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**FACTORS THAT AFFECT ONLINE CONSUMER TRUST IN TAIWAN**

**Dissertation**

**Presented in Partial Fulfillment of the Requirements for the Degree of**

**Doctor of Philosophy**

**Lynn University**

**By**

**Yu-Wen, Chen**

**February, 2006**

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**FACTORS THAT AFFECT ONLINE CONSUMER TRUST IN TAIWAN**

Chen, Yu W., Ph.D.

Lynn University, 2006

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U.M.I.  
300 N. Zeeb Road  
Ann Arbor, MI 48106

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## **Abstract**

According to Internet's rapid development, electronic commerce becomes a new way for businesses to market products online. Many people like shopping online because of the convenience. However, when consumers shop online, some concerns emerge, such as worries of how personal data will be used, how secure the online site is, and whether or not the Website should be trusted. The topic was explored in this dissertation was the identification of the factors that affect online consumer trust among Taiwanese Internet shoppers. This is a practical concern occurring on the Internet worldwide. Therefore, how to increase confidence and trust is imperative to online shoppers and sellers.

This dissertation found that perceived online security, perceived online privacy, Internet experience, and third-party assurance seal are positively associated with online consumer trust, and perceived risk is negatively associated with online consumer trust. In addition, there is no difference between Taiwanese male and female online shoppers on the issue of online consumer trust, nor is there a difference between Taiwanese single and married online consumers on the issue of online consumer trust.

The researcher recommends future studies should utilize a probability sampling method, focus on experimental research design to measure the difference among this study and this proposed study, and adopt a qualitative research design by interviewing participants and eliciting their opinions about online consumer trust.

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## CHAPTER I

### INTRODUCTION TO THE STUDY

#### Introduction and Background to the Problem

Strictly speaking, e-commerce is “the purchasing and selling of goods or services on the Internet” (Reddy & Lyer 2002, p. 518). Electronic commerce has grown rapidly since the mid-1990s (Reddy & Lyer, 2002), and is a new method of conducting business (Cordy, 2003). Business-to-Customer (B2C) electronic commerce sales in Taiwan were \$270 million in 2001, \$490 million in 2002, \$690 million in 2003, and \$990 million in 2004 (MOEA, 2005). The data indicated that Taiwanese e-commerce is growing and will continue to grow.

The growth of e-commerce in Taiwan has been overshadowed by concerns about privacy, lack of security on transactions, mistrust of vendors, and perceived risk. Online privacy is “the rights of individuals and organizations to determine for themselves when, how, and to what extent information about them is to be transmitted to others” (Grandinetti, 1996, p. 22). Privacy has an impact on the intent of customers to buy online. If there is a real or perceived lack of privacy, consumers are reluctant to reveal financial and private information to online retailers (Park & Kim, 2003). In some cases, online shoppers make up personal data as a protection mechanism (Hoffman & Novak, 1999). Privacy affected online consumers’ trust, which was a determinant of their willingness to purchase online. Online security is “the protection of data against accidental or intentional disclosure to unauthorized persons, or unauthorized modifications or destruction” (Grandinetti, 1996, p. 22). Online security usually includes transactional encryption in order to prevent fraud or theft (Machrone, 1998). Not every

e-retailer store in Taiwan has a trust seal, and Taiwanese online shoppers do not believe that Internet transactions are secure.

Trust refers to “a consumer’s willingness to accept vulnerability in an online transaction based on their positive expectations regarding an e-retailer’s future behaviors” (Kimery & McCord, 2002, p. 65). Taiwanese online consumers usually lack trust because they only see pictures of the products, not the products themselves. Risk means “the Internet users’ perception on the possibility of yielding unexpected outcomes with undesirable consequences” (Cheung & Lee, 2001, p. 26), and it is an important factor in online consumer trust. Many studies have found a strong negative relationship between perceived risk and online consumer trust (Cheung & Lee, 2001). All these factors can affect online consumer trust, and then affect online consumers’ purchasing behavior.

### **Purpose of the Study**

The purposes of this non-experimental, correlational study were to: (a) measure the difference in levels on online consumer trust between males and females and between single and married people, (b) measure which independent variable had the first, second, and third greatest effect upon the dependent variable (online consumer trust), and (c) examine the relationships between perceived online security, perceived online privacy, Internet experience, third party seals, perceived risk, and online consumer trust.

### **Research Questions**

The research questions to be discussed through the critical analysis of the literature are:

1. How does the level of online consumer trust differ between men and women?

2. What is the difference between the level of online consumer trust between single people and married people?

### **Research Hypotheses**

The research hypotheses to be discussed through the critical analysis of the literature are:

1. Perceived online security is positively associated with online consumer trust.
2. Perceived online privacy is positively associated with online consumer trust.
3. Internet experience is positively associated with online consumer trust.
4. Third-party assurance seal is positively associated with online consumer trust.
5. Perceived risk is negatively associated with online consumer trust.

These research hypotheses addressed areas in the fields of electronic commerce (EC), trust, consumer science, ethics, and the legal environment. Perceived online security, perceived online privacy, Internet experience, third party seals, and perceived risk were significant explanatory variables of online consumer trust.

### **Definition of Terms**

#### ***Independent Variable #1 (Perceived Online Privacy)***

***Theoretical definition.*** Perceived online privacy is defined as “the rights of individuals and organizations to determine for themselves when, how, and to what extent information about them is to be transmitted to others” (Grandinetti, 1996, p. 22).

***Operational definition.*** In this study, privacy is defined as “the Internet users’ perception on the ability of Internet vendors in protecting consumers’ personal information collected from its electronic transactions from unauthorized use or disclosure” (Cheung & Lee, 2001, p. 25). Perceived online privacy (3 items) was

measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000). The questionnaire can be found in Appendix C.

#### ***Independent Variable #2 (Perceived Online Security)***

***Theoretical definition.*** Perceived online security is “the Internet users’ perception on the Internet vendors’ ability to fulfill security requirements” (Cheung & Lee, 2001, p. 25).

***Operational definition.*** In this study, perceived online security means “the protection of data against accidental or intentional disclosure to unauthorized persons, or unauthorized modifications or destruction” (Grandinetti, 1996, p. 22). Perceived online security (2 items) was measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000).

#### ***Independent Variable #3 (Experience)***

***Theoretical definition.*** Experience refers to knowledge and skill gained over a period of time (Wikipedia, n.d.).

***Operational definition.*** The researcher defined Experience in this study as the number of years that the subjects have used the Internet. Experience (3 items) was measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000).

#### ***Independent Variable #4 (Third-Party Seal)***

***Theoretical definition.*** Third party seal is “one source of formal third-party information about an e-retailer’s past behaviors, intentions, and capabilities” (Kimery & McCord, 2002, p. 67).

**Operational definition.** Third party seal means “the assurance of the trustworthiness of Internet vendors by third party recognition bodies” (Cheung & Lee, 2001, p. 25). Third party seal (3 items) was measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000).

#### ***Independent Variable #5 (Perceived Risk)***

**Theoretical definition.** Perceived risk means “the trustor’s belief about likelihoods of gains and losses outside of considerations that involve the relationships with the particular trustee” (Mayer, Davis, & Schoorman, 1995, p. 726).

**Operational definition.** Perceived risk means “the Internet users’ perception on the possibility of yielding unexpected outcomes with undesirable consequences” (Cheung & Lee, 2001, p. 26). Perceived risk (3 items) was measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000).

#### ***Dependent Variable (Online Consumer Trust)***

##### ***Theoretical definition***

Trust was a “trustor’s expectations about the motives and behaviors of a trustee” (Doney & Cannon, 1997, p. 37).

##### ***Operational definition***

In this study, trust was defined as “the psychological status of involved parties who are willing to pursue further interactions to achieve a planned goal” (Turban & King, 2003, p. 156). Trust (3 items) was measured by trust in Internet shopping questionnaire by Professors Cheung and Lee (2000).

## **Justification**

Online consumer trust is a topic of global interest. These were: (a) uncertainty about how personal data would be used. This was a crucial limitation to online shopping; (b) the fact that online consumers only saw a picture of the product, not the product itself; and (c) the fact that online consumers and online retailers did not meet face-to-face. For these reasons, the question of how to shop safely was very important.

This topic is worth studying because e-commerce will continue to grow; however, it will be jeopardized if online consumer trust in the websites of e-retailers did not increase. This study was researchable because of past studies, and because these variables can be measured. This study was feasible because the study can be conducted within a reasonable amount of time, subjects were available, and concepts in the theoretical frameworks could be measured. In the literature review, the factors that affect online consumer trust between e-retailers and consumers will be explored. This critical analysis of the literature will conclude with interpretations of theoretical, empirical, and methodological literature, conclusions, as well as recommendations for future scholarly inquiry.

