Sources of Trust toward a Market-maker in the E-marketplace

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Abstract

While the growth of the e-marketplace such as e-auctions and e-knowledge markets seems phenomenal in recent years, several studies suggest that a large number of Internet users have serious trust concerns, and that winning customer’s trust is the primary hurdle to continued growth of the e-marketplace. Especially, in the e-marketplace, buyers routinely engage with businesses and individual sellers with whom they have little or no prior interaction, making trust one of the most important issues.

In this study, we develop and test a trust-building model for buyers and sellers, respectively. In addition, our analysis provides a theoretical framework that identifies the sources of trust in a market-maker.

The results indicate that the buyer’s trust in a market-maker stems from the characteristics of a market-maker and the website, as well as the customer’s experience. However, for the seller, only the characteristics of both the market-maker and the website are positively associated with trust in the market-maker.

Keywords:
Sources of Trust; E-marketplace; Trust in a Market-maker; Buyer; Seller

Introduction

The growth of the Internet and its user base in recent years has created the new transactional environment. Internet-based electronic marketplaces are becoming more and more popular. E-marketplaces are commerce sites on the public Internet that allow large communities of buyers and suppliers to meet and trade with each other (Ariba, 2000). E-marketplaces manage participants, information, and business processes – the flow of information and the business transactions. Most analysts have assumed that electronic markets would come to dominate the e-business landscape (Grieger, 2003).

The characteristic of the e-marketplace is its bias (Grieger, 2003). Biased e-marketplaces are buy-side market and sell-side market. The role of a buy-side marketplace is to aggregate buyers, focusing primarily on providing efficiencies for the corporate buyer. On the contrary, Sell-side marketplace concentrates on aggregating sellers together into a central catalogue and product information repository. However, neutral e-marketplaces, driven by a third party, are the true market-makers because they are equally attractive to sellers and buyers and the most common business model in online (Kaplan & Sawhney, 2000). Online auctions and online knowledge market are the typical examples of neutral e-marketplaces. We analyze the e-marketplace focusing on the neutral e-marketplace in this study.

To succeed, e-marketplace must attract a number of buyers and sellers quickly, creating liquidity at both ends (Kaplan & Sawhney, 2000). To attract lots of buyers and sellers, market-makers must be able to guarantee reliable and timely information for participants to trust them (Feldman, 2000). In this market, because the risk of buying from an anonymous seller acts as an obstacle for buyers using the system, the advantages may be less clear. Sellers should also take the risk of transacting with an unknown buyer online. For this reason, the market-maker, as an intermediary in the e-marketplace, identifies and qualifies these participants and maintains data such as reputation, credit-worthiness, and experience for their reference (Choudhury et al., 1998; Feldman, 2000; Pavlou & Gefen, 2004).

In fact, trust plays a central role in helping consumers overcome perceptions of risk and insecurity (McKnight et al., 2002; Tan & Thoen, 2001). Online exchange is characterized by uncertainty, anonymity, lack of control, and potential opportunism (Hoffman et al., 1999). In addition, online transactions often require sharing of sensitive personal and financial information. Thus, building and maintaining trust between buyers, sellers, and partners are widely believed to be the key drivers of success for most online firms (Keen, 1997).

The objective of this study is to identify the market-maker’s trust sources for building customer’s trust under the unique type of market, the e-marketplace, or known as the broker-managed online market. In doing so, our research can give new insights on how the market-maker fosters customer trust. The insight generated from this research would contribute to our understanding of the online trust in general.
We develop trust building model of the buyer and seller in the e-marketplace. Then, we identify trust sources leading to trust in a market-maker in the e-marketplace from the perspective of the buyer and seller, respectively. Some authors have tried to include both parties by defining their concept of trust very broadly (e.g. McKnight & Chervany, 2002) but empirical research on this topic has been very limited. Our intention is to close this gap by focusing on analyzing buyer and seller trust model in the e-marketplace. To our knowledge, this focus is quite exceptional for trust research which typically has a buyer perspective.

