Trust Formation in Online Services in Latin America: The Effect of Reputation and Familiarity, and the Moderating Role of Experience and Internet Penetration

Abstract

This paper addresses reputation and familiarity as determinants of trust in online banking and examines the effects of experience as a moderator in a Latin American context. The study uses data from two countries, Chile and Bolivia that represent the highest and lowest Internet penetration in the region. The effects of reputation and familiarity on trust are supported. However, these relationships differ in their strength. In a low Internet penetration market, when penetration is low and experience is short, the effect over trust is produced mainly by reputation; when experience is large, familiarity is more important. For high Internet penetration rates, these effects are reversed. Past studies in online banking focused on the factors affecting trust, not on the strength of these relationships depending on external moderators. This study contributes to understand the role of Internet penetration and experience; and helps to fulfill a lack of research in the Latin American relationships context.

Introduction

Client migration from traditional banking to online systems has been one of the key areas of competition in the financial sector during the last decade (Jayawardhena 2004; Yiu et al. 2007; Sohail and Shaikh 2008), allowing users to have better availability, more direct control over their accounts, cost savings, and an increasing customization of the services provided by banks (Eriksson 2008). As a consequence, academic research in online and interactive marketing has focused on the factors influencing the use and adoption of online platforms. Trust has been found as a central construct for the explanation of the usage of web-based banking services (Rexha et al. 2003). Therefore, trust and its antecedents have captured a lot of attention from researchers in the field (Pavlou 2003). In particular, bank reputation and familiarity (with online systems) are the main determinants of trust, as both variables are related to the knowledge
or experience with the brand or the online banking system. Furthermore, each of these factors are considered more and more important to maintain relationships in the long term (Casalo et al. 2007). Another variable influencing trust in an online setting according to previous studies is the time or the relationship length (Flavian et al. 2005), modifying the strength of these relationships.

Despite the growing need of Latin American managers and strategists for better knowledge regarding the drivers of online strategy success, studies addressing these issues in the region have been scarce. Latin America represents nearly 10% of the total users of the Internet in the world, with a general average penetration of 30.5%. Inside this region there are many differences between the development of Internet usages of Internet in different countries. Thus it is possible to find high penetration rates in some countries (Chile: 50.4%, Argentina: 48.9%, Colombia: 45.3%, similar to the average rate of penetration in Europe, 52.0%) and low penetration rates in other countries (Nicaragua: 3.1%, Honduras: 8.4%, Bolivia: 10.2%, similar to the average rate in Africa, 6.8% [Internet World Stats 2010]).

Chile and Bolivia, as examples of low and high Internet penetrations, also have several differences in the rates of use of internet banking and the development of the banking sector in the countries. While in Chile 15% of the population has some banking product (defined here as either a current, savings or credit card account) and 70% of this population uses online banking (SBIF Chile 2009), in Bolivia just 9% of the population is a client of a bank and just 6% of this population uses online banking (SBEF Bolivia 2009).

This can be important for bank and service managers in the region, but it may also be an interesting contribution to online strategies outside Latin America, considering a comparison between two contexts of low and high rates of Internet penetration. A model is proposed linking reputation and familiarity with trust, and it is tested using SEM and multi-sample analyses. From this research, implications for future research and managerial practice are derived.
Theoretical Background and Hypothesis Formulation

Trust can be defined as the willingness to rely on others (Moorman et al. 1996). Trust is a key variable in marketing strategy, particularly under the new relationship marketing paradigm (Morgan and Hunt 1994). From its cognitive conception, a common conceptualization of trust involves three components: honesty (promise fulfillment and sincerity [Doney and Canon 1997]); benevolence (the interest of one party that both parties reach a common objective [Ganesan 1994]); and competence, (the consumer’s perception of the knowledge and skills of the supplier to provide satisfaction through the service or product provision [Coulter and Coulter, 2002]). Therefore trust becomes a key concept for explaining online service adoption and central to our conceptual model. The approach of trust formed by three sub-dimensions was broadly used in previous research (Flavian et al. 2006).

