

# The Impact of Electronic Shopping Site's Privacy Policy, Reputation, and Trust on Customers' Purchase Intentions

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## ABSTRACT

With the advent of EC, Internet shopping becomes a way of business transactions. This research investigates how trust can affect customers' purchase intentions. Having surveyed related literature, a conceptual framework has been proposed. The framework consists of four components: independent variables (privacy policy and reputation), intervening variables (cognitive and affective trust), dependent variable (customers' purchase intentions), and moderating variable (perceived risk). The 2(with/without privacy policy)\*2(good/bad reputation) experiments are employed to collect primary data to validate the proposed conceptual framework. The two levels privacy policy and reputation can significantly influence cognitive and affective trust. Moreover, the effect of cognitive trust and purchase intentions is more than that of affective trust. The study result also shows the interaction between privacy policy, reputation, and trust for the major product is not significant. Therefore, we suggest that electronic shopping sites' managers should consider customers' mentality in order to raise their purchase intentions.

## INTRODUCTION

The applications of Internet have been evolved from the communications of the national defense and academic researches into marketing, information services, recreations and general commerce. The whole world is now devoted to expanding electronic commerce. In other words, the Internet becomes another communication medium besides broadcasting, television, newspapers and magazines. Moreover, it can be used interactively for doing transactions like telephones and fax machines. Electronic commerce has three business models: business-to-business (B2B), business-to-consumer (B2C), and consumer-to-consumer (C2C). This research provides a conceptual framework for B2C discussions.

Furthermore, in terms of B2C marketing activities, we should persuade relationship marketing instead of transaction marketing now. So-called relationship marketing aims at not only providing different products to different customers but also building long-term stable relationship with customers in order to gain customers' lifelong value. Most important, when scholars discuss relationship marketing they find that the central of relationship marketing is trust [15]. Moreover, advantages of electronic shopping quite attract customers, for example, saving time, more privacy, not expensive, etc. But it truly has some risks. Customers who do their shopping may perceive some risks in most stores, especially in non-stores. Hence customers may take action to reduce some risks and then affect customers' purchase intentions [17].

This research aims at the trust issue when customers go shopping in electronic shopping sites. Main concerns would be that how electronic shopping sites' privacy policy and reputation influence customers' buying intentions.

## CONCEPTUAL FRAMEWORK AND MODEL

### Internet Shopping



Internet shopping is also called electronic shopping. Kotler (1994) [12] suggests that Internet shopping is that customers use personal computers linking on-line service to order products or services. In other words, Internet is used as a marketing channel. Generally speaking, when customers browse electronic stores' homepages through Internet and buy goods from those stores, it is so-called Internet shopping.

According to an investigation of the famous search engine Yam.Com about Internet users in Taiwan in 1999 [22], the result finds that the overwhelming majority (about 76.3%) doesn't shop through Internet. The primary concern is the transaction safety which accounts for 46.5%. Other reasons blocking their interests are the protection of their personal information and transaction safety. One can see that because of lack of trust, customers would not go shopping through the Internet.

### Privacy Policy

As the information age coming, Internet users growing and technology developing, Internet has become a major tool of gathering and communicating personal information by the way of asking users for registering or providing their personal information before supplying services. Therefore, the conception of information privacy shows up. Information privacy is different from traditional privacy, which thinks of personal data protection and the confrontation of privacy in the information age. So-called information privacy is that the owner of data can't use the information for another purpose, which the person involved provides for a particular purpose without informing and acquiring agreement. The key point of this view is that people are the originally productive source of their personal datum, the final checker for the correctness and completeness of their information, and the participative decision-maker of their datum to use to what extent [13].

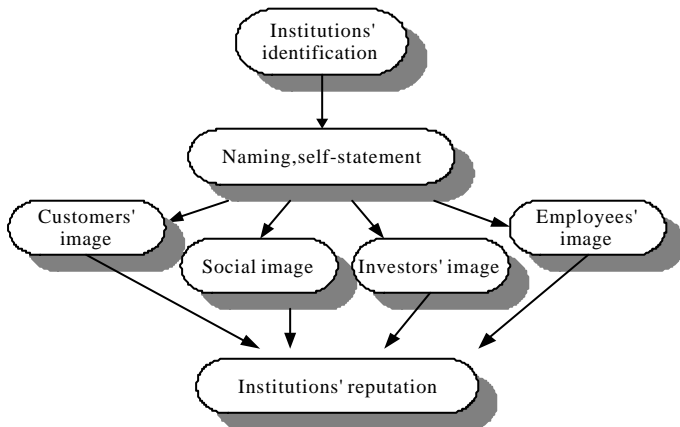
Since information privacy is so important, some Internet stores start to explore relative privacy policy on homepages in order to explain how they use customers' data to protect their rights. Nevertheless, IMSSN's surveyed 700 worldwide sites and found that most of them (about 75%) still do not exhibit privacy policy. Privacy policy means that sites disclose such words as 'privacy policy' and displays some options like FAQs and help on homepages. Other than one can directly select some illustration about privacy policy on the first page, most sites communicate its privacy policy