Literature Review

Trust has been examined in many social science disciplines, including sociology, economics, marketing, organizational behavior, and most recently, e-commerce (Bhattacherjee, 2002). Therefore, there are literally dozens of definitions of trust. Each discipline has a unique perspective on the nature and definition of trust (Shapiro, 1987; Yamagishi & Yamagishi, 1994; Granovetter, 1985). Mayer et al (1995, p712), proposed an integrative definition of trust as “the willingness of a party [trustor] to be vulnerable to the actions of another party [trustee] based on the expectation that the other [trustee] will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party [trustee].”

One reason of confusion is that each discipline views trust from its own unique perspective tailored to their research context (McKnight & Chervany, 2002). There are three categories of the theoretical perspectives used in studies on trust (Mayer et al., 1995): personality theory, sociology and economics, and social psychology. The social-psychological perspective appears to be most relevant for understanding consumer trust in electronic commerce because it focuses on the aspect of the trusting party in transaction.

Second reason is the vagueness of trust (McKnight & Chervany, 2002). In most studies on trust, trust has several dimensions across research context. In the transaction-related context, most frequently cited trust dimensions of the counterpart are benevolence, and integrity (McKnight & Chervany, 2002; Doney & Cannon, 1997). Benevolence is the extent to which a trustee is believed to intend doing good to the trustor, beyond its own profit motive (Mayer et al., 1995). Bhattacherjee (2002, p.219) argued that “In e-commerce context, it may be difficult to anticipate user needs for designing benevolent services or it may be overly expensive to deliver such services. In such circumstances, benevolent firms should at the very least: (1) demonstrate receptivity and empathy toward users’ concerns and needs, and (2) proactively make good-faith efforts to resolve user concerns.” Integrity refers to the trustor’s perception that the trustee will adhere to a set of principles or rules of exchange (Mayer et al., 1995). Bhattacherjee (2002, p.219) summarizes this by saying, “In e-commerce context, rules of integrity refer to: (1) conduct of online transactions, (2) customer service policies following a transaction, and (3) firm’s use of private user information.” Online companies may develop their integrity by stating their rules of a transaction explicitly (such as, shipping policies, merchandise return policies, and customer data privacy policies) on their Websites (Bhattacherjee, 2002). In addition to these dimensions, there are a few dimensions used in research on trust including predictability, reliability, and fairness (McKnight & Chervany, 2002; Lee & Turban, 2001).

In this paper, we regard trust as a multidimensional concept and define it as the perceived benevolence and integrity of a participating party in the transaction. The former dimension is the extent to which one partner is genuinely interested in the other partner’s welfare and motivated to seek joint gain (Doney & Cannon, 1997). The latter dimension focuses on the objective credibility of an exchange partner based on product or service quality or other customers’ evaluations on the trading partner. This definition of trust is relevant in an online buying context. A buyer facing some degree of risk in a purchase situation turns to a market-maker or seller that the buyer believes is able to perform effectively and reliably (integrity) and is interested in the customer’s interests (benevolence).

A trust source refers to the belief, impression, experience, or institution from which a trust cue is produced (Bailey et al., 2000). We synthesized the literature in human-computer interaction, marketing, economics, and social psychology to identify the following four sources of trust.

First, presumption produces trust through general beliefs or levels of confidence maintained in the absence of doubt (Bailey et al., 2000; Chen and Dhillon, 2003). According to Chen and Dhillon (2003), a person shows a propensity to trust in the extent that he/she demonstrates a consistent tendency to be willing to rely on others across situations. Second, characteristics of a partner produce trust through an examination of an exchange partner’s external appearance, such as the visual design of a website (Kim & Moon, 1997) or the physical appearance of a person (Patzer, 1983). Third, characteristics of a website can convey some sense of a firm’s trustworthiness to customers because the website is the only means to interact with the customers in the online environment. Therefore, website characteristics including layout, usability, reliability, and functionality can be important tools for promoting customer’s trust (Chen & Dhillon, 2003). Finally, experience produces trust through repeated successful exchanges with the same partner (Chen & Dhillon, 2003). For example, a person having repeated successful exchanges with a specific exchange site will likely perceive the site as being more trustworthy than an unfamiliar site (Bailey et al., 2000). In an exchange relationship, a consumer’s knowledge about the capabilities, benevolence, and integrity of a firm increases as the customer’s experience with the firm is accumulated. If the outcome is consistently positive, the consumer’s trust toward the firm will increase (Chen & Dhillon, 2003).