## **Delimitations and Scope**

1. The geographic setting was limited to the nine organizations located in Taichung County, Taiwan.
2. This survey participants must be able to read, write, and speak Chinese, and must be 18 years old or older.
3. This survey participants were limited to the Taiwanese employees who had Internet shopping experience.



4. This survey participants were willing to join the study and complete the survey.

### **Organization of the Study**

Chapter I offers an introduction to the study, including background to the problem, the purposes of this study, research questions, research hypotheses, the definitions of terms, justification, and the delimitations.

Chapter II offers an in-depth review of perceived online privacy, perceived online security, Internet experience, third-party assurance seal, perceived risk, and online consumer trust, and theoretical framework.

Chapter III presents research methodology, including the research design, population and sampling plan, the instruments, procedures and ethical aspects, methods of data analysis, and evaluation of research methods.

Chapter IV reports the results of research questions and research hypotheses, and socio-demographic characteristics. Chapter V offers discussion, interpretations, practical implications, conclusions, limitations, and recommendations for future study.

## CHAPTER II

### LITERATURE REVIEW, THEORETICAL FRAMEWORK

#### Review of the Literature

#### *Trust in Internet Shopping*

There were many factors, including service quality, system quality, information quality, vendor and channel characteristics, consumer demographics, and personal traits, that could impact online consumer purchasing behavior (Saeed, Hwang, & Yi, 2003). Consumer behavior is an old issue; however, online consumer purchasing behavior is a new topic (Saeed et al., 2003). Earlier literature on online consumer purchasing behavior refers to the Technology Acceptance Model (Davis, Bagozzi, & Warshaw, 1989), the Theory of Reasoned Action (Fishbein & Ajzen, 1975), and Flow Theory (Csikszentmihalyi, 1988).

#### *Technology Acceptance Model (TAM)*

Davis, Bagozzi, and Warshaw (1989) introduced Technology Acceptance Model. The reason people like this model are because this model can not only predict, but also explain users' acceptance of computers (Davis, et al., 1989).

Purpose of Technology Acceptance Model was to offer a concept regarding tracking the influence of outside elements at inside belief, attitude, and behavior (Davis, et al., 1989). Ease of use and usefulness were the two major determinants in this model.

Chen, Gillenson, and Sherrell (2002) reported that Technology Acceptance Model was an effective model on Internet shopping. One function of the TAM is to predict online consumer attitudes regarding Internet purchasing (Childers, Carr, Peck, & Carson,

2001). The TAM was helpful and suitable for electronic commerce, so Davis and Venkatesh (1996) revised this model into a broader and wider view of online shopping.

Salisbury, Pearson, Pearson, and Miller (2001) conducted a methodological study to describe the influence of perceived usefulness and ease of navigation for online purchasing. These researchers conducted a non-experimental, causal comparative and quantitative design using 168 undergraduate students. Salisbury's et al., (2001) literature review was thorough, and current, and compared and contrasted theory of reasoned action. Empirical studies of online security and online purchasing behaviors were examined, leading to a major gap in the literature in that this study did not address online shoppers' access to the Web stores.

A non-probability sampling plan resulted in the self-selected, data-producing sample of 168, but this study did not indicate the response rate. A pilot test was used in this study. Reliability estimates were high for internal consistency, and construct and criterion-related validity was established. Data collection procedures were clearly described, but this study did not report IRB or other ethical approval.

Findings supported the hypothesis that perceived Internet security would impact purchasing behavior on the Internet stores. The study did not support the hypothesis that ease of navigation would impact purchasing behavior on the Internet. Nor did the study support the hypothesis that perceived usefulness would impact purchasing behavior on the Internet stores.

Salisbury's et al. (2001) interpretation of these findings was that online security was a critical factor in increasing purchasing behavior, especially among people who work in e-retailing. Implications for practices were that the Website should therefore

address privacy and security concerns, with more and different variables to enable consumers to fully understand Web-based shopping. The strength of the study was the model's reasonable consistency with the data. Limitations reported by Salisbury et al. (2001) were that these subjects (students) cannot be generalized to other populations, and that these students did not have previous online shopping experience. Salisbury et al. (2001) concluded that future studies should include other relevant constructs and demographic groups.

The strengths of this study were in hypothesis testing reasoned action theory, and reliability and validity on Web-based shopping behaviors, resulting in a high level of data quality, data analysis, and clearly defined and replicable procedures. The limitation in the study was its external validity, so the findings cannot be generalized beyond undergraduate students enrolled in an introductory computing course at a rural southeastern U.S. university (Salisbury et al., 2001). Based on the literature, future studies should focus on different universities or countries (Salisbury et al., 2001).

### ***Theory of Reasoned Action (TRA)***

Reasoned action theory is a cognitive model of the decision-making process of human behavior (Fishbein & Ajzen, 1975). The goal of the TRA was to predict and understand consumer behaviors directly (Ajzen & Fishbein, 1980). According to the TRA, his or her actual behavior was determined by behavioral intention, as well as person's attitude and subjective norm (Fishbein & Ajzen, 1975). Behavioral intention is "a measure of the strength of one's intention to perform a specified behavior" (Fishbein & Ajzen, 1975, p. 288). Attitude toward behavior is "an individual's positive or negative feelings about performing the target behavior" (p. 216). Subjective norm is "the person's

perception that most people who are important think he should or should not perform the behavior in question” (Fishbein & Ajzen, 1975, p. 302).

### ***Flow Theory***

Flow theory was introduced by Csikszentmihalyi (1988). According to the flow theory, concentration, interest, and enjoyment of an activity should be experienced at the same time in order for flow to happen (Csikszentmihalyi, 2000). A common flow measurement was the level of enjoyment of an activity (Csikszentmihalyi, 1988). Based on the flow theory, concentration refers to flow experiences that were described as states of intense focus upon or absolute absorption in an activity (Csikszentmihalyi, 2000). Interest was a basic aspect of flow experiences, and enjoyment referred to pleasurable flow activities (Csikszentmihalyi, 2000).

If consumers did not enjoy shopping, online shoppers would not go to web stores (Rice, 1997). When consumers shopped on the Internet, they had emotional and cognitive impressions (Koufaris, 2002). These feelings could determine whether or not the consumers would return to the web stores (Koufaris, 2002). Shopping enjoyment was a critical influence on consumers’ attitudes towards online shopping (Eighmey, 1997).

Koufaris (2002) conducted a quantitative study of emotional and cognitive responses on a consumer’s first visit to an Internet store can return intentions and the likelihood of making unplanned purchases. The researcher used a non-experimental, causal comparative, and quantitative design. Koufaris’s (2002) literature review was thorough and current in comparing and contrasting theories about the information system (TAM), and online consumer behavior. Empirical studies lead to a major gap in the literature, which provided evidence that subjects did not visit websites of their own

volition. Koufaris (2002) encouraged the participants go to the websites by giving a \$10 gift card to each participant.

A probability sampling plan was used in Koufaris' (2002) study. Usefulness, ease of use, and shopping enjoyment were measured by descriptive statistics. Reliability estimates were high for internal consistency, and construct and criterion-related validity was established. Data collection procedures were clearly described, but the study did not report IRB or other approval. Findings, using linear regression, supported the hypothesis that usefulness was positively associated with willing to revisit the e-retailers. Using linear regression, this study did not support the hypothesis of ease of use was positively associated with intention to return. Nor did this study not support the hypothesis that consumers with higher shopping enjoyment are more likely to make unplanned purchases.

Koufaris' (2002) interpretation of these findings was that shopping enjoyment and usefulness on the website were critical for a new customer's intention to return. The implication for this practice was that Website features which are intended to be mere tools for the consumer might have a strong emotional impact. There was no study strength reported by Koufaris (2002), but a weakness of the study reported was an important variable missing from the framework, which was a planned purchase by first-time customers. A limitation reported was that the subjects had registered with an online market research company, and responded to multiple online questionnaires; therefore, these Internet users may be more "web-savvy" than average users. Koufaris (2002) suggested the following areas of future study: (a) the need to reexamine the relationships this study tested, and introduce new possible predictors; (b) the need to capture actual new customers who would be able to better explain the factors behind customers'

acquisition and planned purchasing; and (c) the use of metrics to explain how and why consumers think, act, and feel when shopping on the web.