by step-by-step displays on the screen [21]. Additionally, some sites show it by the ways of professional certification, for example TRUSTe [11] or BBBonline [10]. Such certification supplies the protection of privacy policy. Only when a site identifies itself as an advocate of protecting privacy and its privacy policy conforms with the rules of data protection, it can then apply for trustmark(  ,  ).The trustmark is awarded only to sites that adhere to established privacy principles and agree to comply with ongoing TRUSTe or BBBonline oversight and consumer resolution procedures [8].

**Reputation**

Reputation is a kind of social memory, which consists of business past, experience, past products, managerial performance and so on. The kind of social memory will form good, not good, excellent or indistinct business evaluation. In fact, an institution or company's reputation is a blueprint, which assembles customers' image, social image, investors' image, and employees' image through institutions' identification, naming, and self-statement as shown in Figure 1 [3]. In other words, institutions' reputation, which is a value judgment for institutions' characteristics, usually forms with long-term accumulation and reinforces by effective communication [9].

The past researches find that good or bad store's reputation is the most considerable factor when customers go shopping in electronic shopping sites [23]. Hence, among the most successful factors of influencing electronic shopping sites,



to build good reputation is the extremely important one. That is to say, reputation can affect customers' trust to non-stores shopping and then influence their purchase intentions.

Figure 1. The composition of a institution's reputation [3]

**Trust**

Internet is a virtual circumstance. Transaction parties need to shoulder some risks when they transact in the virtual space. According to the social exchange theory, trust is an important element between the two interdependent transaction parties. Trust can reduce the opponent's opportunistic risk. If there are no trust between the two parties, the transaction could still go on but probably could have cognitive gap and even have accommodation results [4]. As for trust's definition, every scholar has his opinions. Our research adopt the definition of Moorman, Zaltman & Deshpande [19] which is more comprehensive. They

suggest that trust is to have willingness to trust transaction partners, and to have confidence to them. If actors of trust feel confident to trusted persons but have no willingness to relay on them, then this kind of trust is very limited and meaningless.

Driscoll (1978) and Scott (1980) classify trust according to the formative process. Trust has two components: (1) general component, including behavioral and affective trust; (2) specific component, including situation and cognitive trust [15]. Haider Ali & Sue Birley(1998)[1] propose a trust model which includes cognitive and affective trust after discussing the role of trust in marketing activities. Daniel(1995) separate trust into two categories which are affective base and cognitive base trust[15]. Michell, Reast & Lynch (1998) [18] recommend twenty-two variables such as confidence, truthfulness, integrity, professional standing, reputation, fair-mindedness, benevolence, caring, values, sincerity, helpful advertising, warranties, dependability, quality consistency, quality standing, predictability, guarantee from corporate name, personal experience, opinion, purchasing duration, experience of peers, and delivery. They divide the above-mentioned into four dimensions which are probity, equity, reliability and satisfaction. The four dimensions belong to affective and cognitive variables. As Figure 2 shows. According to the foregoing literature, our research suggests that the trust should be made up of twocategories, which are affective and cognitive trust.

**Perceived Risk**

Cox [6] indicates that customers will have perceived risks when they cannot feel satisfying with the goal of purchasing, assuming customers' behavior is goal-oriented. Perceived risk is a function of two factors: (1) Customers perceive the probability of disadvantage before buying; (2) Customers subjectively perceive the degrees of losses when the results of buying are disadvantageous. Cunningham (1967) [7] defines the former is uncertainty and the latter is consequence. Moreover, Cunningham measures the specific products' risks and finds that those are in specific order. That is, customers think some as higher perceived risk products than others. They are in some order. However, we should not classify different products into a high or low perceived risk. Cunningham points out that perceived risk are highly of individualistic nature and time dynamics. In other words, one may feel the purchase situation risky, while others may not. Different kinds of customers will perceive different degrees of risks. Besides, customers may perceive high risks in some point of time, but they may not think so in the future [17].

