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An Integrative Model of Consumer Trust in Internet Shopping

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Abstract

Despite the phenomenal growth of Internet users, the penetration rate of Internet shopping remains low. Previous works suggesting that the lack of trust is the major impediment stops consumers from building exchange relationships with Internet vendors. In this study, we synthesize the three theoretical perspectives of trust and perceived risk theory to develop an integrative model of consumer trust in Internet shopping. We empirically test the research model with a sample of 405 students in a local university. The results show that both perceived integrity and perceived risk have the greatest influence on consumer trust in Internet shopping. Propensity to trust exhibits a significant moderating effect on consumer trust and its antecedents. The implications of this study are noteworthy for both researchers and practitioners.

Keywords

Consumer trust in Internet shopping, Perceived Integrity, Perceived Risk, Propensity to Trust

1. Introduction

The use of the Internet for purchasing goods and services has enormous potential. The Internet enables consumers to shop or do transactions 24 hours a day, all year around from almost any location. It also provides consumers more choices and allows them to have quick comparisons. Moreover, it allows consumers to interact, exchange ideas, and to compare experiences with other customers in the electronic communities. Though the Internet offers a range of advantages that collectively have been shown to be important enough to attract massive interest, recent surveys demonstrated that the penetration rate of Internet shopping remains low. A global Internet usage survey¹ reports that the proportion of users making online purchase remains at 15 percent since 2001. This low Internet shopping penetration is common in most countries, especially in the Asia-Pacific region. A recent survey² reports that less than 20 percent of Internet users in Asian countries have experienced Internet shopping. Consistently, eMarketer³ has identified “General lack of trust in vendor” as a significant factor inhibiting consumers’ online purchases.

Recent research also indicates that consumers’ lack of trust constitutes a major psychological barrier to the adoption of electronic commerce. Hoffman, Novak and Peralta (1999) contended that Internet users do not have enough trust to engage in relationship exchanges with Internet vendors involving money and personal information. Although recent studies offer important insights into trust in Internet stores (Jarvenpaa, Tractinsky, & Vitale 2000), little theory-guided empirical research has been undertaken to understand the nature and potentially important constructs of trust in Internet shopping. Only very few research papers (e.g. Lee and Turban 2001; McKnight, Choudhury & Kamar 2002) available provide a rich model in explaining trust in the context of consumer-based electronic commerce.

Accordingly, the key objective of this study is to examine the nature of trust, and to build a rich and extensive model of consumer trust in Internet shopping. More specifically, we develop and empirically test the model that identified salient determinants of consumer trust in Internet shopping. We expect this study will present important theoretical and practical contributions. Theoretically, we develop an integrated model of consumer trust in Internet shopping by synthesizing three different theoretical perspectives. Practically, we identify the important factors affecting consumer trust in Internet shopping. The results provide Internet vendors some guidelines to build consumer trust and enhance exchange relationships with Internet shoppers.

This paper is structured as follows. We first address different theoretical perspectives of trust in the study of Internet shopping. We then introduce the research model and present research hypotheses. Next, we describe the research methodology and discuss the statistical results. We conclude the findings by noting the managerial and research implications.

¹ Nua Internet Survey (2002) “Internet users still not buying online”
http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905358100&rel=true

² Nua Internet Survey (2002) “Web-based shopping still unpopular in EU”
http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905358388&rel=true

³ eMarketer (2000)
http://www.emarketer.com/analysis/ecommerce_b2c/20000801_privacy.html

2. Theoretical Background

The notion of trust has been examined under various contexts over the years, for instances, in bargaining (Schurr & Ozanne 1985), industrial buyer-seller relationships (Doney & Cannon 1997), distribution channels (Dwyer, Schurr & Oh 1987), partner cooperation in strategic alliances (Das 1998), and the study of market research (Moorman, Deshpande & Zaltman 1993). These studies have adopted different theoretical perspectives in investigating trust, and Lewicki and Bunker (1995) have further aggregated these different perspectives into three main categories with respect to the way it is viewed. The three categories entail (1) the views of social psychologists, (2) the views of personality theorists, and (3) the views of sociologists and economists.

