Impact of Nationality Information in Feedback on Trust in a Foreign Online Store

Keywords:
Electronic commerce, consumer behavior, trust, risk, feedback, cross-border

Vanessa BRACAMONTE, SOKENDAI (The Graduate University for Advanced Studies)
Hitoshi OKADA, National Institute of Informatics

Abstract
An experimental study was conducted among Japanese consumers in order to investigate the effects of nationality information in feedback on trust towards a foreign online store. Three experimental conditions were created: (1) feedback from Japanese users, (2) feedback from Thai users and (3) a control condition of no feedback. We hypothesized that showing feedback from Japanese users would result in the highest level of trust, and that an increase in trust would then result in lower perceived risk, and higher perceived usefulness and intention of use of the website. A survey was conducted in Japan, obtaining a total of 915 participants who were randomly assigned into three groups corresponding to the experimental conditions. Structural equation modeling was used in order to analyze the proposed hypotheses within a model of consumer behavior. The results indicate that showing feedback from Japanese users resulted in higher trust than showing feedback from Thai users or showing no feedback. However, feedback from Thai users did not result in an improvement of trust when compared with no feedback shown.
1. Introduction

Online shopping is no longer an uncommon activity for consumers. According to the Nielsen Global Trends in Online Shopping report (2010), only 13% of respondents in Asia Pacific indicated that they had never shopped online, and in Japan, 80% of online consumers had plans to make an online purchase in the near future. Although adoption of online shopping continues to improve, for the most part this is the case for domestic online shopping only. Cross-border electronic commerce, which is shopping online in stores located outside the consumer’s country, presents additional challenges and has not improved at a comparable rate. One of the main reasons for this is uncertainty in the consumers (Consumer Affairs Agency of Japan, 2011). Consumers perceive higher barriers and risks in cross-border online shopping compared to domestic online shopping (Commission of the European Communities, 2009). Therefore, in order to improve consumer adoption, it is critical to increase the consumer’s trust in foreign online stores.

Trust in an online store continues to be an important issue for research in consumer acceptance of electronic commerce (Corritore et al., 2003; Grabner-Kräuter & Kaluscha, 2003; Gefen et al., 2008; Karimov et al., 2011). Trust has a major role in improving online shopping, as higher trust results in higher intention of use (McKnight et al., 2002; Gefen et al., 2003; Pavlou, 2003). As a consequence, studies in this area have investigated the different antecedents of trust and potential ways of improving the perception of trustworthiness of websites. User-generated feedback is one of the mechanisms used in order to build trust (Dellarocas, 2003), which has been implemented widely in online stores. According to the Nielsen Global Trust in Advertising and Brand Messages report (2012), consumers all over the world trust the opinions of other online consumers and the opinions of people they know. Showing feedback on the website allows consumers to have access to these opinions and the information they contain. However, trust and feedback mechanisms have most often been studied in domestic electronic commerce, and the unique characteristics of a cross-border context have seldom been considered.

The aim of our study is to contribute to the study of trust-building mechanisms in a cross-border context. Based on the findings that feedback from users who share some characteristic with the consumer has a positive influence (Williams, 2001), we hypothesize that sharing the same nationality characteristic with the users giving feedback will have a stronger effect on trust. That is, that indicating the nationality of the users giving feedback on the website should act to help the perception of trustworthiness of the website in the case where the nationality is the same as the consumer’s, through a group membership effect. We investigate this effect by using an experimental design, manipulating the nationality information in the feedback shown in the website. The conditions considered are feedback from Japanese users, feedback from Thailand users, or no feedback at all as a control condition.

The results confirm that feedback from Japanese users has a stronger effect on trust than feedback from Thai users and no feedback, though showing Thai feedback was not different from showing no feedback. These findings provide evidence of a possible way to improve
trust in foreign online stores and highlight the importance of identifying the unique characteristics of cross-border electronic commerce.