Roselius [20] classifies perceived risk factors into five groups such as performance risk, financial risk, physical risk, social risk and time-loss risk. Furthermore, a research about Internet customers' behavior finds that customers will face five kinds of perceived risks: 1. Time risk: Customers worry about wasting time when they search target goods in electronic shopping sites because of the excessive content loading (such as too many images). 2. Vendor risk: Customers feel nervous about non-stores shopping. 3. Security risk: Customers concern about computer crime that may jeopardize the security of personal information and credit card numbers. 4. Brand risk: Customers feel uncertain

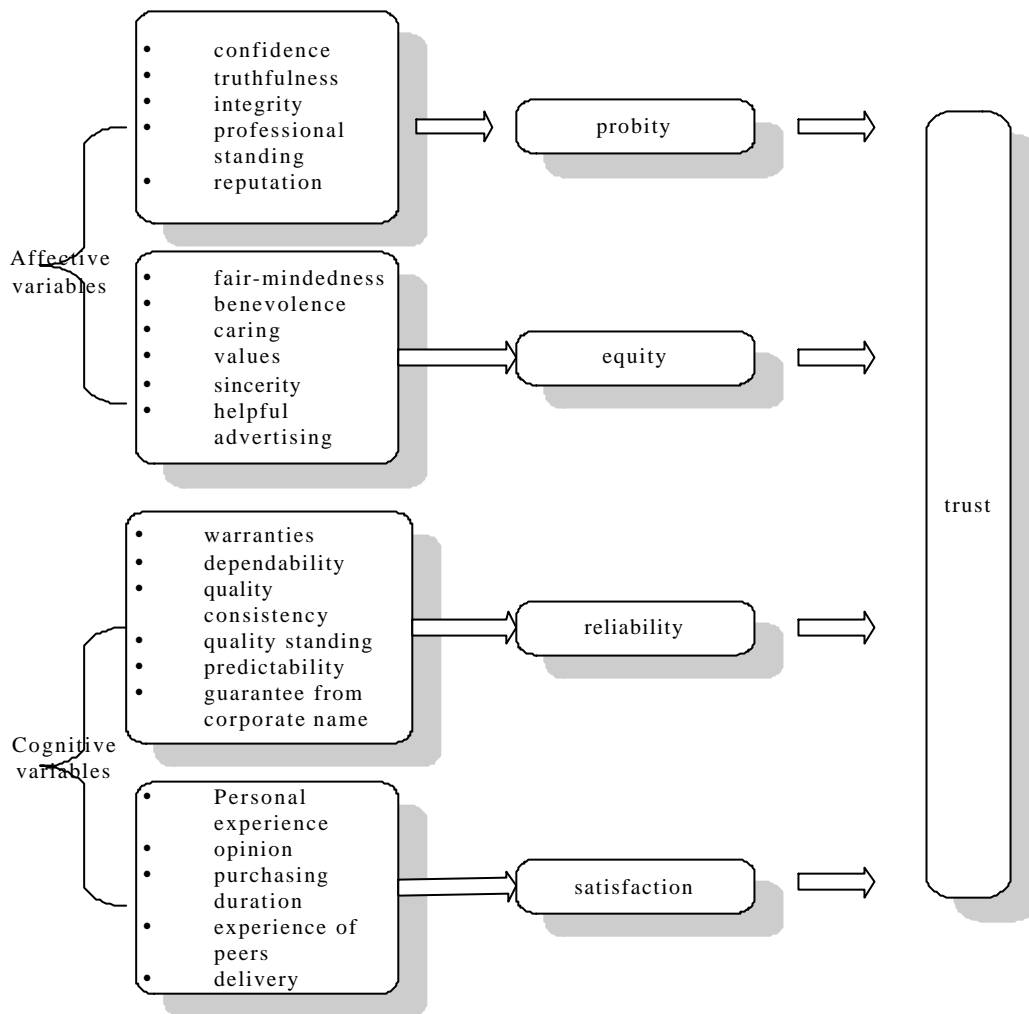


Figure 2. The four dimensions of trust [18]

when facing unfamiliar brand. 5. Privacy risk: Customers worry that personal information they left on the purchasing site may be abused or resold.