Social psychologists scrutinized trust at the interpersonal and group levels, and they defined trust as an expectation about the behavior of others in transactions. In particular, how the contextual factors enhance or inhibit the development and maintenance of that trust (Lewicki et al. 1995). Mayer and Schoorman (1995) summarized prior studies on trust and identified three most frequently cited attributes of the trustworthiness of a trustee. The three attributes include ability, benevolence and integrity. Ability refers to the skills, competencies, and characteristics of the trustees. Benevolence is the extent to which a trustee is believed to do good to the trustor. Integrity refers to the consistency of the trustee's past actions and credible communications.

Personality theorists studied trust as a belief, expectancy, or feeling that is deeply rooted in the personality. They focused on the specific developmental and social contextual factors that shape the readiness of trust. Robinson (1996) defined trust as "expectations, assumptions, or beliefs about the likelihood that another's future actions will be beneficial, favorable, or at least not detrimental to one's interests (p.576)." People with different developmental experiences, personality types, and cultural backgrounds vary in their propensity to trust.

Sociologists and economists delved the issue of trust into an institutional phenomenon, individuals must generalize their trust to large organizations made up of individuals with whom they have low familiarity, low interdependence, and low continuity of interaction. They focused on how institutions and incentives were created to reduce anxiety and uncertainty associated with transactions among relative strangers (Zucker 1986). Barney and Hansen (1994) contended "some level of compensation will always exist where strong-form trustworthy partners will abandon their values, principles, and standards of behavior, and act in opportunistic ways (p.179)."

The three theoretical perspectives project fundamentally different views of trust. It is necessary to reconcile these approaches and develop a framework that acknowledges the role of rational considerations, social inputs, as well as personal traits in the study of consumer trust in Internet shopping. Indeed, the three perspectives only provide us a framework guiding us to postulate an integrative model of consumer trust in Internet shopping. Since Internet shopping is a new form of commercial activity, this study attempts to identify and include factors specific to the context of consumer-based electronic commerce.

Internet shopping involves a higher degree of uncertainty and risk when compared with conventional shopping. Prior studies of trust in traditional buyer-seller relationship (Doney et al. 1997) have already found that there exists a very strong relation between risk and trust. Perceived risk theory has been playing an important role in consumer behavior research and

relationship marketing literature (Dion, Easterling & Miller 1995, Morgan & Hunt 1994). Mitchell (1999) contended that perceived risk is powerful at explaining consumer behavior since consumers tend to avoid mistakes than to maximize utility in purchasing. Perceived risk appears to be a condition for trust to arise.

Delving into the study of consumer trust in Internet shopping, this study synthesizes the three different perspectives of trust and perceived risk theory, and postulates an integrative model to explain consumer trust in Internet shopping.

3. Research Model and Hypotheses

Lee and Turban (2001) has modified the definition of trust proposed by Mayer et al.'s (1995) and revised it to fit the specific context of Internet shopping. They defined consumer trust in Internet shopping as “the willingness of a consumer to be vulnerable to the actions of an Internet merchant in an Internet transaction, based on the expectation that the Internet merchant will behave in certain agreeable ways, irrespective of the ability of the consumers to monitor or control that Internet merchant (p.79)”. The current study adopted Lee et al.'s (2001) definition in explaining consumer trust in Internet shopping.

Synthesizing the three perspectives of trust and perceived risk theory, a research model with a variety of factors specific to the context of Internet shopping is postulated. As shown in Figure 1, our research model proposes perceived trustworthiness of Internet vendor, external environment, and perceived risk as the three main determinants of consumer trust in Internet shopping. Moreover, propensity to trust exhibits a moderating impact on the relationships between consumer trust and its antecedents (except perceived risk).