2. Theoretical Framework

While there are different understandings of trust throughout the literature (Wang & Emurian, 2005), the definition used for this study considers trust as the belief that the vendor will act in a favorable way towards the consumer (Gefen, 2000; Pavlou, 2003). This belief is frequently characterized as multidimensional and composed of (1) benevolence, the belief that the vendor will act in the consumer’s best interest; (2) integrity, the belief that the vendor will keep its commitments; and (3) competence, the belief that the vendor will be able to perform their task correctly (McKnight et al., 2002; Gefen, 2002). Trust in a website can be positively influenced by feedback (Ba & Pavlou, 2002; Dellarocas, 2003; Kwahk & Ge, 2012). It has long been established that buyers make their evaluations based on the opinions of others (Burnkrant & Cousineau, 1975) and feedback mechanisms can help consumers obtain that information.

The influence of feedback is greater when the users giving feedback share some similarities or can be grouped along some dimension with the consumer (Williams, 2001), because group situations increase social influence (Deutsch & Gerard, 1955). This effect is even present across cultures. Yuki et al. (2005) found that both USA and Japanese respondents indicated higher trust when the users shared the same group membership than when they didn’t. In addition to the content of the feedback, information about the characteristics of the user giving the feedback can also have an effect on the consumer’s judgment (Forman et al., 2008).

Risk is defined as the uncertainty perceived by the consumer when considering the possible negative consequences of their behavior (Dowling & Staelin, 1994; Featherman & Pavlou, 2003). Because of the characteristics of online shopping, there are different sources of uncertainty and different consequences for the consumer. Risk has a number of facets, corresponding to the consequences of using online services (Featherman & Pavlou, 2003): (1) performance, related to the functional aspect; (2) financial, related to the monetary risk (3) security, related to the risk of private information
loss; (4) time, related to the waste of time; (5) psychological, related to a negative psychological effect on the users well-being; and (6) social risk, related to the loss of standing among a social group. These facets can be more parsimoniously categorized into two groups according to the type of consequence: material risk (performance, financial, security) and psychological risk (time, psychological and social).

Perceived risk becomes a high barrier that must be overcome to some extent, in order for the consumer to use an online store. Trust becomes important in such risky situations (Mayer et al., 1995), and it helps lessen the perception of risk associated with the vendor by considering their positive or trustworthy characteristics (Pavlou, 2003). Perceived risk reduces the consumer’s perception of having control over the results of their shopping behavior, and therefore has a direct negative effect on the intention of use of the online store (Jarvenpaa et al., 1999; Pavlou, 2003). Trust also has a direct effect on intention of use (McKnight et al. 2002), as the characteristics of trustworthiness of the vendor induce the consumer to perceive that a transaction would result in a positive outcome.

**Hypothesis 2:** Higher trust will result in lower perceived risk of the foreign online store

**Hypothesis 3:** Higher risk will result in lower intention of use of the foreign online store

**Hypothesis 4:** Higher trust will results in higher intention of use of the foreign online store

Perceived usefulness is originally defined as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989). The technology acceptance model (TAM) proposed by Davis (1989), indicates that perceived usefulness along with perceived ease of use are the most relevant factors that affect user behavior towards a technology artifact. Because of the existence of a risk component in the case of electronic commerce, extensions of the original TAM model which include the relationship between trust and TAM factors have been investigated (Benbasat & Barki, 2007).

If a vendor cannot be trusted to fulfill their promise to the consumer, that is, if the vendor is not trustworthy, then the online store is not useful to the consumer because they would not be able to obtain the desired product or service (Gefen et al., 2003). Thus, the perceived usefulness of the online store would increase with higher trust in the website. While ease of use is an important consideration for websites (King & He, 2006), its effect on intention of use is relatively lower than the effects of perceived usefulness or trust (Pavlou, 2003; Gefen et al. 2003). Therefore, because of the experimental design of this investigation and in the interest of parsimony, perceived ease of use is not included in the study.