## METHOD

### Conceptual framework

The conceptual framework, shown in Figure 3, includes four parts: (1) Independent variable: sites' privacy policy and reputation. (2) Dependent variable: customers' purchase

intentions. (3) Intervening variable: cognitive and affective trust. (4) Moderating variable: customers' perceived risk. This research proposes following five hypotheses: H1: privacy policy significantly influences cognitive trust. H2: reputation significantly influences affective trust. H3: under the interference of perceived risk, privacy policy significantly influences cognitive trust. H4: under the interference of perceived risk, reputation significantly influences affective trust. H5: both cognitive and affective trust significantly influences customers' purchase

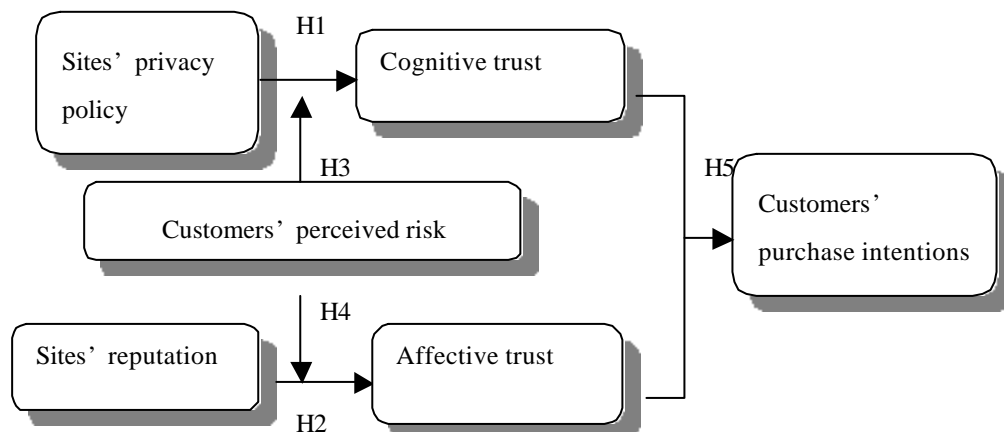


Figure 3. The conceptual framework

intentions.

**Operational definitions**

Independent variables: A site’s reputation can be classified into either good or bad reputation according to a famous company’s virtual Internet investigation. In terms of sites’ privacy policy, this research categorizes a site by whether it discloses privacy policy in the first page.

Dependent variables. This research revises the measurement of shopping intention by Baker etc. [2], which include three items to judge the possibility of shopping in a specific store.

Intervening variables. Cognitive and affective trust are measured by using the trust model of Paul Michell etc. [18]

Moderating variable. Our research modifies Chung’s [5] research that separates perceived risk into five parts such as financial, performance, psychology, social and time risk. The degrees of perceived risk are the product of the risk probability and the testee’s subjective importance of the risk.

**Experiment design**

The point of our research is how customers’ trust which come from Internet shopping sites’ privacy policy and reputation influence their purchase intentions. The research method we adopt is laboratory experiment because of better internal validity. Furthermore, our research conveys questionnaires through Internet. The reasons are Internet is closer to the population we needs and more advantageous than traditional questionnaire investigation. Internet investigations can directly perform by www and can avoid some work like copy, print and so on. Besides, Internet questionnaires can use pc to collect data and compile statistics, which is more efficient and correct than a traditional way.

Our research attaches the address of questionnaire in emails that gather from snowball sampling. This experiment involves 2(good/bad reputation)\*2(privacy policy/no privacy policy)=4 groups that each one has 43 units. Because of the characters of Internet, not all products are suitable to sale by Internet. Therefore, we select mobile phones as experimental target in order to fit for Internet circumstances. The content of four experimental web pages all download and revise form a real website. And their names are faked up in order to avoid the disturbance of existing image.

**RESULTS**

172 samples are collected. The reliability of each construct is more than 0.7 and is reasonable high. The constructs and corresponding reliabilities are shown in Table 1.

Table 1. Reliabilities of constructs

Construct	Cronbach’s alpha
Affective trust	0.8599
Cognitive trust	0.7887
Purchase intentions	0.9079
Perceived risk	0.8597

**The relationship between privacy policy and cognitive trust**

When privacy policy is used as the independent variable and cognitive trust as the dependent variable. Table 2 lists the one-way ANOVA results. In other words, H1 isn’t

rejected. Privacy policy significantly influences cognitive trust.