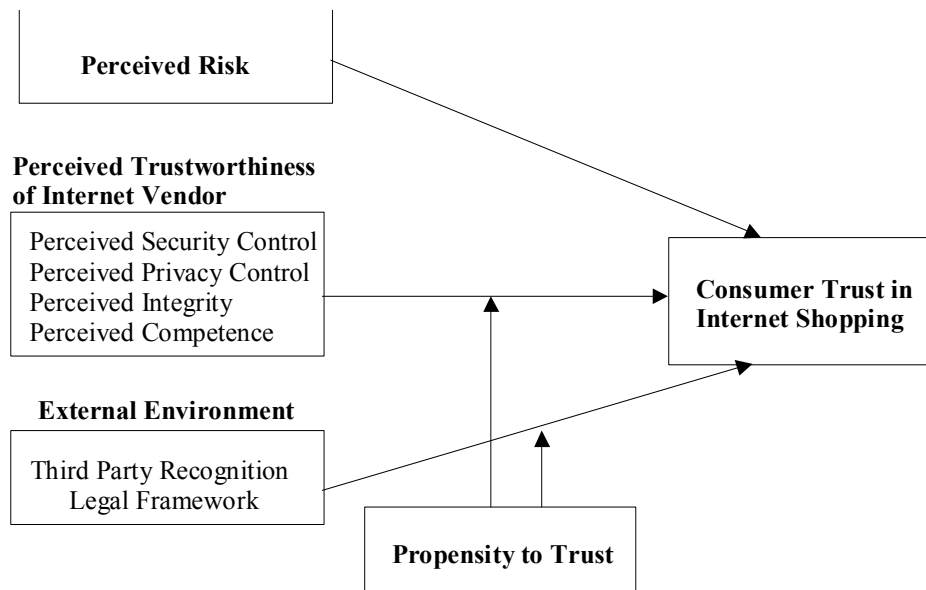


Figure 1. An Integrative Model of Consumer Trust in Internet Shopping

Internet shopping is a new form of commercial activity. Consumers have to interact with Internet stores and experience completely different shopping procedures when compared with conventional shopping. Consumers cannot physically check the quality of the products before making a purchase, nor can they fully monitor the safety and security of sending sensitive personal and financial information through the Internet to a party whose behaviors and motives may be hard to predict. With the guidance of the theoretical framework, we address the antecedents of consumer trust of this specific shopping channel.

3.1 The Role of Main-effect characteristics in Trust: Perceived Trustworthiness of Internet Vendor

Because of the lack of physical presence, Internet stores need a significant amount of visibility to generate traffic and businesses. Reputation is found to be an important factor driving traffic to the websites. However, in order to promote the relationship exchange between consumers and Internet vendors, Internet vendors have to create a trustworthy image that helps build consumer trust. Adapting the social psychology perspective of trust (Lewicki et al. 1995), we propose trustworthiness as one of the determinants of consumer trust in Internet shopping. In the current study, we identify four trustworthiness factors that are specific to Internet vendors. The four factors are perceived integrity, perceived competence, perceived security control, and perceived privacy control.

Perceived integrity refers to the perception of Internet shoppers on the honesty of Internet vendors. In particular, whether the vendor has consistent actions, whether its actions are congruent with its own words, and whether its transactions with its consumers are fair. **Perceived competence** is conceptualized as the perception of Internet shoppers on the skills and expertise of Internet vendors. **Perceived security control** refers to the perception of Internet shoppers on Internet vendors' ability in fulfilling security requirements. **Perceived privacy control** is conceived as the perception of Internet shoppers on Internet vendors' ability in protecting consumers' personal information collected from its electronic transactions from unauthorized use or disclosure.

H1: Perceived Integrity (PI) of an Internet vendor is positively related to Consumer Trust in Internet Shopping (CTIS).

H2: Perceived Competence (PC) of an Internet vendor is positively related to Consumer Trust in Internet Shopping (CTIS).

H3: Perceived Security Control (PSC) of an Internet vendor is positively related to Consumer Trust in Internet Shopping (CTIS).

H4: Perceived Privacy Control (PPC) of an Internet vendor is positively related to Consumer Trust in Internet Shopping (CTIS).

3.2 The Role of Main-effect characteristics in Trust: External Environment

Sociologists viewed trust as the ability to structure contracts or rewards and punishments so that individuals behave in a pre-specified manner. This type of trust is essential to maintain social orders (Lewis & Weigert 1985), and we believe that it is particularly important to the Internet environment. In the faceless world of electronic commerce, an objective third party (e.g. TRUSTe, BBBOnline, Verisign) and the government should play an important role in establishing Internet consumer's bill of rights.

In this study, **third party recognition** refers to the perception of Internet shoppers on effectiveness of third party recognition bodies in assuring the trustworthiness of Internet vendors. **Legal framework** refers to the perceived effectiveness of the law and code of practice established to protect Internet shoppers during electronic transactions.

H5: Perceived effectiveness of third party recognition (TPR) is positively related to Consumer Trust in Internet Shopping (CTIS).

H6: Perceived effectiveness of legal framework (LF) is positively related to Consumer Trust in Internet Shopping (CTIS).