Research Model and Hypothesis
The research model specifying sources of trust in a market-maker in the e-marketplace is presented in Figure 1. While the past research focused on identifying only the characteristics of a trading partner, in our research model, we evaluate the various sources of trust in a market-maker in the e-marketplace. In this regard, we assume that customer trust for a market-maker, in the e-marketplace, can reside in the characteristics of the market-maker, the characteristics of a website, the length of relationship with the market-maker, and customer’s propensity to trust.

![Research Model](image)

**Figure 1- Research Model**

**Characteristics of the market-maker**

Many researchers suggested that a company’s size assists consumers in forming their impressions regarding the company’s trustworthiness (Jarvenpaa et al., 2000). It seems that consumers believe that a large company will have the necessary competence and resources for support systems such as customer and technical services and the existence of these systems builds trust (Chow & Holden, 1997). In addition, firm reputation can be an indicator of trust. Perceived size and reputation of firm are expected to be related. Larger firm might be perceived as being more reputable (Jarvenpaa et al., 2000). Customer trust can increase significantly when the company is perceived to have a good reputation (Doney & Cannon, 1997). Therefore, a favorable reputation is easily transferable across buyers and enhances the credibility of the vendor (Ganesan, 1994). Similarly, Anderson and Weitz (1989) found that a channel member’s trust in a manufacturer is positively related to the manufacturer’s reputation for fair dealings with channel members.

**Characteristics of a website**

In the case of an Internet firm, the website is perhaps the only way a firm communicates with its customers. According to Chen and Dhillon (2003), usability and security can be considered as the important characteristics of the website. Web usability is a set of design principles of website including consistency of the interface, response time, and interaction style (Nielsen, 1993). Other studies (Cheskin Research, 2000; Rhodes, 1998) suggested that interface elements were important to establish trust: the ease of navigation and feedback mechanisms.

Web security in this study is the perception of security associated with transactions with a particular website. A major concern of online customers is how secure their transactions on the web are. Customers expect that a company’s website will provide methods for secure exchange of financial information with them (Ranganathan & Ganapathy, 2002). In this vein, Lee and Turban (2001) postulate that “security effectiveness” as a contextual factor will have a significant impact on customer’s trust. Koufaris and Hampton-Sosa (2004) also suggested that perceived security control of the website is positively related to trust in the company.

In the e-marketplace, a website may provide diverse information in terms of a transaction such as detail product information, evaluations on the product by experienced buyers, and seller’s credit level. Such information is provided by the facilities of the market-maker in the website. Customers may partially estimate the credibility of the transaction in the site based on that information. Therefore, the quality of the information may reveal the trustworthiness of the market-maker.

**Length of relationship**

Customer’s experience in the site breeds trust. Most researchers agree that trust evolves over time. According to Doney and Cannon (1997, p39–40), two reasons can explain why trust increases with the length of relationship. They stated that “First, length of time represents an investment both parties make in the relationship. To the extent that buyers perceive such investments on the part of suppliers, they could calculate that a supplier would incur losses by acting in an opportunistic manner. Second, the process of prediction also can be invoked as a relationship grows older. When exchange relationships have a history, the outcomes of past transactions provide a basis for subsequent interaction.” In addition, Ganesan (1994) found that a retailer’s experience with a vendor is positively related to the retailer’s perception of vendor’s benevolence and credibility. Therefore, we expect that as the customer’s experience increases, his/her perceived level of trust in a counterpart will be higher.

**Propensity to trust**

Some persons are more likely to trust than are others (Mayer et al., 1995). The propensity to trust is a personality trait influences trustworthiness of trustor. Propensity to trust is a stable, within party factor that affects the likelihood that a party will trust another party. People with different cultural backgrounds, personality types, and developmental experiences vary in their propensity to trust (Hofstede, 1980). People who have a higher propensity to trust tend to have a higher trust in person or something.

In an e-marketplace context, market-maker’s characteristics are about the website where transactions take place. The size and reputation of a market-maker represent place for transaction and market-maker’s competence of managing information, rules, and participants. Therefore, among the four sources of trust in a market-maker, characteristics of a market-maker and a website belong to the factors of institutional trust while length of relationship is a factor of relational trust.
Therefore, hypotheses for this group of factors are:

\( H_1 \): Characteristics of a market-maker are positively related to the trust in a market-maker.