Table 2. Summary of one-way ANOVA

Source	Sum of Squares	df	Mean Squares	F-value
Between Groups	143.101	1	143.101	18.266***
Within Groups	1331.806	170	7.834	
Total	1474.907	171		

\*\*\* means p<0.05

**The relationship between reputation and affective trust**

When reputation is used as the independent variable and affective trust as the dependent variable. Table 3 lists the one-way ANOVA results. In other words, H2 isn’t rejected. Reputation significantly influences affective trust.

Table 3. Summary of one-way ANOVA

Source	Sum of Squares	df	Mean Squares	F-value
Between Groups	252.928	1	252.928	32.103***
Within Groups	1339.368	170	7.879	
Total	1592.297	171		

\*\*\* means p<0.05

**The moderate effect of perceived risk**

One can use reputation and perceived risk as independent variables and affective trust as dependent variable. Additionally, one can use privacy policy and perceived risk as the independent variable and cognitive trust as the dependent variable to perform regression analysis. Table 4 and Table 5 list the statistic results. We find that H3 and H4 are partly rejected. That is to say, perceived risk doesn’t significantly influences affective and cognitive trust.

Table 4. Summary of ANOVA

Source	Sum of Squares	df	Mean Squares	F-value
Regression	580.359	2	190.179	48.462***
Residual	1011.938	169	5.988	
Total	1592.297	171		
Source	Sum of Squares	df	Mean Squares	F-value
Regression	146.444	2	73.222	9.315***
Residual	1328.463	169	7.861	
Total	1474.907	171		

\*\*\* means p<0.05

Note: Independent variables of the above are reputation and perceived risk, and dependent variable is affective trust.

( R=0.604;R2=0.364 ) ; Independent variables of the bottom are privacy policy and perceived risk, and dependent variable is cognitive trust. ( R=0.315;R2=0.099 )

Table 5. Summary of regression analysis

	Unstandardized coefficients	Standardized coefficients	t-value
Reputation	1.732	0.604	9.808***
Perceived risk	3.339E-04	0.004	0.070
	Unstandardized coefficients	Standardized coefficients	t-value
Privacy policy	1.903	0.319	4.316***
Perceived risk	3.585E-03	0.048	0.652

\*\*\* means  $p < 0.05$

### The relationship among cognitive trust, affective trust, and purchase intentions

When affective and cognitive trust is used as independent variables and purchase intentions as the dependent variable to perform. Table 6 and Table 7 list the regression analysis results. We find that H5 is partly rejected. That is to say, cognitive trust significantly influences purchase intentions, but affective trust doesn't significantly influence purchase intentions.

Table 6. Summary of ANOVA

Source	Sum of Squares	df	Mean Squares	F-value
Regression	1218.473	2	609.236	84.115***
Residual	1224.056	169	7.243	
Total	2442.529	171		

\*\*\* means  $p < 0.05$

Note: Independent variables are cognitive trust and affective trust, and dependent variable is purchase intentions.

( $R = 0.706$ ;  $R^2 = 0.499$ )

Table 7. Summary of regression analysis

	Unstandardized coefficients	Standardized coefficients	t-value
Cognitive trust	0.727	0.170	6.407***
Affective trust	0.210	0.565	1.926

\*\*\* means  $p < 0.05$

### CONCLUDING REMARKS

These samples show that the majority of the Internet users are male. The ages are between 21 and 25, of college education or above, mostly students, and inhabitations are in the north. Because of the fast circulating information in the north, this group can more easily make use of Internet to do something about trade activities.

According to statistic analysis, different levels of privacy policy and reputation can independently influence the cognitive and affective trust significantly. In addition, in terms of the influences of cognitive trust, affective trust to purchase intentions, the influences of cognitive trust are more than affective trust obviously. In fact, related reports show that in all kinds of reasons to affect purchase intentions, the proportion of caring about trade safety is 46.5% [22]. That is, customers decide when to go shopping

by Internet on cognitive trust mostly. Even though, affective trust still affects purchase intentions just not significantly. In the case of the moderate effect of perceived risk, the affection to trust isn't significant. The reasons are that customers will take actions like data collection, their or someone experience, preventive methods (buy high quality products) and so on to avoid or decrease risks when facing [14]. Therefore, the influences relatively decrease to trust and make the result isn't significant.

Customers' purchase intentions will increase if managers concern privacy policy and try to solve from the beginning. Moreover, to establish websites' reputation can retrieve customers' unsafety by advertisements, management strategies. Because of the insignificant results of perceived risk, we can discuss what strategies influence trust except reputation and privacy policy and develop another model for Internet issues.