3.3 The Role of Main-effect characteristics in Trust: Perceived Risk

According to the definition of trust defined by Boon and Holmes (1991), trust only arises in a risky situation. This situation is especially evidence in Internet shopping, because the user is exposed to higher risk if he or she chooses to trust and engage in Internet shopping instead of alternate means of commerce. In relationship marketing literatures, risk is related to trust and it is defined as a necessary antecedent for trust to be operative (Mitchell, 1999). **Perceived risk** is

defined as the perception of Internet shopper on the possibility of yielding unexpected outcomes or even negative consequences.

H7: Perceived risk of Internet shopping (PR) is negatively associated with Consumer Trust in Internet Shopping (CTIS).

3.4 The Moderating effect of Propensity to Trust

Propensity to trust is viewed as a personality trait that leads to generalized expectation about the trustworthiness of others. It is a stable within-party factor that affects the likelihood the party will trust. People with different cultural backgrounds, personality types, and developmental experiences vary in their propensity to trust (Hofstede 1980). In this study of consumer trust in Internet shopping, we believe consumer's propensity to trust affects the relationships between trust and its antecedents.

H8: Propensity to Trust moderates the relationship between the perceived integrity of an Internet vendor and Consumer Trust in Internet Shopping (CTIS).

H9: Propensity to Trust moderates the relationship between the perceived competence of an Internet vendor and Consumer Trust in Internet Shopping (CTIS).

H10: Propensity to Trust moderates the relationship between the perceived security control of an Internet vendor and Consumer Trust in Internet Shopping (CTIS).

H11: Propensity to Trust moderates the relationship between the perceived privacy control of an Internet vendor and Consumer Trust in Internet Shopping (CTIS).

H12: Propensity to Trust moderates the relationship between the effectiveness of the third party recognition and Consumer Trust in Internet Shopping (CTIS).

H13: Propensity to Trust moderates the relationship between the effectiveness of the legal framework and Consumer Trust in Internet Shopping (CTIS).

4. Research Method

As there are only limited amount of studies on the trust in Internet shopping, most of the measuring instrument in this study had to be developed from scratch, rather than borrowed from the past literatures. By employing Moore and Benbasat's (1991) rigorous three-stage instrument development approach, a set of 31 measurement instrument with high degree of reliability and validity was developed (Cheung & Lee 2001). They are listed in Appendix A.

A self-administrative questionnaire was distributed to the Management Information Systems (MIS) students from the Faculty of Business. The sampling unit of this study is believed to be the potential Internet shoppers. With reference to ACNielsen Insights (2000)⁴, the young generation will be the major groups participating in Internet shopping in the near future. A total of 405 pieces of usable questionnaire was collected.

5. Data Analysis

Since the use of structural equation modeling techniques for analyzing theoretical models containing moderators is still very much in its infancy (Jaccard & Wan 1996), standard multiple regression techniques was applied instead. Before examining the moderating effect of the research model, overall model test was conducted first.

5.1 Test of Overall Model

With reference to Table 1, the research model (moderating model) is statistically significant ($p=0.00$) and the multiple coefficient of determination of the research model is 0.59. This shows that the predictive power of the research model is moderate and 59 percent of the total variation of Consumer Trust in Internet shopping is explained by the model.

Model	R Square	F statistic	df	p-value
Original Model CTIS=PSC+PCC+PI+PC+PTT+TPR+LF+PR	0.57	65.54	8	0.00
Moderating Model CTIS=PSC+PCC+PI+PC+PTT+TPR+LF+PR +PSC*PTT+PCC*PTT+PI*PTT+PC*PTT +TPR*PTT+LF*PTT	0.59	39.34	14	0.00

KEY:

PSC = Perceived Security Control

PPC = Perceived Privacy Control

PI = Perceived Integrity

PC = Perceived Competence

PTT = Propensity to Trust

TPR = Third Party Recognition

PR = Perceived Risk

EX = Experience

CTIS = Consumer Trust in Internet Shopping

⁴ ACNielsen Insights Hong Kong Issue 2 (2000)

$$\text{Hierarchical F} = \frac{(R_m^2 - R_o^2)/(k_m - k_o)}{(1 - R_m^2)/(N - k_m - 1)}$$

Table 1. Model Summary

5.2 Test of Moderating Effect

With the presence of moderator in the research model, two fundamental issues have to be considered first. (1) The presence of the moderating effect and (2) the strength of the moderator.