Trust in e-Commerce or e-Trust is defined as the degree of trust customers experience in online exchanges or online channel exchanges (Ribbink et al. 2004). More specifically, online trust is based on the customers’ perceptions of the provider and has a more important role in online exchanges than in traditional exchanges, mainly because it takes place in a more uncertain environment (Pavlou 2003) and it lacks human interface in the online transactions. Reasonably, users of online transactions have more difficulty in evaluating a provider’s commitments and the provider’s use of the customer’s personal information. Yet, the rational expectation is that trust in online transactions can reduce customer perceived risk (Pavlou 2003) and influence customer loyalty (Macintosh and Lockshin 1997), resulting in repeated uses in the near future.

Reputation

Reputation is defined as people’s perceptions of an organization’s honesty and concerns for its stakeholders (Doney and Cannon 1997). As such, it is a subjective judgment of a firm’s performance on the basis of one’s own experiences with the provider or third-party information (Fombrun and Shanley 1990). Granovetter (1985) believes that reputation is the result of interactions occurring in social
networks which share and broadcast information regarding a variety of topics including what companies do. Reputation involves the credibility of a company or brand by its consumers (Herbig and Milewicz 1993; Hyde and Gosschalk 2005). It is a signal of a history of fulfillments by the supplier recognized and acknowledged by its stakeholders and users (Doney and Canon 1997).

The role of reputation on trust has been studied in various contexts. A positive reputation favorably affects consumer’s trust in the product’s company (Doney and Cannon 1997), by emphasizing fulfilled past promises on the part of the firm (Kim et al. 2008). A good reputation affects both the start of a relationship (Einwiller 2003) and the continuation of an established relationship (Anderson and Weitz 1989). In online contexts, the lack of personal contact increases risk perceptions, and the need to use available cues to infer the potential performance of suppliers (Casalo et al. 2007). Then, a firm’s reputation becomes a key driver of uncertainty reduction and trust formation in online environments (Li et al. 2006; Casalo et al. 2007). Thus:

H1: Firm's reputation has a positive influence on trust of its online services

**Familiarity**

Familiarity relates to experience with and knowledge of a brand, product or organization. It results from the users’ accumulation of related experiences as consumers or players in other interactions (Alba and Hutchinson 1987), and the knowledge regarding the industry and the product (Coulter and Coulter 2003), notwithstanding the consumers’ exposure to the product and brand information (Baker et al. 1986).

The role of familiarity on trust has been studied in commercial contexts (Jennings et al. 2000). Familiarity is a requirement in the pursuit of trust (Noteboom 1996). A greater consumer knowledge of a provider’s services increases the consumer’s trust in the provider (Garbarino and Johnson 1999). Some authors suggest that in online environments familiarity plays a key role in the evaluation and adoption of web-based services (Maenpaa et al. 2008). Previous research suggests that familiarity may
reduce uncertainty in online environments, and may increase confidence that services will be correctly provided, when no human counterpart is encountered (Casalo et al. 2008). Therefore,

H2: Familiarity with an online banking services has a positive effect on trust of its services.

The no-moderating role of Internet penetration levels
The main effects of familiarity and reputation on trust are expected to hold true in all markets regardless of the intensity of internet penetration.

H3: Overall similar positive effects of familiarity and reputation on trust are expected for markets with low and high internet penetration.

However, we expect that Internet penetration levels may have a moderating role on the effect of time or length of the relationship on trust formation. Length of the relationship between a client and a supplier affects decision making and buyer-supplier interactions (Buvik and Halskau 2001). In the specific case of online trust, Ha (2004) suggests and tests the idea that trust is established through a systematic relation between the supplier and users of the service, and particularly, time or length of the relationship may play a key role on the effects of the independent factors (Verhoef et al. 2000). Flavian et al. (2005) indicate that the particular effect of time may depend on the nature of the independent variable. More abstract and general variables, like image or reputation, diminish their effects over time while other concrete and specific variables like satisfaction (or familiarity) increase their effects on trust (Constantinides 2004; Flavian et al. 2005). However, these general rules might be affected by internet penetration. We expect that consumers in low penetration markets behave as suggested by Ha (2004) and Flavian et al. (2005). Given the lack of experience by those consumers with online services, reputation and image might have a stronger effect at the beginning, but after some time consumer familiarity with a firm’s internet services will be more important than overall reputation. These
differences are expected to reach a plateau, and afterwards we expect that those effects will be more stable over time, with no significant differences in the case of high penetration markets. Then:

H4a: For Internet low penetration markets, the shorter the relationship between the user and the supplier the larger the effect of reputation on trust compared to the effect of familiarity.