The strengths of this study were in hypothesis testing in marketing and information system theories, and the reliability and validity of shopping enjoyment measures of variables, resulting in a high level of data quality, data analysis, and clearly defined procedures allowing replication. The limitations of the study were in external validity, where findings were limited to 300 sample subjects who visited BooksAMillion website, and were given a \$10 gift certificate for participating (Koufaris, 2002). According to this study, future studies should examine other bookstore websites (Koufaris, 2002).

### ***Integrative Framework***

Saeed et al., (2003) designed a comprehensive framework for online consumer purchasing behavior and used 42 studies to compare the results of each research study, as well as to integrate research findings across studies. People who had higher income, education, and age were found to be more likely to buy online (Bellman, Lohse, & Johnson, 1999; Liao & Cheung, 2001). After reviewing the result of 42 studies, the study concluded that online shopping had three stages: use of Internet to locate website vendors, Internet buying, and post-buying. According to Saeed's et al., (2003) integrative framework, e-retailers' system quality was facilitated by online consumer perception. The authors found that consumer perception was an important variable in predicting online consumer purchasing behavior, and would be analyzed and discussed further.

Saeed's et al., (2003) framework included the system, information, and service quality, as well as vendor and channel characteristics, in addition to the following consumer demographics and personal traits:

**System quality.** System quality was the users' perceptions regarding the effectiveness of system attributes (Saeed et al., 2003). The integrative framework showed that system quality impacted online consumer purchasing behavior by online shoppers' feelings about usefulness, ease of use, online consumer trust, as well as shopping enjoyment (Saeed et al., 2003).

**Information quality.** Information quality referred to online shoppers' feelings about the content of the Website (Saeed et al., 2003). Content was equally crucial in different businesses, such as bookstores, airlines, and cars (Agarwal & Venkatesh, 2002). Liu and Arnett (2000) found that information quality and learning capability had a high correlation. Saeed et al., (2003) reported that information quality was a critical predictor of online consumer purchasing behavior, according to the research findings.

**Service quality.** Service quality referred to the consumers' perceptions regarding online retailers' service experience (Saeed et al., 2003). Seddon (1997) pointed out that the service system and the Information System (IS) were different entities; therefore, the website needed to distinguish which entity offered the service. In the integrative framework, Saeed et al., (2003) mentioned that vendors offered customer service. If a vendor's service quality changed, this change would impact users' perceptions of trust and usefulness, as well as impact online consumer purchasing behavior (Saeed et al., 2003).



***Vendor and channel characteristics.*** Vendor characteristics (perceived size and reputation) could influence online consumers' perceptions about trust (Saeed et al., 2003). The integrative framework reported that vendor and channel characteristics could impact online consumer purchasing behavior by increasing vendor trust (Saeed et al., 2003).

***Consumer demographics and personal traits.*** Consumer demographics had three crucial findings as follows: (a) women were more conservative customers on online shopping than men (Slyke, Comunale, & Belanger, 2002); (b) lifestyle was an important variable (Saeed et al., 2003); and (c) all demographics did not explain variance in online consumer buying attitude (Bellman et al., 1999; Chen & Hitt, 2002).

### ***Factors That Affect Online Consumer Trust***

#### ***Perceived Online Privacy***

"Personal data has become a commodity to be bought, sold, and traded" (Brown & Muchira 2004, p. 65). Profitability has become more critical than privacy (Gillmor, 1998; Kakalik & Wright, 1996). Internet technology not only made collecting consumers' data easy, but also provided the consumers with useful information about products of interest (Prabhaker, 2000). However, not all consumers tended to provide personal details (Brown & Muchira, 2004). If the companies had privacy policies, consumers would feel more confidence and trust in revealing personal data (Brown & Muchira, 2004). Some consumers provided false personal information in order to protect their privacy (Kehoe, Pitkow, & Morton, 1997). Many consumers did not want to register on a Website when an online store lacked a statement about how online consumer data would be used (Brown & Muchira, 2004).

Brown and Muchira (2004) conducted a non-experimental, empirical, quantitative study to measure the relationship between the privacy and online purchasing behavior. The sample size was 210. Data were collected by questionnaire, using a convenience sample of undergraduate and postgraduate students at an east coast Australian university. The sample was relatively homogenous in terms of demographics and lifestyles, thereby enhancing external validity of the sample, which can minimize the external validity of the research. Brown and Muchira's (2004) literature review was thorough and current in comparing and contrasting theories about privacy. Empirical studies measuring the relationships among online privacy and Internet purchasing behaviors were examined, and found that few studies analyzed unauthorized secondary use of data in the context of the Internet.

A non-probability sampling plan resulted in the self-selected, data-producing sample size of 210, a response rate of 88.6%. There were 186 usable responses (91 respondents were male and 95 were female). Therefore, there was no gender imbalance. The measurement instruments were used to measure key demographic factors. The scale used to measure unauthorized secondary use of data was replicated from Moorman, Deshpande, and Zaltman (1993), and a three-item scale developed by Korgaonkar and Wolin (1999) was used to measure invasion of privacy. Data collection procedures were clearly described, but IRB approvals were not reported.

Using multiple regression analysis, findings supported the hypothesis for a significant negative relationship between consumers' experiences of online invasion of privacy, and their purchasing of products via the Internet. In addition, the findings supported the hypothesis for a significant negative relationship between consumers'

experience of inaccuracy or manipulation of personal data, and purchasing of products via the Internet. Results did not support the hypothesis of a significant negative relationship between consumer attitude toward unauthorized use of secondary data and purchasing of products via the Internet. Brown and Muchira's (2004) interpretation of these findings was that consumers who received unwanted and unsolicited communications from companies via the Internet were less likely to purchase products online. This led to the conclusion that companies with Websites should treat consumer privacy concerns seriously if they want to encourage customer loyalty and increase sales. An implication for practice was that guarantees of confidentiality may not have any influence on consumers' product acquisition decisions.

Brown and Muchira (2004) did not report the strengths of their study. Limitations reported by Brown and Muchira (2004) were the use of a student sample, and the measurement of attitudes toward online privacy. The researchers recommended the following areas of future study: (a) use of a random representative sample; and (b) a focus on how consumers respond to a specific Website in light of privacy concerns.

Brown and Muchira's (2004) findings were consistent with direct marketing literature (Berman & Mulligan, 1999; Campbell, 1997; Mand, 1998). The strengths of this study were in hypotheses testing of privacy and consumer behavior theory, resulting in a high level of data quality and data analysis; and the clearly defined procedures of the authors which allowed for replication. Limitations in the study were weaknesses in external validity, because the findings were based upon students at an east coast Australian university. Future studies should focus on other countries, and should include a broader range of consumer age groups.

E-commerce continues growing, but lacks consumer confidentiality (Brown & Muchira, 2004). Carroll (1999) noted that when consumers shopped online, personal data was stored in an Internet store's data bank. There were many databases and data manipulation techniques, which could reveal a consumer's social and political activities, lifestyle, and personal characteristics (Nowak & Phelps, 1995). "This data can be sold or exchanged between companies to get comprehensive details of a consumer" (Brown & Muchira, 2004, p. 65). Over 450 U.S. companies made money by gathering and selling consumer data (Nowak & Phelps, 1995).

### ***Privacy Policy***

An important part of privacy concern was online invasion through the release of personal data without the consumer's approval (Attaran, 2000). Receiving junk mail and unsolicited messages were also consumer privacy concerns (Korgaonkar & Wolin, 1999). If consumers had experiences with invasion of privacy online, they would be less likely to buy products on the Internet (Brown & Muchira, 2004). When Internet stores wanted to collect online consumers' data, many online shoppers ceased to trust the e-retailers (Kehoe, Pitkow, & Morton, 1997). The Federal Trade Commission's (FTC) reasons for setting an Internet privacy policy were "(a) to identify possible Internet shoppers' protection regarding Internet transactions and marketing, (b) to provide a public forum for the exchange of ideas, and presentation of research, and technology, and (c) to encourage effective self-regulation" (FTC, 1998, p. 2). About 50% of the larger websites offered privacy policies or suitable hyperlinks to policies on home pages (Liu & Arnett, 2002). Policy mechanisms were designed to protect Internet security and privacy (Jones,

2002). The core principles of the Federal Trade Commission are notice, access, choice, and security.

Notice means that online consumers must be advised by e-retailers' information (Sheehan & Hoy, 2000). Online shoppers need to be told when personal data will be gathered (Liu, Marchewka, & Ku, 2004). Access refers to the ability of consumers to review, correct, and perhaps delete personal data on websites (Merkow & Breithaupt, 2001). When online companies buy individual data from other people or websites, the online stores regard the data as legitimately purchased assets, and e-retailers do not want the consumers to access the data (Brown & Blevins, 2002). Under the International Safe Harbor Privacy Principles policy, however, individuals have a right to access such personal data (Brown & Blevins, 2002). The Safe Harbor Privacy Principles were the same as European Union's Article 25.6 on protecting consumers' data (Merkow & Breithaupt, 2001).