\( H_2 \): Characteristics of a website are positively related to the trust in a market-maker.

\( H_3 \): Length of relationship in the site is positively related to the trust in a market-maker.

\( H_4 \): Propensity to trust is positively related to the trust in a market-maker.

Transaction intention consists of purchasing, cooperating, and information sharing (McKnight & Chervany, 2002). As we noted previously, McKnight and Chervany (2002) maintained that trusting behavior is positively associated with the dependability on a trading partner. Doney and Cannon (1997) found that trust of supplier firm is the key driver of the anticipated future interaction with the supplier firm. Anticipated future interaction means the future intention to use or purchase, trusting behavior.

Therefore, hypotheses for this group of factors are:

\( H_5 \): Trust in a market-maker is positively related to transaction intention.

**Methods**

The instruments of the study were developed based on existing literature and the results of the prior interviews with the Internet users who have the transactional experience in the e-marketplace. To gather data, online knowledge market was chosen as the subject of the study.

**Online knowledge market**

A knowledge market is a place where knowledge is traded. There are vibrant content industries like publishing and broadcasting (Skyrme, 2001). Other examples are people-based industries like management consulting and recruitment agencies. For some of these businesses, there are active markets in the sense that buyers and sellers go there to trade. There are also markets in intellectual property, such as copyrights and patents. This growth of the knowledge market is in line with the predictions of analysts; Datamonitor predicts that the market of direct information exchange will be more than $6 billion by 2005 constituting a significant business opportunity for aware enterprises (Kafentzis et al., 2004).

As noted previously, online knowledge market is a typical example of the e-marketplace. Recruitment agencies (Careermosaic.com), consultancy matching services of many professional associations (Arthur Andersen's Global Best Practices; Ernst & Young's ERNIE), knowledge shops (knessa.com), and stock market or investment knowledge exchanges (iExchange.com) are all examples of online knowledge markets.

Our survey was conducted with the customers of Company A, a leading subscription-based online knowledge market-maker in South Korea. Its annual sales grew from $1.2 million in 2002 to $4 million in 2004 and there are currently over 1.5 million subscribers to this company's website. Company A is a kind of online knowledge shop that sells all kinds of written materials, from papers for university students to professional reports for workers and researchers.

The process of a transaction is as follows. Sellers upload their documents with detailed information and their prices. Potential buyers search products based on their interests using the search engine in the website. Then, they evaluate the products and decide what to buy based on the product descriptions, prices, and other information including the evaluations of previous buyers. After the buyer decides to purchase and pay the price, s/he downloads the file and the market-maker or Company A transfers to the corresponding seller the sales revenue minus its transaction fee.

**Survey**

For the survey, a questionnaire was developed in two phases using seven-point Likert scale. In the first phase, a set of items was created based on the review of previous literature and on interviews with experienced users in the online knowledge market. After we discussed with practitioners in company A, inappropriate items for survey were removed. Then, pretest survey was conducted with 100 buyers and sellers of company A through its website, respectively. In the second phase, based on comments from the pretest survey, we refined total survey items. Finally, online survey was conducted with 1,000 buyers and sellers of company A's website, separately. The final samples for analysis in our study consisted of 701 buyers and 668 sellers.

**Characteristics of the sample**

Buyer respondents were primarily in their twenties and thirties (90% and 7%, respectively). In terms of gender, male was 51% and female was 49%. In the case of sellers, they were also mainly in their twenties and thirties (93% and 5%, respectively) and consisted of 53% male and 47% female. These figures are reflected the fact that younger Internet users are the main customers of the online knowledge market.

**Measure Development and Validation**

We developed multi-item scales based on a review of the relevant literature and interviews with practitioners and experienced users in the e-marketplace. Statistical procedures used to validate measures included assessment of item and scale reliability and convergent validity. We analyzed these using LISREL 8.20 and SPSS 10.0. In our study, most measurement items were adapted from past research. However, some items including market-maker's size and reputation, and the length of the relationship were modified scales based on Koufaris and Hampton-Sosa (2004)'s and Swan and Nolan (1985)'s research. Therefore, before summarizing the results of the confirmatory factor analysis, we assessed the construct validity of the measurements using exploratory factor analysis.
VARIMAX rotation was used in the exploratory factor analysis (EFA). The measurements loaded correctly on the constructs, with a total of 71 percent and 76 percent of the variance being explained by the data for buyers and sellers, respectively. The results are shown in Table 1 and Table 2.