H4b: For Internet high penetration markets, no major differences are expected for the positive effects of reputation and familiarity on trust.

Method

Data collection

Data were collected with a personal survey using a structured questionnaire. Respondents answered question sets about their level of trust towards online banking using three independent sub-scales (benevolence, honesty, and competence), and also, about their perception of reputation and familiarity. The content validity of the scales considered in the study can be ensured due to a structure based on items proved and used in previous research. These scales were adapted through 2 focus groups with online banking users, in-depth interviews with experts, and statistical tests. Variables were measured using 7-point multi-item Likert scales.

Two quota sub-samples of active online banking users were obtained based on the criterion of the length of the relationship. Samples were balanced in a group of one year or less experience and more than one year using the online services of their banks. All respondents were required to use online banking websites more than one time during the last twelve months. As a result a total sample of 893 cases was obtained. This sample was composed by a low Internet penetration sub-sample (Bolivia) with 417 cases and a high Internet penetration sub-sample (Chile) with 476 cases. Atypical cases, repeated responses, and incomplete questionnaires were controlled. Table 1 shows a summary and a comparison between these two sub-samples in terms of their basic demographical characteristics.
Table 1. Socio-demographics of data collected

<table>
<thead>
<tr>
<th></th>
<th>Bolivia</th>
<th>Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational level</td>
<td>61.2</td>
<td>50.4</td>
</tr>
<tr>
<td>(undergraduate or graduate studies)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work situation (employed)</td>
<td>93.9</td>
<td>80.1</td>
</tr>
<tr>
<td>Income (over USD 1,500)</td>
<td>52.0</td>
<td>58.0</td>
</tr>
<tr>
<td>Gender (women)</td>
<td>35.5</td>
<td>47.9</td>
</tr>
<tr>
<td>Marital Status (married)</td>
<td>61.2</td>
<td>41.8</td>
</tr>
<tr>
<td>Age (over 35 years old)</td>
<td>39.6</td>
<td>43.8</td>
</tr>
<tr>
<td>User experience</td>
<td>52.0</td>
<td>47.7</td>
</tr>
<tr>
<td>with online banking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(one year or more)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Measures validation**

Following the procedures proposed by Deng and Dart (1994), validity and reliability of the scales were proved to assure good measurements.

a) **Content validity**

The first stages of scales development were based on previous studies of relationship marketing literature. With this, initial scales were adapted using Kumar et al. (1995), Doney and Canon (1997), Siguaw et al. (1998) and Roy et al. (2001) for the trust scale components, Jarvenpaa et al. (2000), Nguyen and LeBlanc (2001) and Kim et al. (2004) for the reputation scale and Bhattacherjee (2002) and Casalo et al. (2008) for familiarity.

In a later stage, following De Wulf and Odekerken-Schroeder (2003), selected items were evaluated by experts and users, who determine if each item could be considered to be used as a part of the specific construct (Zaichkowsky 1985), keeping those with a high level of consensus among them (Liechtenstein et al. 1990).

b) **Exploratory analyses of reliability and dimensionality**

As a first step, an exploratory analysis of reliability and dimensionality was performed (Anderson and Gerbing 1988). The Cronbach Alpha indicator was used to assess the initial reliability of scales, considering a minimum value of 0.7, and item-total correlation values over 0.3 for each item. In particular, for the total sample (low penetration/high penetration) Alpha’s values were 0.812.
(0.799/0.824) for trust, 0.799 (0.868/0.748) for reputation, and 0.823 (0.869/0.764) for familiarity; each item also presented an item-total correlation over 0.3.