Choice means that companies should allow consumers to choose whether or not to participate (Sheehan & Hoy, 2000). "Opt-in requires users to consent to their personal data being collected before it is collected" (Brown & Blevins, 2002, p. 572). "Opt-out places the burden on the individual to request the data not be collected" (Brown & Blevins, 2002, p. 572).

Security refers to measures collectors' data security (Sheehan & Hoy, 2000). Many online stores have consumer data to market for decades (Phelps, Nowak, & Ferrell, 2000). Online companies should prevent data loss and data misuse (Brown & Blevins, 2002). When online consumers are aware of privacy violations, they can protect their privacy (Sheehan & Hoy, 1999).

Liu, Marchewka, and Ku (2004) conducted a causal-comparative and correlational study to propose and test a model of privacy, trust, and shopping behavior between America and Taiwan. The authors used 514 undergraduate and graduate students. There was no significant difference between U.S. and Taiwan students in their attitudes to Internet privacy and online consumer trust. Liu's et al., (2004) literature review was thorough, and current in comparing and contrasting reasoned action theory.

This theory is used to forecast shopping behaviors (Albarracin, Johnson, Fishbein, & Muellerleile, 2001). Empirical studies of privacy and online consumer trust in Internet shopping were explored. None of the studies cited privacy as a major antecedent for trust. Furthermore, no research examined the relationship among notice, access, choice, security, and trust in Internet shopping. This resulted in Liu's et al., (2004) research questions: (a) how to ensure that online consumers' data does not weaken online shoppers' trust; (b) how to affect online shoppers' purchasing behaviors (including making an online purchase or visiting a Website again); and (c) to determine whether culture played a role in the privacy-trust-behavioral intention relationship (Liu et al., 2004).

A non-probability sampling plan resulted in the self-selected, data-producing sample size of 514, a response rate of 84%. The *t*-test technique was used to measure privacy, trust, and behavioral intentions. The reliability estimate was Cronbach's alpha for internal consistency, and construct and criterion-related validity were established with both the U.S. and Taiwanese data that was used in this study. Data collection procedures were clearly described. IRB or other approval was not reported.

Findings supported the hypothesis with a positive relationship between privacy and trust in Internet shopping. Liu's et al., (2004) interpretation of these findings was that there was dissimilarity between high privacy to the U.S. sample, and low privacy to the Taiwan sample. This led to the recognition about the relationship among online privacy and online consumer trust are positive when making an online transaction (Liu et al., 2004). Implications for practice were that the four dimensions of privacy had a strong influence on consumers' trust in an e-commerce business (Liu et al., 2004). This level of trust would affect an online shopper's intention to purchase or visit the website again. No strengths were reported by Liu et al., (2004). The limitations reported by Liu et al., (2004) were that the sample focused only on perceptions of American and Taiwanese students. Studies providing a stronger design and deeper understanding of how culture influenced consumers' level of trust should be conducted.

The strengths of this study were in hypotheses testing in reasoned action theory; the reliability and validity of measures of variables, resulting in a high level of data quality; and clearly defined and replicable procedures. Limitations in the study were in external validity where findings were limited to information system undergraduate and graduate students in America and Taiwan. Future studies should focus on randomly selected populations of different countries, cultures, age groups, and occupations.

### ***Perceived Online Security***

Revenue of Internet commerce could surpass \$1 trillion by 2003 (IDC, 1999a). Perceived web security is "the extent to which one believes that Internet transmittal is secure" (Salisbury, Pearson, Pearson, & Miller, 2001, p. 167). When a consumer shopped on the Internet, there were many threats to personal security (Salisbury et al.,

2001). Security is a concern when people shop online (Salisbury et al., 2001). Although Internet security was considered poor, this factor did not interfere with the growth of electronic commerce (Ghosh, 2001). Salisbury, Pearson, Pearson, and Miller (2001) conducted a methodological study to describe and explore Internet security. These researchers conducted a non-experimental, causal comparative, and quantitative design using 168 undergraduate students. Salisbury, Pearson, Pearson, and Miller's (2001) literature review was thorough and current in comparing and contrasting theory of reasoned action. Empirical studies of Internet security and online purchasing behaviors were examined. This study did not address online shoppers' access to the World Wide Web.

A non-probability sampling plan resulted in a self-selected, data-producing sample of 168, but this study (Salisbury et al., 2001) did not indicate the response rate. The pilot test measured perceived Internet security, ease of navigation, and usefulness. Reliability estimates were high for internal consistency, and construct and criterion-related validity was established. Data collection procedures were clearly described, but this study did not report IRB or other ethical approval. Findings supported the hypothesis that perceived Internet security will affect online buying behaviors using squared multiple correlation. The study did not support the hypotheses that ease of navigation will impact buying behaviors, and usefulness will affect buying behaviors using squared multiple correlation. Salisbury's et al., (2001) interpretation of these findings was that Internet security can increase online shopping. This led to the following conclusion: when compared to perceptions of web security, the importance of feelings regarding ease of online buying would be reduced, and implications for practices were that a website



should address privacy and security issues (not only security), and online consumers needed more and different variables to fully understand web-based shopping. The strength reported by Salisbury et al., (2001) was that the model was consistent with the data. The limitations reported by Salisbury et al., (2001) were that subjects are students with little online buying experience. The researchers (2001) concluded that areas of future study should address other relevant constructs and other socio-demographic factors.

The strengths of this study were in hypothesis testing reasoned action theory, resulting in a high level of data quality, data analysis, and clearly defined procedures allowing replication. Limitations in the study were in external validity and cannot be generalized beyond undergraduate students taking an introduction to computer courses at a rural southeastern U.S. university. Future studies should focus on other universities or countries.

Online security is a main concern when online shoppers shop online (Udo, 2001). Chellappa and Pavlou (2002) conducted a methodological study to identify antecedents of consumer perceptions of security, and hypothesized its relationship to trust in electronic commerce transactions. These researchers conducted a non-experimental, causal comparative, and quantitative design using 179 graduate and undergraduate business students. Chellappa and Pavlou's literature review was thorough and current. Empirical studies of online security and trust in Internet transactions were examined, leading to the major gap in the literature that there was no empirical evidence that showed these mechanisms (encryption, verification, and authentication) had a relationship between online security and online consumer trust. This resulted in

Chellappa and Pavlou's study testing the proposition that Internet security was created by encryption, verification, and authentication.

A non-probability sampling plan resulted in a self-selected, data-producing sample of 179. The new multi-item scale was used to measure security and its antecedents (encryption, verification, and authentication). Reliability estimates were 0.93 for internal consistency, and construct and criterion-related validity was established. Data collection procedures were clearly described, but the study did not report IRB or other ethical approval.

Findings supported the measurement of psychometric qualities of the newly designed instrument, and support of the hypothesis that perceived information security was positively related to trust in electronic commerce (EC) transactions, using least-squares regression analysis. The study did not support the hypothesis that limited financial liability was positively related to trust in electronic commerce (EC) transactions, using regression analysis. Chellappa and Pavlou's (2002) conclusion was that online security and online consumer trust did not have a relationship with e-retailers' reputation and financial liability. Electronic commerce transactions, therefore, involved non-monetary risks. The implication for practice was that e-retailers could evaluate encryption, verification, and authentication clearly. The strength of the study reported by Chellappa and Pavlou (2002) was that it had response-set biases. A limitation reported was that all of the participants were business school students. These researchers generated the following areas of future study: controllers should develop a reliable reassurance to increase online consumer trust.

The strengths of this study were in the design of a reliable and valid instrument to measure trust; clearly defined procedures allowing replication; and rigorous methods of data analysis, resulting in a high level of data quality (an internal validity strength of the study). Limitations were in external validity, and results cannot be generalized beyond business school students. Future studies should focus on people of other occupations and ages, and use larger samples.

### ***Internet Experience***

A higher level of Internet experience led to consumer conclusions about the perceived risks, privacy and security of Internet shopping (Miyazaki & Fernandez, 2001). Internet experience affected Internet purchases (Hoffman, Novak, & Peralta, 1999). Novice Internet consumers were less likely to buy products online (Fox, 2000). New consumers worried about credit card theft more than experienced consumers (Fox, 2000). “Experience has been investigated in the Management Information System (MIS) research and literature” (George, 2002, p. 168). Experience is the length of time that a customer has been using a personal computer, and if the customer has attained a self-rated skill level (George, 2002). Experienced Internet users believed that the Internet was more trustworthy than inexperienced users (George, 2002).