In addition, following the relationship proposed by TAM, the more useful an online store is perceived to be, the more the consumer will use it (Gefen et al. 2003).
Hypothesis 5: Higher trust will result in higher perceived usefulness
Hypothesis 6: Higher perceived usefulness will result in higher intention of use

The research model is presented in Figure 1.

3. Methodology

3.1. Participants

Japanese online consumers were the target of the survey, which was conducted in Japan. The participants were gathered through a Japanese online survey company, which sent out an invitation for participation to their registered members. First, a preliminary selection survey was conducted among the members who responded, which included questions about online shopping frequency, credit card ownership and demographic information. Participants who had shopped online at least once in 6 months, owned a credit card and were 21 years old or older were selected to take the main questionnaire.

3.2. Experimental design

Three conditions were defined in order to examine the differences caused by nationality information in feedback: (1) Japanese feedback condition (JPF), where the majority of users giving feedback were identified as Japanese; (2) Thai feedback condition (THF), where the majority of users were identified as Thai and (3) No feedback condition (NF), where no feedback information was shown in the website. The NF condition was chosen as the control, as any other feedback information would imply the nationality of the user.

Three versions of a mock up website, a fictitious Thai online store, were developed to correspond to each condition. The content of the mock up websites was written in Japanese. The design and content were identical for all versions, with the exception of the feedback information included for each condition as was described.

The feedback shown in the website was a simple positive non-textual feedback, the equivalent of a “like” to the website in the manner of social network sites (SNS) such as Facebook. In the conditions where the feedback was shown, the information included was a list of the people who had “liked” the website, along with their names and profile pictures. SNS-type feedback was used in the experiment because of the simplicity of presentation, which allowed a basic positive feedback without the need of text or rating-based information. The feedback from the users had no other textual content besides the names.

The nationality information was indicated through the names of the users giving feedback. Japanese names were written in Chinese characters (kanji) and Thai names were written in Thai script and Latin alphabet. The names were reviewed for naturalness by a native Japanese person and a native Thai person.

Thailand was chosen as the foreign country for the experiment because of its relative geographical closeness and for being one of the top tourism destinations for Japanese people, which would help make the scenario more plausible.

3.3. Survey and measures

The selected participants were randomly assigned into one of the three experimental conditions, and asked to view the corresponding mock up website for their condition (NF, THF or JPF) and then answer questions about their
perception of the website.

The questionnaire included items adapted from previous studies: (1) intention of use (Gefen, 2000; Gefen et al., 2003); (2) perceived usefulness (Koufaris, 2002); (3) trust (McKnight et al., 2002); and (4) risk (Featherman & Pavlou, 2003) (see Appendix). All items were measured on a five-point Likert scale from “strongly disagree” to “strongly agree”, with the exception of risk items which ranged from “very high” to “very low”. The items were translated to Japanese by a native Japanese speaker and their content was then reviewed by a second Japanese speaker.

4. Analysis and Results

4.1. Sample

The survey obtained a total of 915 responses: 311 for the NF condition, 303 for the THF condition and 301 for the JPF condition. The characteristics of the sample are summarized in Table 1. There were no statistically significant differences in the mean or distribution of demographic variables (age and sex) and frequency of online use between the conditions, indicating that the random assignment was successful.

No deviations from normality were found on any variables according to the analysis of the Q-Q plots, and values for skewness indices (SI) and kurtosis indices (KI) were within the acceptable limits of SI<3.0 and KI<10 (Kline, 2011). Multivariate outliers were identified using the Mahalanobis distance measure (D2) and removed, leaving 900 valid cases. There were no missing data. Data validation analyzes were performed using SPSS v18 and Amos v18.