Later unidimensionality was evaluated using principal components factorial analysis. Factor extraction criterion was based on the existence of eigenvalues higher than 1.0 with factor loadings over 0.5 for each item and a significant total explained variance (Hair et al. 2005). Only one factor was extracted of each scale, with satisfactory factor loadings (0.811 minimum).

c) **Confirmatory analysis of reliability and dimensionality**

To confirm the dimensional structure of the scales, a confirmatory factor analysis was performed using structural equation modeling and a model development strategy (Hair et al. 2005) following three criteria proposed by Joreskog and Sorbom (1993). As a result, no items had to be deleted, obtaining good levels of convergence and high levels of goodness of fit: $\chi^2 (df)$ 87.385 (24) $p \leq 0.001$; NFI 0.975; IFI 0.982; CFI 0.982; GFI 0.978; RMSEA 0.054; AGFI 0.959; Normed $\chi^2$ 3.641.

In addition, the Composite Reliability (Fornell and Larcker 1981) was obtained to support the Cronbach Alpha. Values over 0.65 are required (Steenkamp and Geyskens 2006). All the constructs showed satisfactory results for sub-samples and the total sample (0.74 for trust, 0.71 for reputation, and 0.75 for familiarity).

d) **Construct validity**

Two procedures were developed to assess construct validity: convergent validity and discriminant validity.

Convergent validity shows if items in the same scale converge in only one construct. This was tested by checking that the factor loadings of the confirmatory model were statistically significant (level of 0.01) and higher than 0.5 (Steenkamp and Geyskens 2006). All the coefficients were satisfactorily evaluated for the total sample and sub-samples (Table 2).
Table 2. Convergent validity (Total sample/Bolivia/Chile)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Standardized factorial loadings</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation (REP)</td>
<td>rep1</td>
<td>0.796*/0.780*/0.799*</td>
<td>0.633/0.609/0.639</td>
</tr>
<tr>
<td></td>
<td>rep2</td>
<td>0.694*/0.897*/0.632*</td>
<td>0.482/0.805/0.399</td>
</tr>
<tr>
<td></td>
<td>rep3</td>
<td>0.736*/0.808*/0.713*</td>
<td>0.542/0.653/0.508</td>
</tr>
<tr>
<td>Familiarity (FAM)</td>
<td>fam1</td>
<td>0.787*/0.730*/0.791*</td>
<td>0.620/0.532/0.625</td>
</tr>
<tr>
<td></td>
<td>fam2</td>
<td>0.781*/0.912*/0.695*</td>
<td>0.610/0.831/0.483</td>
</tr>
<tr>
<td></td>
<td>fam3</td>
<td>0.775*/0.844*/0.697*</td>
<td>0.601/0.712/0.486</td>
</tr>
<tr>
<td>Trust (TRU)</td>
<td>hon</td>
<td>0.758*/0.813*/0.734*</td>
<td>0.575/0.661/0.538</td>
</tr>
<tr>
<td></td>
<td>ben</td>
<td>0.788*/0.781*/0.789*</td>
<td>0.621/0.610/0.622</td>
</tr>
<tr>
<td></td>
<td>com</td>
<td>0.778*/0.678*/0.835*</td>
<td>0.605/0.472/0.697</td>
</tr>
</tbody>
</table>

* Significant at 0.01 level

Discriminant validity shows if a construct is significantly different to others in the same model. This was tested using two alternative methods, on one hand, with the chi-squared difference test (Bagozzi 1981), and on the other hand, with the confidence intervals method (Anderson and Gerbing 1988). All the results meet the criteria (Table 3).

Table 3. Discriminant validity (Total sample/Bolivia/Chile)

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Conf. intervals (max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REP – FAM</td>
<td>0.422/0.347/0.563</td>
</tr>
<tr>
<td>FAM – TRU</td>
<td>0.733/0.577/0.845</td>
</tr>
<tr>
<td>TRU – REP</td>
<td>0.747/0.578/0.877</td>
</tr>
</tbody>
</table>

* Significant at 0.01 level

Results

After performing reliability and dimensionality tests, a structural equations modeling was used to test the hypothesized causal relationships. In order to test the effect of Internet penetration levels, a multi-sample analysis between the Chilean (high penetration) and Bolivian (low penetration) models was performed (Janssens et al. 1995).