To determine whether the moderator effect is significant, Hierarchical F test was applied. If the difference between R square in original model and that in moderating model is significant, a significant moderator effect is concluded. Table 1 provides the summary of the two models, the original model and the moderating model. In this study, the Hierarchical F is statistically significant, (Hierarchical F statistic = 2.27, $F_{6,390} = 2.10$), which means that propensity to trust is a significant moderator in the research model.

The strength of the moderating effect is indexed by the difference in multiple coefficients of determinations for the original model and the moderating model. As shown in Table 1, for the former, the multiple coefficient of determination is 0.59, and for the later it is 0.57. The moderating effect, therefore accounts for 2% of the variance in Consumer Trust in Internet shopping.

5.3 Test of Main Effect

Table 2 contains the standardized coefficients, t-value and p-value resulting from the multiple regression model. In this study, only perceived integrity (beta = 0.35; $p < 0.05$) and perceived risk (beta = -0.68; $p < 0.05$) are significantly related to consumer trust in Internet shopping, providing support on hypothesis 3 and hypothesis 7. Because of the presence of the significant moderating effect, propensity to trust, the interaction effect between significant perceived integrity and propensity to trust is also significant (beta = 0.48; $p < 0.05$).

	Standardized Coefficients	t-value	p-value
H1: Effect of Perceived Integrity	0.35	2.34	0.02*
H2: Effect of Perceived Competence	-0.02	-0.17	0.87
H3: Effect of Perceived Security Control	-0.11	-0.91	0.36
H4: Effect of Perceived Privacy Control	-0.19	-1.06	0.29
H5: Effect of Effectiveness of Third Party Recognition	0.09	0.68	0.49
H6: Effect of Effectiveness of Legal Framework	-0.09	-0.71	0.48
H7: Effect of Perceived Risk	-0.68	-18.38	0.00*
H8: Interaction effect of Perceived Integrity and Propensity to Trust	0.48	-1.94	0.04*
H9: Interaction effect of Perceived Competency and Propensity to Trust	0.07	0.29	0.77

H10: Interaction effect of Perceived Security Control and Propensity to Trust	0.23	1.13	0.26
H11: Interaction effect of Perceived Privacy Control and Propensity to Trust	0.43	1.63	0.10
H12: Interaction effect of Third Party Recognition and Propensity to Trust	-0.33	-1.38	0.17
H13: Interaction effect of Legal Framework and Propensity to Trust	0.14	0.88	0.38

*p<0.05

Table 2. Result of Multiple Regression Model

6. Conclusions and Discussion

The intent of this study is to develop an integrative model for consumer trust in Internet shopping. Through the analysis reported in this paper, perceived risk and perceived integrity are two significant antecedents of consumer trust in Internet shopping. Moreover, propensity of trust exhibits a significant moderating effect on the relationship between perceived integrity and consumer trust in Internet shopping.

The findings of this study are noteworthy for both researchers and practitioners. Drawing from the theories of psychology, sociology, social psychology, and perceived risk, we develop an integrative model for a more holistic explanation and prediction of consumer trust in Internet shopping. Though psychology, social psychology, and perceived risk perspectives contribute the explanations and predictions of consumer trust in Internet shopping, a significant proportion of the model variance is explained by perceived risk of Internet shopping. The Internet is a huge marketplace with high degree of perceived risk from the potential customers. Consumers cannot physically examine their products before purchases, and consumers worry about the divulgence of their personal information or credit card number through the transaction with the Internet vendors. As expected, the perception of risk exhibits the greatest impact on consumer trust in Internet shopping. Consistent with the theory of planned behavior (Ajzen 1991), the higher the risk the lower the likelihood of transaction. Perceived risk of Internet shopping inhibits consumer trust in Internet shopping.

A Global Online Retailing Report (2001)⁵ highlights consumer trust as the fundamental block in online retailing. We believe the findings of this study provide the Internet vendors valuable hints for a successful design of Internet stores. Specifically, Internet stores that can successfully build an image of strong justice and can fulfill all the promises that have been made to the customers will gain consumers' trust. Indeed, consumers will look at whether the actions of Internet vendors are congruent with the own words, and whether the transactions with consumers are fair. Fiore (2001) suggested that no matter what pricing model the Internet stores adopted, the stores need to make it very clear to the shoppers that come to their websites.