4.2. Measurement model

Confirmatory factor analysis (CFA) was conducted, using Amos v18 with a maximum likelihood estimation, in order to validate the measurement structure of the model. The first-order measurement model was validated first, followed by the second-order measurement model, following Brown’s (2006) guidelines for models with second-order latent variables. The criteria used for determining a good model fit was the following: the root mean square error of approximation (RMSEA) should be lower than 0.06 (p>0.05), the standardized root mean square residual (SRMR) should be lower than 0.08, and the comparative fit index (CFI) and the Tucker-Lewis index (TLI) should be higher than 0.95 (Brown, 2006). Because of the large sample size, a normed chi-square ($\chi^2$/df) between 3.0 and 5.0 was considered acceptable (Taylor & Todd, 1995; Hooper et al., 2008).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Sample summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>Total</td>
</tr>
<tr>
<td>Condition</td>
<td></td>
</tr>
<tr>
<td>NF</td>
<td>311</td>
</tr>
<tr>
<td>JPF</td>
<td>301</td>
</tr>
<tr>
<td>THF</td>
<td>303</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>503</td>
</tr>
<tr>
<td>Female</td>
<td>412</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>21-29</td>
<td>85</td>
</tr>
<tr>
<td>30-39</td>
<td>263</td>
</tr>
<tr>
<td>40-49</td>
<td>297</td>
</tr>
<tr>
<td>50-59</td>
<td>174</td>
</tr>
<tr>
<td>60-69</td>
<td>80</td>
</tr>
<tr>
<td>70+</td>
<td>16</td>
</tr>
<tr>
<td>Online</td>
<td></td>
</tr>
<tr>
<td>shopping frequency</td>
<td>52</td>
</tr>
<tr>
<td>1+ times a week</td>
<td>329</td>
</tr>
<tr>
<td>2-3 times a month</td>
<td>289</td>
</tr>
<tr>
<td>Once a month</td>
<td>189</td>
</tr>
<tr>
<td>Once in 2-3 month</td>
<td>56</td>
</tr>
<tr>
<td>Once in 6 months</td>
<td></td>
</tr>
</tbody>
</table>
The results showed high correlation (higher than 0.90) between the trust dimensions. In initial trust scenarios, such as the one in this study, users lack enough experience to differentiate between the trust dimensions (McKnight & Chervany, 2001) so instead we modeled trust as a single construct (Gefen et al., 2003). All items had a standardized loading higher than 0.7 but the model did not return a good fit. After inspecting the modification indices and identifying the sources of strain, the model was re-specified by removing items and adding residual covariances. The re-specified model showed a good fit ($\chi^2(76)=248.73$ (p=0.0), $\chi^2/df=3.27$, RMSEA=0.05 (p=0.46), SRMR=0.027, CFI=0.98, TLI=0.98). A CFA was then conducted on the model with the second-order latent variable of risk, composed of the material risk and psychological risk factors. The second-order model also showed good fit ($\chi^2(78)=276.2$ (p=0.0), $\chi^2/df=3.54$, RMSEA=0.05 (p=0.21), SRMR=0.03, CFI=0.97, TLI=0.98). Standardized factor loadings for the first and second-order latent variables are shown in Table 2.

Reliability and validity analyzes were conducted. To confirm construct reliability, the Cronbach’s alpha and composite reliability values for the factor should be higher than 0.7, and to confirm convergent validity, the average variance extracted (AVE) of the factor should be higher than 0.5. As can be seen in Table 2, all factors showed good construct reliability and convergent validity. Discriminant validity was verified by comparing the square root of the AVE of a factor to the absolute value of the correlations with all other factors (Gefen et al., 2000). For all factors, the square root of the AVE was higher than the correlations, indicating appropriate discriminant validity.

4.3. Structural Model

Structural Equation Modeling analysis was conducted to test the proposed model, using Amos v18 with a maximum likelihood function. Two dummy variables were used in order to represent the three experimental conditions in the structural model (MacCallum & Austin, 2000). The variables were named after the conditions they represented: JPF and NF. The Thai feedback condition (THF) was used as the reference, and therefore not included.