**Trust measures**

Assessment of the trust in a market-maker measures raised questions about discriminant validity between the two underlying dimensions of trust, integrity and benevolence. Although other researchers find evidence of discriminant validity, these two dimensions of trust are highly correlated (see also Ganesan, 1994; Kumar et al., 1995). Although integrity and benevolence could be conceptually distinct in business relationships such as those studied here, they may be so intertwined that in practice they are operationally inseparable (Doney & Cannon, 1997). Therefore, we regard trust in a market-maker as an unidimensional construct.

**Buyer perspective**

After a series of respecifications guided by goodness of fit information in conjunction with content considerations, a final composition model for the 701 buyers was obtained. We evaluated the measures through confirmatory factor analysis (CFA) procedures. Although the Chi-square statistics was statistically significant ($\chi^2_{(332)} = 877.01; p < .01$), this is not unusual with large sample sizes (Doney & Cannon, 1997; Jarvenpaa et al., 2000). The goodness of fit index (GFI), comparative fit index (CFI), and incremental fit index (IFI) were .92, .93, and .93, respectively. And root mean square error of approximation (RMSEA) was .05. Synthesizing these, the results show that these data provide a reasonable fit with the hypothesized measurement model. Table 1 shows the results of confirmatory factor analysis and cronbach’s alpha. The results guarantee convergent validity and reliability of measurement.

Items of trust in a market-maker were mainly generated based on a review of literature. This construct consists of benevolence and integrity of a market-maker. The measure of trust in a market-maker exhibited high reliability (Cronbach’s $\alpha = .80$) and factor loadings were all over .92. We also developed new scales to measure the market-maker’s size, reputation, web usability, web security, information quality, and length of relationship. Especially, the measurements of information quality are composed by three items considering the e-marketplace context including product information, evaluations on product by experienced buyers, and the level of sellers. Length of relationship consists of two items such as the number of transactions and period of usage. Swan and Nolan (1985) proposed that buyer experience with the salesperson can be measured by the number of orders placed with and filled by salesperson’s firm. These measures exhibited good reliability, with the lowest value of cronbach’s alpha being .63 for length of relationship with a market-maker.

We also developed the measure of propensity to trust based on the past research. This construct is composed of three items. The values of cronbach’ alpha were .82. Factor loadings were all over .79 across two constructs.

Transaction intention consists of three measure items. Two items, intention to purchase and private information sharing, were adopted from McKnight and Chervany (2002) and remaining item, intention to recommend represented future interaction with a market-maker is added. Three items of Cronbach’s alpha was .64 and factor loadings were from .54 to .90.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Observation Variable</th>
<th>Factor loading</th>
<th>Cronbach’s $\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>Number of users</td>
<td>0.81/0.77</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>Number of products</td>
<td>0.90/0.79</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of categories</td>
<td>0.73/0.72</td>
<td></td>
</tr>
<tr>
<td><strong>Reputation</strong></td>
<td>Recognition</td>
<td>0.80/0.73</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>Famousness</td>
<td>0.90/0.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Image</td>
<td>0.74/0.55</td>
<td></td>
</tr>
<tr>
<td><strong>Web usability</strong></td>
<td>Ease of use</td>
<td>0.80/0.70</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Searching function</td>
<td>0.94/0.77</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Navigation</td>
<td>0.95/0.80</td>
<td></td>
</tr>
<tr>
<td><strong>Web security</strong></td>
<td>Payment system</td>
<td>0.70/0.58</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>Information privacy</td>
<td>0.98/0.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seal program</td>
<td>0.87/0.78</td>
<td></td>
</tr>
<tr>
<td><strong>Information quality</strong></td>
<td>Product information</td>
<td>0.74/0.65</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>Evaluation by experienced buyers</td>
<td>0.95/0.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seller’s level</td>
<td>0.99/0.82</td>
<td></td>
</tr>
<tr>
<td><strong>Length of relationship</strong></td>
<td>No. of transactions</td>
<td>0.92/0.85</td>
<td>0.63</td>
</tr>
<tr>
<td></td>
<td>Period of usage</td>
<td>0.81/0.84</td>
<td></td>
</tr>
<tr>
<td><strong>Propensity to trust</strong></td>
<td>Easiness to trust</td>
<td>0.98/0.86</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>Tendency to trust</td>
<td>0.99/0.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Difficulty to trust</td>
<td>0.79/0.77</td>
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</tr>
<tr>
<td><strong>Trust in a market-maker</strong></td>
<td>Keep customer’s best interests</td>
<td>0.99/0.77</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Keep promise</td>
<td>0.99/0.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trustworthy</td>
<td>0.92/0.73</td>
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<tr>
<td><strong>Transaction Intention</strong></td>
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<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Sharing information</td>
<td>0.54/0.59</td>
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</tr>
<tr>
<td></td>
<td>Recommendation</td>
<td>0.80/0.64</td>
<td></td>
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</tbody>
</table>