“Consumers don’t like surprises. If you promote your site as the low-price leader, your prices should show it. If you’re a boutique shop and charge higher-than-average prices, show the value you’ve added to your products or service. Make it very clear what your charge and why – and make sure it fits the expectations of your site’s visitors. (Fiore 2001)”

⁵ An Ernst and Young Special Report: Global Online Retailing (2001)

Order fulfillment is another challenge for Internet vendors to maintain their perceived integrity. In the 1999 holiday season, eToys failed to deliver 4 percent of orders on time. The resulting bad publicity gave it a black eye from which it never recovered⁶. On the other hand, Amazon realized the importance of fulfillment as a central feature of the customer experience. It put full effort in managing its own fulfillment operations, and thus more than 99 percent of holiday orders arrived on time in the 1999 holiday season. This is the reason why Amazon has been chosen as the most user-friendly website offering online consumer world-class shopping experience.

Indeed, we believe our findings will help Internet vendors in devising a process to turn Internet shoppers into Internet consumers. In relationship marketing literatures, trust is postulated as the key driver of building consumer loyalty. In the highly competitive electronic environment, consumers can access virtually unlimited selection of products, brands, and sellers. Moreover, they can switch brands or try different products in a single click. However, consumers have limited time and unlimited choice, they would naturally seek and stick to sellers who best understand and meet their needs. Only companies that can effectively manage their consumer online shopping experiences and build their consumer loyalty will eventually survive.

Notwithstanding of the above findings, the study has some limitations. One potential limitation of this study is that the data were collected from university students. Over 90 percent of the respondents do not have online shopping experiences. We suspected that they do not fully understand the online shopping channel. Since the majority of the sample is not familiar with online shopping procedures, perhaps factors specific to the context of online shopping (perceived security control, perceived privacy control, third party recognition, and legal framework) are not found significant. Therefore, we will target a sample including both student and non-student groups for the future studies.

References

- Ajzen, I (1991), 'The theory of planned behavior', *Organizational Behavior and Human Decision Processes*, vol. 50, pp. 179-211.
- Barney, JB & Hansen, MH (1994), 'Trustworthiness as a Source of Competitive Advantage', *Strategic Management Journal*, vol. 15, pp. 175-190.
- Boon, SD & Holmes, JG (1991), 'The Dynamics of Interpersonal Trust: Resolving Uncertainty in the Face of Risk', *Cooperation and Prosocial Behavior*, pp.190-211.
- Cheung, CMK & Lee, MKO (2001), 'Trust in Internet Shopping: Instrument Development and Validation through Classical and Modern Approaches', *Journal of Global Information Management*, vol. 9, no. 3, pp. 23-35.
- Das, TK (1998), 'Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances', *The Academy of Management Review*, vol. 23, no. 3, pp. 491-513.
- Dion, P, Easterling, D & Miller, SJ (1995), 'What is really necessary in successful buyer-seller relationships?', *Industrial Marketing Management*, vol. 24, no. 1, pp. 1-9.

⁶ The Wall Street Journal Interactive, December 30, 1999.