The structural model specified according to the hypothesized model showed a good fit ($\chi^2(107)=296.78$ (p=0.0), $\chi^2/df=2.77$, RMSEA=0.04 (p=0.93), SRMR=0.03, CFI=0.98, TLI=0.98). The standardized path coefficients are represented in Figure 2. The results show that all

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Measurement model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std. loading</td>
</tr>
<tr>
<td>Intention of use</td>
<td>I1</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>U2</td>
</tr>
<tr>
<td>Trust</td>
<td>T2</td>
</tr>
<tr>
<td></td>
<td>T4</td>
</tr>
<tr>
<td></td>
<td>T5</td>
</tr>
<tr>
<td></td>
<td>T7</td>
</tr>
<tr>
<td>Material risk (MR)</td>
<td>R1</td>
</tr>
<tr>
<td></td>
<td>R2</td>
</tr>
<tr>
<td></td>
<td>R3</td>
</tr>
<tr>
<td>Psychological risk (PR)</td>
<td>R4</td>
</tr>
<tr>
<td></td>
<td>R5</td>
</tr>
<tr>
<td></td>
<td>R6</td>
</tr>
<tr>
<td>Risk</td>
<td>MR</td>
</tr>
<tr>
<td></td>
<td>PR</td>
</tr>
</tbody>
</table>

α Cronbach’s alpha
5. Discussion

The most important result of this investigation, corresponding to our main hypothesis, was that feedback from Japanese users resulted in higher trust towards the foreign online stores than showing Thai feedback or showing no feedback in the website. This result corroborates the findings that similarity with the users giving feedback can have a positive effect on the consumer (Williams, 2001; Forman et al., 2008); in this study, the similarity was indicated with the characteristic of nationality. Surprisingly, the standardized path coefficient corresponding to the effect on trust for the Japanese feedback was rather low. This may be due to the fact that only very simple positive information was provided by the feedback, as it didn’t include a rating system or a review.

The results also confirmed the relationship between trust and the other factors in the model. Trust had a lowering effect on perceived risk, and improved the perception of usefulness and the intention of use of the website. The standardized path coefficients show that, for this cross-border context, the absolute effect of trust on risk and perceived usefulness was more or less equal, with a lower direct effect on intention of use partially mediated by the other two variables. The standardized path coefficients for the effect of risk and perceived usefulness on intention of use were similar, and they were stronger than the direct trust effect. These results are in line with previous studies on the direct effect of trust (McKnight et al. 2002; Gefen et al., 2003; Pavlou, 2003) and add to the work of Jarvenpaa et al. (1999) to validate trust effects in a cross-border context.

There was only one hypothesis which was not confirmed by this study: feedback from Thai users did not have a stronger effect on trust than showing no feedback in the website. That is, there were no differences found in the effect on trust between these two experimental conditions. This is a surprising result that contradicts previous studies, which indicate that positive

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path coeff.</th>
<th>Std. error</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Trust is higher for JP feedback than for TH feedback</td>
<td>0.11</td>
<td>0.06</td>
<td>0.038</td>
</tr>
<tr>
<td>H1b: Trust is higher for TH feedback than for no feedback</td>
<td>-0.03</td>
<td>0.05</td>
<td>0.549</td>
</tr>
<tr>
<td>H2: Trust -&gt; Risk</td>
<td>-0.81</td>
<td>0.04</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H3: Risk -&gt; Intention of use</td>
<td>-0.43</td>
<td>0.06</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H4: Trust -&gt; Intention of use</td>
<td>0.36</td>
<td>0.08</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H5: Trust -&gt; Perceived usefulness</td>
<td>0.98</td>
<td>0.04</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>H6: Perceived usefulness -&gt; Intention of use</td>
<td>0.39</td>
<td>0.05</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>
feedback improves trust in the website (Ba & Pavlou, 2002; Dellarocas, 2003; Kwahk & Ge, 2012).

One possible explanation for this result is that the cross-border context and the use of a foreign online store in the experiment resulted in greater uncertainty about the trustworthiness of the vendor, and so the presence of feedback alone was not enough to increase trust. Another possibility is that whatever positive effect feedback has on trust is being negated by dissimilarity effects. The implications of these results are that websites should consider carefully how to show nationality information in the case of a different nationality from the consumer.