*Loadings of CFA/loadings of EFA

**Seller perspective**

As with the buyer model, after a series of respecifications guided by goodness of fit information in conjunction with content considerations, a final composition model for the 668 was obtained. Though the chi-square value was still statistically significant ($\chi^2_{(332)} = 777.57; p < .01$), this model was judged to provide a good fit. The RMSEA was .06 and GFI, CFI, and IFI were .91, .94, .94, respectively. These all were within acceptable standards. Table 2 is a summary of the final composition model for sellers. The results also guarantee convergent validity and reliability of measurement. The
constructs for sellers except information quality are same with those for buyers. The measurements of information quality for sellers consist of three items such as information on buyers’ needs, market trend, and selling policy.

Table 2- Confirmatory factor analysis for sellers

<table>
<thead>
<tr>
<th>Construct</th>
<th>Observation Variable</th>
<th>Factor loading</th>
<th>Cronbach’a g</th>
</tr>
</thead>
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<td><strong>Size</strong></td>
<td>Number of users</td>
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<td>0.83</td>
</tr>
<tr>
<td></td>
<td>Number of products</td>
<td>0.90/0.80</td>
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<td></td>
<td>Number of categories</td>
<td>0.84/0.79</td>
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<td><strong>Reputation</strong></td>
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<td></td>
<td>Image</td>
<td>0.71/0.56</td>
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</tr>
<tr>
<td><strong>Web usability</strong></td>
<td>Ease of use</td>
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</tr>
<tr>
<td></td>
<td>Seal program</td>
<td>0.90/0.78</td>
<td></td>
</tr>
<tr>
<td><strong>Information quality</strong></td>
<td>Market trend</td>
<td>0.79/0.61</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Transaction policy</td>
<td>0.89/0.79</td>
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<tr>
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<td>Experienced buyer’s feedback</td>
<td>0.85/0.82</td>
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<tr>
<td><strong>Length of relationship</strong></td>
<td>No. of transactions</td>
<td>0.89/0.88</td>
<td>0.70</td>
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<tr>
<td></td>
<td>Period of use</td>
<td>0.99/0.87</td>
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<tr>
<td><strong>Propensity to trust</strong></td>
<td>Easiness to trust</td>
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<td></td>
<td>Tendency to trust</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Difficulty to trust</td>
<td>0.81/0.80</td>
<td></td>
</tr>
<tr>
<td><strong>Trust in a market-maker</strong></td>
<td>Keep customer’s best interests</td>
<td>0.95/0.78</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Keep promise</td>
<td>0.99/0.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trustworthy</td>
<td>0.98/0.83</td>
<td></td>
</tr>
<tr>
<td><strong>Transaction Intention</strong></td>
<td>Intention to buy</td>
<td>0.90/0.75</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>Sharing information</td>
<td>0.72/0.52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recommendation</td>
<td>0.88/0.67</td>
<td></td>
</tr>
</tbody>
</table>

*Loadings of CFA/Loadings of EFA

Results

**Buyer perspective**

The model in Figure 1 was evaluated using LISREL 8.20. Table 3 shows the summary of structural model analysis. The chi-square value was significant ($\chi^2 = 992.06; p < .01$). A significant chi-square, however, might be an artifact of the sample size, thus other fit indices are more indicative (Jarvenpaa et al., 2000). The GFI was large (.91), and the CFI and IFI were all .91. In addition, the RMSEA was .05. Overall, the model fit was good.