Table 4 and Figures 1 and 2 show the major results. Overall, models show good levels of fit, and the direct effects of reputation and familiarity on trust (H1 and H2) are supported by the data in both samples.
Table 4. Goodness of fit of Chile and Bolivia models

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients</th>
<th>Sub-models</th>
<th>CFI</th>
<th>IFI</th>
<th>RMSEA</th>
<th>Chi^2 Normed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bolivia</strong></td>
<td>REP = 0.47 FAM = 0.47</td>
<td></td>
<td>0.956</td>
<td>0.956</td>
<td>0.091</td>
<td>4.450</td>
</tr>
<tr>
<td>(low Internet penetration)</td>
<td>Longer rel.</td>
<td>0.971</td>
<td>0.971</td>
<td>0.070</td>
<td>1.998</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shorter rel.</td>
<td>0.952</td>
<td>0.953</td>
<td>0.100</td>
<td>3.220</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multi-sample</td>
<td>0.960</td>
<td>0.960</td>
<td>0.062</td>
<td>2.604</td>
<td></td>
</tr>
<tr>
<td><strong>Chile</strong></td>
<td>REP = 0.71 FAM = 0.66</td>
<td></td>
<td>0.930</td>
<td>0.930</td>
<td>0.107</td>
<td>6.400</td>
</tr>
<tr>
<td>(high Internet penetration)</td>
<td>Longer rel.</td>
<td>0.887</td>
<td>0.888</td>
<td>0.134</td>
<td>5.360</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shorter rel.</td>
<td>0.928</td>
<td>0.928</td>
<td>0.108</td>
<td>3.912</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multi-sample</td>
<td>0.908</td>
<td>0.908</td>
<td>0.088</td>
<td>4.636</td>
<td></td>
</tr>
</tbody>
</table>

For testing H3 and H4, two further tests are conducted. First, separate models for Bolivia and Chile were estimated, showing the stability of the hypothesized positive relationships between reputation and familiarity and trust. However, when testing the equivalence of both models (Bolivia effects = Chile effects), the associated Chi square test is statistically significant (14.26 (2), 0.05), indicating stronger effects for the Chilean (high penetration) sample. Therefore H3 is only partially supported. Potential explanations for this finding include the need to consider other relevant variables to explain trust formation in an environment where consumers have low exposure to online services.

Table 4 shows differences in the coefficient estimates between the shorter and longer relationship lengths subsamples. Those subsamples include consumers with less than 1 year of relationship, and consumers with longer periods of experience with the firm. In the case of Bolivia –low penetration market, significant effects are found supporting hypothesis (H4a) that reputation is more important at the beginning of a relationship, and later on familiarity becomes more important (Chi square 17.76 (2), 0.05). However, when markets evolve, the effects of familiarity and reputation, become quite similar, not showing significant effects (4.53 (2), ns).
Conclusions and Managerial Implications

In conclusion, reputation and familiarity show a direct and significant effect over trust, no matter the context (both in low or high Internet penetration countries) or the length of the relationship (longer or shorter). However, while in low Internet penetration context, as Bolivia, the influence strength changes
with users’ experience, in high Internet penetration context, as Chile, these changes are not relevant and the strength of those relationships is not statistically different between users with longer or shorter relationships with online banking.

In fact, in low Internet penetration context the effect of reputation in trust formation is stronger when the user has less experience in the use of online banking, instead of the effect of familiarity increasing with longer user experience. In contrast, in high Internet penetration context, the effect of influence of reputation and familiarity over trust does not show significant changes with different length in the user-online banking relationships.

The letter implies that in low Internet penetration countries with less development of the online platforms, reputation plays a key role to obtain users’ trust in the beginning of the relationship. Bank reputation fills the lack of knowledge of the online systems making users confident about the “new” services; this relationship decreases in importance to the extent that experience increases. From another perspective, familiarity becomes important because of the knowledge accumulated by the use of the web tools. Therefore, it is possible to observe a trade-off between reputation and familiarity in the early starts of Internet systems, and a later balance when penetration and time of use is longer.

Marketers should then pay attention to both phenomena in order to increase online customers. A more interesting finding though, is that in internet low penetration markets, reputation is very important, particularly with novel customers (those with shorter relationships with the company). Existing banks will benefit from leveraging their own brands and reputations compared to launching new e-brands for their online banking services. Later on, familiarity will become more important. And as the Chilean sample suggests when countries reach a higher penetration level of internet, then both familiarity and reputation are key with both novel and more experienced consumers, and the market will be opened to receive new competitors, even if those are not yet existing brands.
References