### REFERENCES

- [1] Ali, Haider and Birley, Sue "The role of trust in the marketing activities of entrepreneurs establishing new ventures," *Journal of Marketing Management*, vol.14, pp.749-763, 1998
- [2] Baker, Julie, Levy, Michael and Grewal, Dhruv "An Experimental Approach to Making Retail Store Environmental Decisions," *JR*, 68(Winter), pp.445-6, 1992
- [3] Chang, Wen-Hsien "The Dynamic Journal Structure of Corporate Reputation," Unpublished Master Thesis of Department of Business Administration, National Yun Lin University of Science and Technology, 1999
- [4] Chen, Huan-Wen "The Study of Relational Transaction Form in Marketing Channel Organization---An Example of Supermarket in Taipei," Unpublished Master Thesis of Graduate Institute and Department of International Trade, Tamkang University, 1997
- [5] Chung, Yu -Te "The Impact of Website's Characteristics on Customers' Perceived Risk and Information Search Strategies," Unpublished Master Thesis of Department of Business Administration, National University, 2000
- [6] Cox, D. F. "Risk Handling in Consumer Behavior-An Intensive Study of Two Cases," in Donald F. Cox (ED.), *Risk Taking and Information Handling in Consumer Behavior*, Boston: Harvard University Press, pp.34-81, 1967
- [7] Cunningham, S. M. "The Major Dimension of Perceived Risk," in Donald F. Cox (ED.), *Risk Taking and Information Handling in Consumer Behavior*, Boston: Harvard University Press, pp.82-108, 1967
- [8] Department of Commerce, MOEA "Internet Privacy," *Journal of EC-Pilot*, vol.15, <http://www.ec.org.tw/co-6.asp>
- [9] Gray, Edmund R. and Balmer, John M. T. "Managing Corporate Image and Corporate Reputation," *Long range Planning*, vol.31, no.5, pp.696-701, 1998
- [10] <http://www.bbbonline.org/privacy/index.asp>
- [11] [http://www.truste.org/consumers/users\\_how.html](http://www.truste.org/consumers/users_how.html)
- [12] Kotler, P. *Marketing Management: Analysis, Planning, and Control*, Fifth Edition. Englewood Cliffs, NJ: Prentice-Hall, 1994
- [13] Li, Ko-Yi "How to Protect Personal Privacy in Internet?," [http://stlc.iii.org.tw/stlc\\_c.htm](http://stlc.iii.org.tw/stlc_c.htm)
- [14] Li, Ting-Chia "A Research of Decreasing Risks in Internet," Unpublished Master Thesis of Department of

Information Management, National University, 2000

[15] Lin, Chiung-Wen "The Construction of Trust on Relationship Marketing---An Example of Insurance Companies in Taiwan," Unpublished Master Thesis of Department of Management, Tunghai University, 1999

[16] Lin, Huei-Lirng "Relationship Marketing in Service Selling---An Application of Fuzzy Theory," Unpublished Master Thesis of Graduate School of Tourism Management, Chinese Culture University, 1997

[17] Lin, Ju-Ying "A Research of Decreasing Risks in Internet shopping---By Laboratory Experiment," Unpublished Master Thesis of Department of Business Administration, National University, 2000

[18] Michell, Paul, Reast, John and Lynch, James "Exploring the foundations of trust," Journal of Marketing Management, vol.14, pp.159-172, 1998

[19] Moorman, C., Deshpande, R. and Zaltman, G. "Factors Affecting Trust in Market Relationships," Journal of Marketing, vol.57, pp.81-101, 1993

[20] Roselius, T. "Consumer Rankings of Risk Reduction Methods," Journal of Marketing, vol.35 (January), pp.56-61, 1971

[21] Wang, Yu-Chi and Chang, Chia-Hao "The Rules of Internet Privacy," The Third Seminar on Information Technology and Social Transformation, Dec 20, 1999, <http://itst.ios.sinica.edu.tw/seminar.htm>

[22] Yam.Com, A Investigation of Internet Users in Taiwan, 1999, <http://survey.yam.com/survey1999/result.htm>

[23] Yao, Chi-Jen "A Study of Factors Influencing the Behavior of Electronic Shopping," Unpublished Master Thesis of Department of Management Sciences, Tamkang University, 1998