As expected, the characteristics of the website except information quality, and length of relationship were positively associated with customer’s trust in a market-maker. However, market-maker’s reputation had a positive impact on the trust in a market-maker while size was unrelated to trust in a market-maker in terms of the characteristics of a market-maker. In the case of the length of relationship, it had a positive association with the reputation of a market-maker and information quality. In addition, the relationship between trust in a market-maker and transaction intention was positive. Therefore, while $H_1$ and $H_2$ were partially supported, $H_3$ and $H_4$ were supported. $H_5$ was not supported.

**Seller perspective**

The structural model for seller in Figure 1 was tested through LISREL as with the buyer’s model. Table 4 represents the summary of results. The chi-square was significant ($\chi^2 = 803.06; p < .01$). However, other fit indices, the GFI, CFI, and IFI were .91, .93 and .93, respectively. In addition, the RMSEA was .06. Therefore, the overall model fit was good.

For a seller, two of the four hypotheses tested regarding the sources of trust in a market-maker were partially supported, $H_3$ and $H_4$. Propensity to trust and length of relationship were unrelated to trust in a market-maker. Therefore, $H_1$ and $H_2$ were not supported. In addition, trust in a market-maker was positively related to transaction intention. Therefore, $H_5$ was supported.

**Discussions & Implications**

Our study has identified different sets of trust sources of a market-maker for buyers and sellers in the e-marketplace. Some factors that influence buyers also
influence sellers in their formation of trust in a market-maker. However, some variables have different effects across the two perspectives.

Regarding the characteristics of a market-maker, previous research (Doney & Cannon, 1997) identified company’s size and reputation to be significant to the trust in a company. However, our research found that only reputation is related to the trust in a market-maker positively for buyers and sellers. Because the market-maker’s size was measured with the respondents’ subjective perception on firm size, the absolute criteria of size was not provided. Therefore, we could not find the credible result on the effect of firm’s size on the trust in a market-maker.

While past research (McKnight et al., 2002) found that website quality, which is a combination of system quality and information quality, is positively associated with the trust for customers. However, the results of our analysis indicated that there is a difference between buyers and sellers perspective. In the case of buyers, system quality – web usability and security – were significant to the trust in a market-maker whereas information quality was not. In the e-marketplace, information used by buyers including product information and seller’s credit is more related to a seller rather than a market-maker. Thus, information quality seems to be unrelated to buyer’s trust in a market-maker in this study. On the other hand, for sellers, web security and information quality were related to the trust in a market-maker positively while web usability was not.

Comparing to buyers, sellers’ usage in the website is focused on selling a product or a service. They don’t need to use the complex system of the website such as searching, seller’s credit inquiry, delivery trace, and payment. Therefore, sellers may regard web usability as an irrelevant factor to the trust in a market-maker. On the contrary, information provided by a market-maker for sellers is primarily about selling guide including information on buyers’ needs, transaction policies, and feedback of experienced buyers. These are main concerns for sellers. For this reason, information quality may be a significant factor of seller’s trust in a market-maker.

Considering these results in terms of website quality, market-makers should maintain their own websites as a reliable and safe market for buyers as well as provide sellers with accurate and updated information on market trend.

Conclusions

The role of a market-maker is the key driver for the success in the e-marketplace. Internet users are often uneasy about conducting transactions with unknown trading partners through the online facilities of a market-maker and this can affect whether or not they make a transaction in the e-marketplace. Therefore, a market-maker should manage customer’s trust through the trust-building activities including identifying and qualifying participants and maintaining data such as reputation, credit-worthiness, and experience. Despite the importance of trust in a market-maker, there has been little empirical research on trust and antecedents in the e-marketplace. Furthermore, the majority of past studies on trust, which have used Internet stores as their context, focused on the perspective of the buyer (Papadopoulos et al., 2001).

Our analysis has taken the work of past research (e.g. Koufaris & Hampton-Sosa, 2004; McKnight & Chervany, 2002 etc.) one step further. Our research suggests that there are different facilitators for the trust-development between buyer and seller. This study also offers an important practical contribution by providing guidelines on how market-makers, in the e-marketplace, should address their trust problems differently for the buyer and seller, so as to induce their actual transactions and to encourage customer trust.

References