- Doney, PM & Cannon, JP (1997), 'An Examination of the Nature of Trust in Buyer-seller Relationships', *Journal of Marketing*, vol. 61, pp. 35-51.
- Dwyer, RF, Schurr, PH & Oh, S (1987), 'Output Sector Munificence Effects on the Internal Political Economy of Marketing Channels', *Journal of Marketing Research*, vol. 24, pp. 347-358.
- Fiore F. (2001), 'The "Big Five" of Online Shopping', *informIT*, Nov 09, 2001.
- Hoffman, DL, Novak, TP & Peralta M (1999), 'Building Consumer Trust Online', *Communications of the ACM*, April 1999, vol. 42, no. 4, pp. 80-85.
- Hofstede, G (1980), 'Motivation, Leadership, and Organization: Do American Theories Apply Abroad?' *Organizational Dynamics*, vol. 9, no. 1, pp. 42-63.
- Jaccard, J & Wan, CK (1996), *Interaction Effect in Multiple Regression*, Sage Publications.
- Jarvenpaa, SL, Tractinsky, N & Vitale, M (2000), 'Consumer trust in an Internet store', *Information Technology and Management*, vol. 1, no. 1/2, pp. 45-72.
- Lee, MKO & Turban, E (2001), 'A Trust Model for Consumer Internet Shopping', *International Journal of Electronic Commerce*, September 2001, vol. 6, no. 1, pp. 75-91.
- Lewicki, RJ & Bunker, BB (1995), 'Trust in Relationships: A Model of Trust Development and Decline', *Conflict, Cooperation, and Justice*, Jossey-Bass, San Francisco.
- Lewis, JD & Weigert, A (1985), 'Trust as a Social Reality', *Social Forces*, June 1985, vol. 63, no. 4, pp. 967-985.
- Mayer, RC & Schoorman, FD (1995), 'An Integrative Model of Organizational Trust', *Academy of Management Review*, vol. 20, no. 3, pp. 709-734.
- McKnight, DH, Choudhury, V & Kamar, C (2002), 'Developing and Validating Trust Measures for e-Commerce: An Integrative Typology', *Information Systems Research*, September 2002, vol. 13, no. 3, pp. 334-359.
- Mitchell, VW (1999), 'Consumer Perceived Risk: Conceptualizations and Models', *European Journal of Marketing*, vol. 33, no. 1/2, pp. 163-195.
- Moore, GC & Benbasat, I (1991), 'Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation', *Information Systems Research*, vol. 2, no. 3, pp. 192-222.
- Moorman, C, Deshpande, R & Zaltman, G (1993), 'Factors Affecting Trust in Market Research Relationships', *Journal of Marketing*, Jan 1993, vol. 57, pp. 81-101.
- Morgan, RM & Hunt, SD (1994), 'The commitment-trust theory of relationship marketing', *Journal of Marketing*, vol. 58, pp. 20-38.
- Robinson, SL (1996), 'Trust and Breach of the Psychological Contract', *Administrative Science Quarterly*, vol. 41, pp. 574-599.
- Schurr, PH & Ozanne, JL (1985), 'Influences on Exchange Processes: Buyers' Preconceptions of a seller's trustworthiness and Bargaining Toughness', *Journal of Consumer Research*, vol. 11, pp. 939-953.

Zucker, LG (1986), 'Production of Trust: Institutional Sources of Economic Structure, 1840-1920' in *Research in Organizational Behavior*, ed. BM Staw & LL Cummings, 8th edn, JAI Press, Greenwich, CT, pp. 53-111.

Appendix A

Antecedent	Item
Propensity to Trust	
a1a	It is easy for me to trust a person/thing.
a1b	My tendency to trust a person/thing is high.
a1c	I tend to trust a person/thing, even though I have little knowledge of it.
a1d	Trusting someone or something is not difficult.
Perceived Security Control	
b1a	Internet vendors implement security measures to protect Internet shoppers.
b1b	Internet vendors usually ensure that transactional information is protected from accidentally altered or destroyed during transmission on the Internet.
b1c	I feel secure about the electronic payment system of Internet vendors.
Perceived Privacy Control	
b2a	Internet vendors concern about consumers' privacy.
b2b	Internet vendors will not divulge consumers' personal data to other parties.
b2c	I feel safe about the privacy control of Internet vendors.
Perceived Integrity	
b3a	Internet vendors will not charge Internet shoppers more for Internet shopping.
b3b	Internet vendors are honest to their consumers.
b3c	Internet vendors act sincerely in dealing with customers.
Perceived Competence	
b4a	Internet vendors have the ability to handle sales transactions on the Internet.
b4b	Internet vendors have sufficient expertise and resources to do business on the Internet.
b4c	Internet vendors have adequate knowledge to manage their business on the Internet.
Third Party Recognition	
c1a	There are many reputable third party certification bodies available for assuring the trustworthiness of Internet vendors.
c1b	I think third party recognition bodies are doing a good job.
c1c	Existing third party recognition bodies are adequate for the protection of Internet shoppers' interest.
Legal Framework	
c2a	The existing business code of conduct is sufficient for the protection of Internet shoppers' interest.
c2b	The existing law is adequate for the protection of Internet shoppers' interest.
c2c	The existing legal framework is good enough to protect Internet shoppers.
Trust in Internet Shopping	
d1a	Internet shopping is unreliable.

d1b	Internet shopping cannot be trusted, there are just too many uncertainties.
d1c	In general, I cannot rely on Internet vendors to keep the promises that they make.
d1d	Anyone trusting Internet shopping is asking for trouble.
Perceived Risk	
d2a	Internet shopping is risky.
d2b	Shopping on the Internet entails uncertainty or vulnerability.
d2c	There are negative outcomes on Internet shopping.
d2d	I find it is dangerous to shop on the Internet.