Miyazaki and Fernandez (2001) conducted a quantitative and qualitative study to explore the relationships between online shoppers’ Internet experience and Internet purchasing action. The researchers employed a non-experimental, causal comparative and quantitative and qualitative design using 189 subjects. Respondents’ ages ranged from 15 to 75 years old; gender was almost equally balanced, and the levels of education were from high school to university. Miyazaki and Fernandez’s (2001) literature review

was thorough and current, in comparing and contrasting theory about online shopping. Empirical studies of online shoppers' privacy and security concerns with Internet buying behavior were examined, leading to a major gap in the literature that privacy issues and the potential for fraud were not predictive of online purchasing rates.

Findings supported the hypothesis that "Internet experience is negatively related to the perceived risks of conducting online purchase" (Miyazaki & Fernandez, 2001, p. 30), using multiple regression analysis. Miyazaki and Fernandez's (2001) interpretation of these findings was that some Internet consumers' information concerns affected purchase behavior. This led to the conclusion: when online consumers had more Internet experience, they were less concerned about risk.

The strength of Miyazaki and Fernandez's (2001) study was the use of two trained data collectors. A limitation reported was that analysis of the mixed methods resulted in particular fields of concern to Internet buyers. These authors generated the following area of future study: generalizability of the descriptive findings may be not collected from the domestic or global sample. An implication for practice was that formal privacy policies should be posted to e-commerce websites, thereby enabling online shoppers to understand how e-retailers used online shoppers' data.

The strengths of this study were in hypothesis testing of perceived risk theory, but this study did not report the reliability and validity. This was a random sample, and Internet experience was examined from two perspectives: (a) the duration of the experience; and (b) the frequency of use. Future studies should focus on non-random samples and increase the sample size.

### *Third-Party Assurance Seal*

Third-party assurance seal refers to the resources and information of a third party regarding its former attitudes, purposes, and abilities (Kimery & McCord, 2002). Many e-retailers have earned a third party seal in recent years to inspire trust among online shoppers (Kimery & McCord, 2002). A third-party assurance seal proves that the e-retailer has met the specific standards or requirements and can be trusted by online consumers (Kimery & McCord, 2002). Primary third-party assurance seals are TRUSTe, BBB-Online, and Verisign (Luo, 2002).

Kimery and McCord (2002) conducted a quantitative study to examine the use of third party seals to increase trust in Internet shopping. These researchers used an experimental research design. Kimery and McCord's (2002) literature review was thorough and current. A major gap in the literature was that the research never mentioned how a third party seal affected online shoppers' trust in Internet shopping.

A non-probability sampling plan was used in the Kimery and McCord's (2002) study. Reliability estimates were high for internal consistency and construct validity was established. Data collection procedures were clearly described, but the study did not report IRB or other approval. Findings, using exploratory regression analysis and standardized path coefficients, supported the hypothesis that when online shoppers trust an online store, online shoppers would be likely to buy products at that store (Kimery & McCord, 2002). This study used exploratory regression and path coefficients, but did not support the hypothesis that when online shoppers saw a third party seal, online shoppers would have more trust in that store (Kimery & McCord, 2002).

Kimery and McCord's (2002) interpretation of these findings was that third party seals did not have a significant effect on online consumers who visit an unfamiliar online store for the first time. The implication for this practice is that the decision to join in third-party assurance programs should be made clearly (Kimery & McCord, 2002). Kimery and McCord (2002) generated the following area of future study: Exploring other relevant elements that could reconcile the variables of trust and assurance seal.

### ***Perceived Risk***

When e-retailers collected data about online shoppers, consumers were concerned about that data being sold or exchanged to others (Wang, Lee, & Wang, 1998). In 1995, Sitkin introduced the Theory of Risk Propensity based on his qualitative study of online consumer purchasing intent. This theory identified two major constructs of Internet security and privacy, defined as perceived risk when shopping online. The major propositions in this theory were (a) Internet shoppers would like to shop online if they have more knowledge about online security and online privacy; and (b) experienced and non-experienced Internet shoppers would like to shop online if there are statements of online security and online privacy (Sitkin, 1995).

Milloy, Fink, and Morris (2002) developed a model depicting the direct and indirect relationships among these concepts. The Theory of Risk Propensity (Sitkin, 1995) addressed essential issues about Internet security and privacy in the discipline of electronic commerce, and was useful in explaining, predicting, and discriminating among consumers with and without purchasing intent. Thus, the theory was a well-developed guide which could be used to explain and predict purchasing intent. The theory had an effective balance between simplicity and complexity, contributing to its usefulness.

There was no major proposition with conflicting results in empirical studies, because this theoretical report did not test propositions to become hypotheses.

### ***Online Consumer Trust***

Electronic commerce is the sale of products or services on the Internet. When online shoppers purchase the products online, online consumers see only the picture of the goods, not the products themselves. In addition, online consumers cannot tell how large an online store is. Therefore, trust was a significant factor for online consumers. Jarvenpaa, Tractinsky, and Vitale (2000) mentioned the consumer trust model had two important factors (perceived size and reputation), and these factors could affect online consumers' trust. Thus, trust would lead to attitude and risk perception. Eventually, attitude and risk perception would influence the willingness to buy. Chen and Dhillon (2003) concluded that competence, integrity, and benevolence were three key factors affecting consumers' trust, and that trust would affect purchase intention. Liu, Marchewka, and Ku (2004) stated that privacy encompasses notice, access, choice, and security, and that these factors could affect the consumers' degree of trust. Trust leads to repeat purchases, continued visits, and favorable recommendations to other consumers through positive remarks.

#### ***Perceived Size***

A store's size could affect online consumers' trust (Jarvenpaa, Tractinsky, & Vitale, 2000). An Internet store's size refers to its sales volume and the number of products sold (Jarvenpaa et al., 2000). Large stores indicated that the e-business owned the necessary resources and expertise, which were crucial factors in online consumer trust (Chow & Holden, 1997). Large e-businesses should be able to compensate online

shoppers when something goes wrong with the business transaction, or when a product is found to be defective (Jarvenpaa et al., 2000). Therefore, an online store's size was positively correlated with online consumer trust (Jarvenpaa et al., 2000).

### ***Perceived Reputation***

Reputation refers to whether or not e-retailers are honest and care about their consumers (Doney & Cannon, 1997). An online store's reputation could affect online consumers' trust (Jarvenpaa et al., 2000). Ganesan (1994) also noted that an Internet store's reputation correlated positively with online shoppers' trust in it. Stores with good reputations attracted more customers and business than stores with poor reputations (Jarvenpaa et al., 2000).

Jarvenpaa, Tractinsky, and Vitale (2000) conducted a quantitative study to measure stores' size and reputation differences among trust, perceived risk, and return to the store. The researchers employed a causal comparative and quantitative design using 184 undergraduate and MBA students in Australia. Jarvenpaa's et al., (2000) literature review was thorough and current. Empirical studies of consumer trust in an Internet store were examined, but this study did not systematically control size and reputation of the store sites; and that site design, aesthetics and ease of use were not measured.

A probability sampling plan was used in this study. The data sample size was 184 subjects; however, this study did not report response rate. A pilot study tested the measures of trust and reputation. Reliability estimates were low for internal consistency and construct, and criterion-related validity was established. Data collection procedures were clearly described, but the study did not report IRB or other approval. Finding



supported the hypothesis that online shoppers would like to shop online if their perceived risk is low, using structural equation modeling.

Jarvenpaa's et al., (2000) interpretation of the finding was that perceived store size and perceived reputation seemed to affect trust differently, depending on the type of store. This led to the conclusion that statistical significance depended on consumers' perceived size of the online store. Implications for practice were the need to explore the underlying processes by which consumer trust was formed or developed, or how trust evolved as the consumer interacted with an Internet store, and actually purchased from it. How to determine stores' size and good reputation are necessary. The strength of the study was that these undergraduate and graduate students in Australia had Internet shopping experience. A limitation reported was that this study included only two retail domains (books and travel websites). The researchers proposed the following areas for future study: (a) a reexamination and refinement of the measures; and (b) revealing the contribution of additional variables to the behavior of Internet consumers.

The strengths of this study were in hypothesis testing of reasoned action and planned behavior theories, and the reliability and validity of Cronbach's (*a*) measures of variables resulting in a high level of data quality, data analysis, and clearly defined and replicable procedures. Limitations in the study were in external validity where findings were limited to 184 subjects, Australian university students. Future studies should be conducted on different countries, with larger samples, and use different kinds of websites.