There are some limitations to this study. First, by using an online survey company the survey obtained responses from a pre-existing group of users, which limits the generalization of the results on the population.

Second, we used a mock-up website for the experiment instead of a fully functional, real online store. This limits the realism of the study, as the respondents were not able to get a complete impression of the website. However, this design was selected to allow for a flexible manipulation of the experimental conditions, along with the content of website, and avoid any external reputation effects.

Third, in this study the nationality was indicated by the user name. While it is possible for a Japanese native to identify Japanese or Thai names, in other cases nationality information may not be as easily identified from names, or they may not necessarily indicate the actual nationality of the user. Still, the consumer uses the information as they perceive it, so even an incorrect perception of country can have an effect on consumer evaluation (Magnusson et al., 2011).

Fourth, the scope of this model was limited and did not consider other factors, such as perceived ease of use, or the effect of refund policies or sales tax, for example. This was done in the interests of parsimony and to retain the focus on the experimental manipulation, but the possible impact is that there may be some bias in the estimated effects. Future research should validate the results with additional factors.

6. Conclusion

This study examined the effect of nationality information in feedback on trust and subsequently on risk, perceived usefulness and intention of use, in a model of consumer behavior in a cross-border electronic commerce context. We investigated the difference in impact between three different conditions: Japanese feedback, Thai feedback and a control condition of no feedback.

The results showed that feedback from users of the same nationality as the consumer results in higher trust than feedback from foreign users. And that feedback from foreign users did not improve trust in a foreign online store even when compared to showing no feedback at all in the website. The results of this study indicate that nationality information in feedback can help increase consumers’ trust in the website, through the perception of a similar group membership.

These findings have some implications for the design of foreign online stores. For example, vendors could identify the nationality of the consumer and use that information to show feedback from consumers of that same country, prioritizing it over feedback from users of other
countries and clearly indicating the nationality. It may be useful for international online stores to consider showing feedback differentiated by country when that information is available.

Future studies should consider nationality effects in combination with more complex feedback content, such as positive or negative reviews. The model could also be validated using other countries, to compare the results obtained. In addition, a third nationality could be added to the analysis, in order to test country-of-origin effects by comparing the impact of feedback from two different foreign user groups. In a more general sense, future studies in a cross-border context should endeavor to identify other factors that uniquely affect consumers in cross-border electronic commerce, such as the perception of the foreign country, logistical challenges or security concerns.

7. References


8. Appendix (Measurement items)

*Intention of Use* (Gefen, 2000; Gefen et al., 2003)

I1 Given the chance, I would provide this online store with the information necessary to make a purchase.

I2 Given the chance, I would use my credit card to shop from this online store.
Perceived usefulness (Koufaris, 2002)
U1 Using this online store would improve my performance in my shopping.
U2 Using this online store in my shopping would increase my productivity.
U3 Using this online store would enhance my effectiveness in my shopping.
U4 I would find this online store to be useful in my shopping.

Trust (McKnight et al., 2002)
T1 I believe that this online store would act in my best interest.
T2 If I required help, this online store would do its best to help me.
T3 I believe that this online store would act in my best interest.
T4 This online store is truthful in its dealings with me.
T5 I can trust this online store site to process and deliver my shopping correctly.
T6 This online store would keep its commitments.
T7 This online store is sincere and genuine.
T8 This online store is competent and effective in selling products online.
T9 This online store performs its role of selling products online very well.
T10 Overall, this online store is a capable and proficient online store.
T11 In general, this online store is very knowledgeable about shopping online.

Risk (Featherman & Pavlou, 2003)
R1 The possibility that the products delivered by this online store may fail to meet my expectations is:
R2 The possibility that I stand to lose money if I use this online store is:
R3 The possibility that using this online store will cause me to lose control over the privacy of my payment information:
R4 The possibility of losing or wasting time by using this online store is:
R5 The possibility that using this online store will cause me frustration is:
R6 The possibility that using this online store will cause people I know to think less highly of me is: