them were male while 50.4% of them were female. 47.2% of Swiss respondents were 17-25 years old. Over 30%
of them were 26-35 years old. The result showed that over 50% of them education level were tertiary or above. Around 37% of them were secondary education level. More than 60% of Swiss respondents were students and around 23% of them earned below CHF1000 each month. 53.6% of them reported that they purchased 1-3 times during the past six months.

For Hong Kong, 56.2% of respondents were male and 43.8% of them were female. Over 55% of them age between 17 and 25. More than 67.6% of them education level attained university or above. Around 45% of Hong Kong respondents were students and 24.8% of them had average monthly income below $4000. 45.7% of them had purchased 1-3 times during the past six months while only around 6% of them had no purchase experience during the past six months.

Measurement

Scale of the questionnaire was adopted from previous studies with appropriate adjustment of wording in order to fit in the data collection of this research. Five-point Likert scale was used to rank the results of each item, ranging from strongly agree (5) to strongly disagree (1). The demographic information including the gender, age, occupation, education level and average monthly income were also collected.

Individualism and Collectivism: Sixteen items from Choiu [36] were used to measure the individualism-collectivism dimension.

Perceived Risk: Perceived risk was measured using 4 items which were adapted by Stone et al. [37].

Privacy: Privacy was measured using 4 items where 2 items were from Dinev et al. [38] and the other two were from Liu et al.[30].

Security: Security provided by the website was measured using 4 items where 2 items were adapted from Chen et al. [39], 1 item was adapted from Bressolles et al. [40] and the other one was adapted from Dinev et al. [38].

Social Exchange: Social exchange was measured using 4 items. One was adapted from Kim et al. [41] and another was adapted from Chen et al. [39]. Two items was developed for this study.

Information Content: 6 items were used to measure information content that provided by the website where 3 item were from Bressolles et al. [40], 2 items were from Park et al. [42] and one of them was from Kim et al. [41].

Trust: Consumer trust towards the online vendors was measured using 5 items. Two items were adapted from Cyr et al. [43] and the other two were from Heijden et al. [44]. The last item was from Chen et al. [39].

Analysis and Findings

The statistical Package for Social Science (SPSS) 16.0 for Windows was used to analyze the data. Reliability Analysis and Multiple Regression Analysis were used.

Reliability of the instrument

Cronbach’s Alpha was used to test the internal reliability of the scales. All Alphas are greater than 0.7 (from 0.77 to 0.96). The test demonstrated that the measures of Individualism-Collectivism, Perceived Risk, Privacy, Security, Social Exchange, Information Content and Trust are reliable.

Test of the Research Model

Multiple regression analysis has been performed with Perceived Risk, Privacy, Security, Social Exchange, Information Content, and the interaction terms as independent variables and Trust as dependent variable.

Individualism-Collectivism acted as a moderator variable which moderates the effect of Perceived Risk, Social Exchange and Information Content towards Trust. As pointed out by Echambadi et al. [45], the cross-product term in moderated regression might be collinear with its constituent parts. This made it difficult to detect main and interaction effects. Mean-centering can reduce the covariance between the linear and the interaction terms. As a result, mean-centering was used to calculate the interaction terms in the current study.

Table 1 Trust in online vendor affected by Perceived Risk, Privacy, Security, Social Exchange, Information Content

<table>
<thead>
<tr>
<th>Variables</th>
<th>β</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR</td>
<td>-0.201</td>
<td>0.000*</td>
</tr>
<tr>
<td>P</td>
<td>0.044</td>
<td>0.250</td>
</tr>
<tr>
<td>SEC</td>
<td>0.162</td>
<td>0.000*</td>
</tr>
<tr>
<td>SE</td>
<td>0.033</td>
<td>0.228</td>
</tr>
<tr>
<td>IC</td>
<td>0.557</td>
<td>0.000*</td>
</tr>
<tr>
<td>cIxPR</td>
<td>0.113</td>
<td>0.003*</td>
</tr>
<tr>
<td>cIxSE</td>
<td>0.001</td>
<td>0.983</td>
</tr>
<tr>
<td>cIxIC</td>
<td>0.079</td>
<td>0.042*</td>
</tr>
<tr>
<td>R2</td>
<td>0.870</td>
<td>Adjusted R2 = 0.865</td>
</tr>
</tbody>
</table>

*P <0.05

PR= Perceived Risk  P= Privacy  SEC= Security  SE= Social Exchange  IC= Information Content  cI= Mean Centered of Individualism/Collectivism  cPR= Mean Centered of Perceived Risk  cSE= Mean Centered of Social Exchange  cIC= Mean Centered of Information Content
Table 1 summarizes the result of coefficients. The R² value of the model is 0.870 which indicated that 87% of the variance can be explained by all related independent variables.

As shown in table 1, perceived risk (β = -0.201) is negatively related to trust. Moreover, the interaction of perceived risk and individualism-collectivism (β = -0.113) is also significant. When the consumer is more individualistic, the effect of perceived risk becomes less negative. The negative impact of perceived risk towards trust would be weakened. As a result, it supports that collectivist would have a stronger negative effect on perceived risk towards trust. Hypothesis 2 is supported.

Privacy (β = 0.444), social exchange (β = 0.33), and the interaction of social exchange and individualism-collectivism do not have a significant effect on trust. On the other hand, security (β = 0.162) and information content (β = 0.557) do have a positive effect on trust. Moreover, the interaction of information content and individualism-collectivism (β = 0.079) is significant. Higher score of individualism-collectivism indicates that the consumer is more individualistic. The effect of information content towards trust is stronger for individualists.

Discussions

The main objective of this study is to investigate the effect of perceived risk, privacy, security, social exchange and information content on trust and how individualism-collectivism moderate the effect of these factors on trust.

As data were collected from Switzerland and Hong Kong, it would be useful to compare the level of individualism-collectivism in these two places. The mean score of individualism-collectivism of Swiss and Hong Kong were 3.0140 and 2.6767 respectively. A t-test showed that the mean scores are significantly different. It indicates that Swiss is more individualistic, which collaborate with the result of Hofstede’s study.

The results of current study shows that perceived risk has a negative relationship with trust of online vendors and individualism-collectivism moderate the effect of perceived risk on trust. The result is consistent with previous research [25],[27]. Individualists are easier to trust other than collectivists. Collectivists still think that online shopping is riskier than individualists.

As perceived risk has a stronger negative effect on trust for collectivists, online vendors can put more efforts on the measures that can reduce the concern of collectivist consumers for example improving the products quality and their reputation so as to build up the confidence of consumers.

Security is important for every consumer. A higher level of security would enhance the consumer trust. This result is consistent with previous study [28],[29]. Online vendors can try to improve their security systems and explain the security system that they use on the website. All these can improve the trust of many consumers.

Information content was found to have a positive relationship with trust and it is stronger for individualists. The result is quite consistent with previous studies [35],[9]. As suggested by Park et al. [46], the amount of information would not be an important factor of trust, consumer could not handle large quantity of information. Consumers want to have in-depth and relevant information. That means consumers believe quality of information would be more important than quantity. They would like to have high quality information. If the information is accurate and relevant, their trust would be improved. As information content is an important determinant for trust, online vendors have to pay more attention on the information content of website. Consumers would consider the quality of information rather than quantity of information especially for the individualist. Online vendors should focus on the accuracy of information.

In this study, social exchange was found to have no significant effect on trust of online vendors. The result is different from Hawkins et al. (1999). Although it is popular for online vendors to provide forum or bulletin board to let consumer to communicate with each other, consumer would not treat social exchange as an important factor that affecting trust. This study shows that security, perceived risk and information content are more important than social exchange. When consumers share opinion or read opinion on forum or bulletin board of website, they can know more about the quality of the product and service. Through this interaction, they can gain more information about the website and their perceived risk would be weakened. When they find that other consumers have a good purchase experience, they would think that buying products from this website is less risky. Due to this reason, social exchange may have an indirect relationship with trust.

Perceived risk, security and information content have a relationship with trust. Online vendors have to pay attention in these aspects so as to attract more new consumers. Consumers with different culture would concern different factors of trust. Online vendors need to know what kind of people they target so as to appropriate marketing strategies. For the above T-test, Swiss was more individualistic than Hong Kong people. For individualist, Swiss online vendors would concern...
the quality of information content more than other factors. Providing accurate and in-depth information can help improve the confident of consumers towards the website.

However, it is different for collectivists. Hong Kong people are more collectivistic compared to Swiss. They think that perceived risk is more important. Therefore, online vendors can put more efforts on it such as enhance the product quality and reputation so as to improve the trust of consumer and thus consumers’ confident towards the website.

There are some limitations for this study. First of all, the sample was only 230 which is not large enough to reflect the whole population. Secondly, the respondents are only from two countries, Switzerland and Hong Kong. The discussion of culture difference is limited. Thus future study can be carried out in difference countries with larger sample. Another limitation is that only one culture dimension has been studied. There are other culture dimensions, such as power distance, uncertainty avoidance, masculinity and femininity and long versus short term orientation, that can also used as moderator.

**Conclusion**

In this study, a research model was developed to study the moderating effect of individualism-collectivism on the determinants of online trust. Perceived risk, privacy, security, social exchange and information content were examined for their relationship with trust towards online vendors. The model was tested using data from Switzerland and Hong Kong. It was found that the cultural dimension of individualism-collectivism does moderate the relationships. This suggests that it is fruitful to study the effect of individual cultural dimensions in addition to study nations as a whole. As cultural dimensions were found to have moderating effect, online vendors should take this into account as online shopping is becoming more espoused national cultural values in technology acceptance. *MIS Quarterly*, 30(3), 2006, pp.679-704.


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