Trust is associated with lower perceived risk of shopping at the web stores, and the reputation and size of the stores affect the level of trust (Jarvenpaa et al., 2000). Trust in online stores is an important element that can influence e-commerce (Journal Abstract)

(Kimery & McCord, 2002). When consumers mistrust the web, building a long-term relationship with companies is difficult (Keen, 1997).

Trust is defined as “the psychological status of involved parties who are willing to pursue further interactions to achieve a planned goal” (Turban & King, 2003, p. 156). Many consumers did not trust Internet vendors because of online security and privacy (Hoffman, Novak, & Peralta, 1999). Trusting web stores with personal data was associated with whether Internet transactions were thought to be secure or not (Ratnasingham, 1998). Trust was rooted in technology use in order to improve information sharing (Ratnasingham, 1998). Consumers usually lack trust because Internet shopping is a non-physical activity with higher risk than shopping in the traditional stores (Shu, 2003).

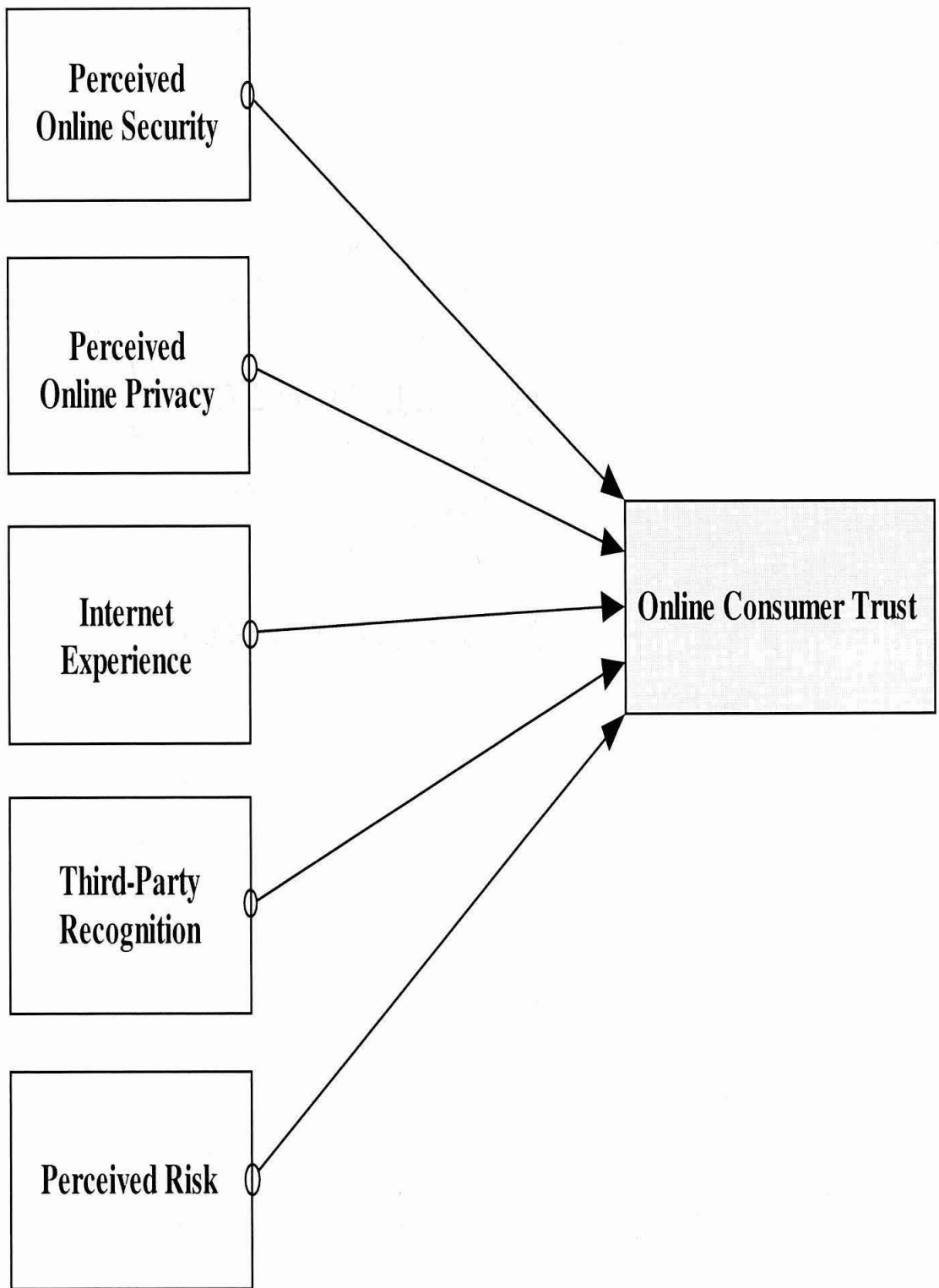
Sitkin and Roth (1993) introduced the theory of trust based on a qualitative study examining the perspectives of trust/distrust. This theory identified three major constructs: competence, integrity, and benevolence, as keys to developing consumer trust in an Internet vendor (Sitkin & Roth, 1993). Chen and Dhillon (2003) reported that the major propositions in this theory were that perceived competence, integrity and benevolence of an Internet vendor significantly influenced consumers’ trust, and individual characteristics significantly influenced perception of the competence, integrity, and benevolence of an Internet vendor. These characteristics included faith in humanity, a trusting stance, attitude toward shopping online, personal values, gender, age, and educational level. Chen and Dhillon (2003) developed a path model depicting these direct and indirect relationships among these concepts. This theory addressed essential issues about consumer trust in the discipline of electronic commerce, and was useful in

explaining, predicting, and discriminating between those with trust and those without trust. Thus, it was a well-developed guide to review. The theory struck an effective balance between simplicity and complexity, contributing to the usefulness of this theory.

### **Theoretical Framework**

A literature map (Figure 1) was used to guide the library search for theoretical and empirical literature in this review about the factors that affect online consumer trust. The map shows a deductive pattern of the main themes, using a “clustering style” type of graphic organizer.

The theoretical framework displays the relationships among the concepts as follows: (a) perceived online security would affect online consumer trust; (b) online consumer trust was influenced by perceived online privacy; (c) Internet experience would lead to online consumer trust; (d) the use of a third-party seal would impact online consumer trust; and (e) online consumer trust was affected by perceived risk. The causal variables in the literature map were perceived online security, perceived online privacy, Internet experience, the use of a third-party seal, and perceived risk. The outcome variable was online consumer trust. In addition to guiding the literature search, the literature map identified themes, theories, and concepts that would organize the Literature Review.



*Figure 1.* Literature map.

Chapter II offers an in-depth review of perceived online privacy, perceived online security, Internet experience, third-party assurance seal, perceived risk, and online consumer trust, and theoretical framework. Chapter III presents research methodology, including the research design, population and sampling plan, the instruments, procedures and ethical aspects, methods of data analysis, and evaluation of research methods.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

A quantitative methodology was used to study the factors influencing online consumer trust. Chapter 3 describes the methodology for this study. Chapter 3 begins with a discussion of the research design. The sampling plan and setting, instruments, procedures and data collection methods, evaluation of ethical aspects of the study, and methods of data analyses are presented. This chapter concludes with an evaluation of the research methods used in this study.

#### **Research Design**

Two research questions and the five research hypotheses would lead to the development of a self-administrated questionnaire research study, with descriptive and exploratory purposes. The design focused on quantitative methods with close-ended questions on the survey tool. The research questions and research hypotheses were addressed through quantitative methods. The dependent variable was online consumer trust and the independent variables were perceived online security, perceived online privacy, Internet experience, the existence of a third-party assurance seal, and perceived risk. Variables were measured by questions on the *Trust in Internet Shopping Survey*, using a 5-point Likert Rating Scale (1 represents “strongly disagree”, 3 indicates “neutral”, and 5 means “strongly agree”). The survey was developed by Cheung and Lee (2000), and the researcher received permission from Professor Lee by email. The e-mail permission letter can be found in Appendix A.

An independent *t*-test would be used to measure the difference in levels on online consumer trust between males and females and between single and married people. Multiple regression analysis would be used to measure and predict which independent variable had the first, second, and third greatest effect upon the dependent variable (online consumer trust). Pearson correlational coefficient (*r*) would be used to measure and test the research hypotheses to be supported or not.

The research questions to be discussed through the critical analysis of the literature are:

1. What is the difference in the level of online consumer trust between males and females?
2. What is the difference in the level of online consumer trust between single and married people?

The research hypotheses to be discussed through a critical analysis of the literature are:

1. Perceived online security is positively associated with online consumer trust.
2. Perceived online privacy is positively associated with online consumer trust.
3. Internet experience is positively associated with online consumer trust.
4. Third-party assurance seal is positively associated with online consumer trust.
5. Perceived risk is negatively associated with online consumer trust.

Perceived online security, perceived online privacy, Internet experience, third party seals, and perceived risk were significant explanatory variables of online consumer trust. The participants or subjects of this study would be Taiwanese employees in nine organizations, and the sample size would be 230 people. The permission letter from the organizations in Taiwan is in Appendix E. Population and sampling plan are showed as follows:

### **Population and Sampling Plan**

#### ***Target Population***

The target population included the following:

1. The participants of the study were Taiwanese employees.
2. The subjects' ages were between 20 and 55 years old.
3. Taiwanese employees had full-time working status.
4. Companies were located in Taichung County, Taiwan.

#### ***Accessible Population***

Because there are many different kinds of companies and industries in Taiwan, the accessible population was limited to the following corporations and requirements:

1. The corporations would be limited to (a) Jiann Gwo Plastic Industry Corporation, (b) Taiwan Business Bank, (c) Chen Tai Rubber Industrial Corporation, (d) King Sia Company, (e) Cathay Financial Holdings Corporation, (f) Taiping Kindergarten, (g) Kai Mei Company, (h) National Chin-Yi Institute of Technology, and (i) En Wise CPA firm (AGN International).



2. Participants would be limited to the Taiwanese employees who had Internet shopping experience.

### *Sampling Plan*

#### *Eligibility Criteria and Exclusion Criteria*

The eligibility criteria of the study are:

1. Subjects were Taiwanese employees.
2. Age ranges were between 20 and 55 years old.
3. Corporations were nine organizations in Taichung County, Taiwan.
4. The subjects were currently employed in one of the nine organizations.
5. Subjects needed to know how to use a computer.
6. Participants needed to have Internet experience.
7. Subjects were interested in the topic.
8. Participants were able to read, write and speak Taiwanese and Chinese.
9. Subjects were willing to join the study and complete the survey.

The study excluded: (a) employees of other companies; (b) subjects whose ages were older than 55 years or younger than 20 years; (c) employees who did not have Internet experience; and (d) people who were not Taiwanese. The exclusion criteria were because (a) nine organizations were a large enough sample; (b) if the participants with Internet experience would have more meaningful responses; and (c) non-Taiwanese participants might not be sufficiently proficient in Chinese.

### ***Sampling Plan***

There were two stages to sampling plan. The first stage was purposeful sampling and the second stage was convenience sampling. The sample was selected from: (a) Jiann Gwo Plastic Industry Corporation (50 eligible subjects); (b) Taiwan Business Bank (20 eligible subjects); (c) Chen Tai Rubber Industrial Corporation (20 eligible subjects); (d) King Sia Company (10 eligible subjects); (e) Cathay Financial Holdings Corporation (20 eligible subjects); (f) Taiping Kindergarten (10 eligible subjects); (g) Kai Mei Company (50 eligible subjects); (h) National Chin-Yi Institute of Technology (30 eligible subjects); and (i) En Wise CPA firm (AGN International) (20 eligible subjects). A total of 230 people met the eligibility criteria. Convenience sampling is the most commonly used technique in clinical research. The researcher selected convenience sampling was because it is easy, convenient, fast and affordable. The researcher used purposeful sampling because of the nine organizations. The non-probability sampling plan was more economical, quicker, and practical than a probability sampling plan.

### ***Data Producing Sample***

A non-probability sampling plan was used to obtain a sample of Taiwanese employees in Taichung County, Taiwan. The research proposal was approved by Lynn University Institutional Review Board before conducting the study. All nine organizations agreed to participate. Permission letters from the nine organizations were obtained. The data-producing sample was 217, resulting in a response rate of 94.34%. Table 1 shows the number of respondents agreeing to participate and the potential participants from the nine organizations. The eligible and agreeing participants at this study had 230 subjects.

Table 1

*The Number of Agreeing to Participate and Potential Participants*

Organization	Number Agreeing to Participate	Potential Participants
Jiann Gwo Plastic Industry Corporation	50	200
Taiwan Business Bank	20	50
Chen Tai Rubber Industrial Corporation	20	50
King Sia Company	10	30
Cathay Financial Holdings Corporation	20	400
Taiping Kindergarten	10	25
Kai Mei Company	50	300
National Chin-Yi Institute of Technology	30	100
En Wise CPA firm (AGN International)	20	200
Total	230	1355

***Evaluation of Sampling Design***

The Taichung County region of Taiwan was selected by the researcher and the researcher believed that the region was a limitation, as well as the fact that the region would affect and decrease generalizability. However, the accessible population of this study increased sample representation. The main limitation with the use of a self-selected, convenience and purposeful sample is bias. The homogeneity of the sample was a strength. For instance, the sample included only full-time employees, between the ages of from 20 and 55, who have Internet experience, and who live in the same geographic area.

**Instrumentation*****Socio-Demographic Profile***

The self-reported *Socio-Demographic Profile* was designed by the researcher (Appendix B). The Profile was completed and obtained from every subject at the time of

the survey. This “checklist” was used to collect data on the participants’ age, education, gender, marital status, and experience with the Internet. The participants’ age, education, gender, and marital status were important, because the researcher wanted to know which age group had the most online shopping experience and trust in the Internet in Taiwan, which educational level had more trust in Internet shopping, the degree to which males or females liked shopping online, and whether single or married people had more trust in the Internet. All of the participants in the study completed the Socio-Demographic Profile. After the subjects finished the profile, the researcher collected the data and conducted the statistical analysis.

(1) There were seven age cohorts: (a) 20-25, (b) 26-30, (c) 31-35, (d) 36-40, (e) 41-45, (f) 46-50, and (g) 51-55.

(2) There were six educational levels: (a) junior high school, (b) senior high school, (c) college, (d) university, (e) master’s degree, and (f) doctoral degree.

(3) Gender: males and females.

(4) Martial Status: single and married.

(5) There were five groups of Internet experience: (a) 1-6 months, (b) 7-12 months, (c) 1-2 years, (d) 2-3 years, and (e) more than 3 years.

### ***Instrument (Trust in Internet Shopping)***

#### ***Description***

The instrument was used to establish internal consistency regarding Cronbach’s (*a*) on the total scale and subscales. The total scale contained 30 items of trust in Internet shopping, organized into the following 11 subscales: Perceived Online Security (2 items); Perceived Online Privacy (3 items); Integrity (2 items); Competence (3 items);

Personality (4 items); Cultural Environment (2 items); Experience (3 items); Third Party Recognition (3 items); Legal Framework (2 items); Trust in Internet Shopping (3 items); and Perceived Risk (3 items). Scale type of the instrument was a 5-point Likert Rating Scale (1 represents “strongly disagree”, 3 indicates “neutral”, and 5 means “strongly agree”). The researcher adapted the variables of online security, online privacy, experience, third party seal, trust, and perceived risk from Professor Cheung’s and Lee’s (2000) instrument.

### ***Reliability***

Cronbach’s alpha ( $a$ ) using the data obtained from the current study resulted in estimates of reliability ranging from 0.764 on the Perceived Integrity subscale to a high of 0.882 on the Legal Framework when used with management information systems students at City University of Hong Kong. A total of 405 usable questionnaires were collected by Professor Matthew Lee (2000). The results are as follows:

Perceived Security Control (2 items), Cronbach’s ( $a$ ) = 0.794

Perceived Privacy Control (3 items), Cronbach’s ( $a$ ) = 0.810

Perceived Integrity (2 items), Cronbach’s ( $a$ ) = 0.764

Perceived Competence (3 items), Cronbach’s ( $a$ ) = 0.846

Personality (4 items), Cronbach’s ( $a$ ) = 0.881

Cultural Environment (2 items), Cronbach’s ( $a$ ) = 0.833

Experience (3 items), Cronbach’s ( $a$ ) = 0.880

Third Party Recognition (3 items), Cronbach’s ( $a$ ) = 0.795

Legal Framework (2 items), Cronbach’s ( $a$ ) = 0.882

Trust in Internet Shopping (3 items), Cronbach’s ( $a$ ) = 0.860

Perceived Risk (3 items), Cronbach's ( $\alpha$ ) = 0.864

### ***Validity***

To test construct validity, an exploratory factor analysis (EFA) was performed with EQUIMAX rotation. All item-to-total correlation was greater than 0.70 (except Cultural Environment). For assessing this validity in the instrument, all measurement items were subjected to EFA and were input for factor analysis. An 11-construct solution with a total of 74.63% variance extracted was obtained. Except for one item in the construct of "Perceived Risk" that loaded higher on the construct of "Trust", all other items loaded correctly. The result showed a relatively high factor loading to its own construct (0.75) and the average variance extracted of its construct is (0.71) higher than all the squared correlations of other constructs. A measurement instrument was developed systematically. In this study, the construct validity was 0.96 and the overall ratio of items to target was 95.73%.

### **Procedures: Ethical Considerations and Data Collection Methods**

- 1) To ensure that many participants would be surveyed, the researcher distributed the survey and consent form to the participants. The data collection process took two weeks.
- 2) The study was approved by Lynn University's Institutional Review Board before conducting the study.
- 3) The researcher explained the dissertation research and consent form to the participants. Certifications of translation of consent form and Questionnaire are found in the Appendices F and G.

- 4) The participants informed that they needed to complete a written consent form prior to survey and data collection. Participants were informed that data would be confidential.
- 5) The survey took approximately 15 minutes to complete. There were no subject identifiers on the survey form.
- 6) The participants did complete the survey at work. Before the researcher distributed the survey to the participants, the researcher explained the dissertation research and participants' rights, and obtained their written consent. After the researcher distributed the survey, the researcher left the room.
- 7) After the participants finished the survey, the participants put the survey into an envelope and sealed it, and placed it in a box that the researcher had left in the room. After all participants left the room, the researcher returned to collect the surveys (Box).
- 8) The researcher created a password-protected database. The researcher entered the data into SPSS and the original surveys were kept in a locked filing cabinet or locked desk drawer at the researcher's office.
- 9) Five years after the researcher finishes the study, the participants' data will be destroyed.
- 10) Data analysis and finalization of the study occurred.
- 11) The researcher submitted a summary report to each participating organization that expressed interest in the findings and results.

## Methods of Data Analysis

When the survey and socio-demographic form were completed, the researcher collected the data and entered the data into an SPSS program for statistical analysis. Reliability estimates would be determined using Cronbach's ( $\alpha$ ), and validity estimates would be determined using factor analysis for construct validity of measurement. The characteristics of the sample (participants' socio-demographic file) would be summarized using descriptive statistics. Two research questions and five research hypotheses would be answered by inferential statistics. The descriptive statistics would include measures of central tendency (minimal, maximal, mean, and median) and frequency. For each research question, the independent  $t$ -test would be used to explore the differences among males and females as well as among single and married people. For each research hypothesis, the multiple regression analysis and Pearson  $r$  correlational coefficients were used to explore the relationships among these five independent factors (perceived online security, perceived online privacy, Internet experience, third-party recognition, and perceived risk) and the one dependent variable (online consumer trust).

To examine these relationships, a correlational coefficient would be used. The researcher wanted to know which research hypotheses would and would not be supported. The researcher used the independent  $t$ -test to measure the differences in gender and in marital status in online consumer trust. The researcher used multiple regression analysis to measure and predict which independent variable was the most important in affecting online consumer trust, which independent variable was the second most critical variable, and which independent variable was the third.



- (1) Descriptive statistics: Age, education, gender, marital status, and experience with the Internet were explored by measures of central tendency (minimal, maximal, mean, and median) and frequency.
- (2) Pearson  $r$  correlational coefficients: Correlation analysis was used to explore a simple correlation between two continuous variables. This study used Pearson  $r$  Correlational Coefficients to explore the relationships between five independent variables and one dependent variable. This technique can also ascertain whether or not the research hypotheses would be supported.
- (3) Independent samples  $t$ -test analysis: The independent samples  $t$ -test analysis included two groups and one continuous variable in order to measure statistical differences among these two groups. This tool was used to compare the means at two different samples (George & Mallery, 2003). The two samples shared some variable of interest, but there was no overlap between members of the two groups (George & Mallery, 2003). In this study, the researcher used this technique to explore the differences between males and females and between single and married people.
- (4) Multiple regression analysis: This tool was used to measure how each independent variable affected the dependent variable. Multiple regression analysis measures a linear relationship among the independent variable(s) and the dependent variable (George & Mallery, 2003). This technique was used to measure and predict the three most influential independent variables upon the dependent variable. Five important terms were used:

**R<sup>2</sup>:** The range of R<sup>2</sup> was from 0.0 to 1.0. The larger the value, the better (George & Mallery, 2003). The closer the value was to 1.0, the better.

**F statistic:** The F statistic represented a probability value,  $p$ , associated with  $R$  to reveal the relationship's significance among these independent factors and the dependent variable (George & Mallery, 2003). The F statistic measured whether the probability value had statistical significance or occurred by chance.

**B coefficients:** The coefficients for the regression equation measure predicted values of the dependent variable (George & Mallery, 2003). In other words, the B coefficients indicated whether the results or values could tell the actual effect on the dependent variable.

**$\beta$  weights:** This range at  $\beta$  weights was from -1 to +1. If the value of  $\beta$  weights was a large number, it indicated that this independent variable had a large effect on the dependent variable (George & Mallery, 2003). In other words, the result indicated the first, the second, the third, the fourth, and the fifth most important independent variables upon the dependent variable.

**t value:** B coefficients divided by the standard error of B (George & Mallery, 2003).

Multiple regression analysis was used to explore relationships between these five independent factors and the dependent variable. The multiple regression equation was shown as follows:

$$Y = f(X1 + X2 + X3 + X4 + X5)$$

Where Y = dependent variable (the level of online consumer trust);

X1 = independent variable (perceived online security);

X2 = independent variable (perceived online privacy);

X3 = independent variable (Internet experience);

X4 = independent variable (third-party recognition); and

X5 = independent variable (perceived risk)

## **Evaluation of Research Methods**

This was a non-experimental and non-probability study. Extraneous variables were not introduced because they could interfere with the relationship between these independent factors and the dependent factor.

There was no gender bias in the study. Data collection took place in a natural environment, where situational contaminants could affect responses, and threaten the internal validity of the study. As the measure of trust in Internet shopping was a new tool, this was a weakness. However, reliability and validity estimates were strong. Therefore, the use of a valid and reliable research instrument would contribute to internal validity. For data analysis, descriptive and inferential statistical procedures were considered appropriate to measure the socio-demographic profile and to answer the research hypotheses. This strengthened the internal validity of the study. Appropriate data analyses would lead to appropriate interpretations and conclusions.

The strengths and weaknesses of the sampling plan were described. The major limitation was in interpreting the research findings and generalizing them to other populations based on homogeneity (population validity), and to other settings beyond the Taichung County area of Taiwan (ecological validity). The settings were the weaknesses in external validity of the study because of the limitation to the accessible population, which would necessitate caution in generalizing to the target population. The convenience sample would affect generalizing to other populations. However, the strength of the research sample size would contribute to external validity.

Chapter III presented the research methodology, including the research design, population and sampling plan, trust in Internet shopping instrument, socio-demographic

characteristics, procedures and ethical aspects, methods of data analysis, and evaluation of research methods. Chapter IV presents the results of this study.

## CHAPTER IV

### RESULTS

This chapter presents the research questions, research hypotheses, and findings. This study used descriptive and inferential statistics. These research questions and research hypotheses are presented as follows:

#### Research Question 1

What is the difference among males and females on online consumer trust?

The independent-samples *t*-test in Table 2 shows that the 105 males in this study had a mean of 3.33 total points, the 112 females had a mean of 3.35 total points, and the means did not differ significantly at the  $p < 0.05$  level (note:  $p = 0.889$ ).

Table 2

#### *Group Statistics for Male and Female*

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TrustAvg	Male	105	3.33	.742	.072
	Female	112	3.35	.824	.078

Levene's test for Equality of Variances in Table 3 indicated that variances for males and females did not differ significantly (note:  $p = 0.150$ ). Significance (2-tailed) on the equal variances assumed section was 0.889 and equal variances not assumed section was 0.889. Therefore, there was no statistical significance difference between males and females as to the level of online consumer trust because  $p$  values were not less than 0.05.

Table 3

*Independent Samples t-test for Male and Female*

		Levene's Test for Equality of Variances	<i>t</i> -test for Equality of Means
		Sig.	Sig. (2-tailed)
TrustAvg	Equal variances assumed	.150	.889
	Equal variances not assumed		.889

**Research Question 2**

What is the difference between single and married people in the level of online consumer trust?

This independent-samples *t*-test in Table 4 indicated that the 113 single participants had a mean of 3.27 total points, the 104 married individuals had a mean of 3.41 total points, and the means did not differ significantly at the  $p < 0.05$  level (note:  $p = 0.192$ ).

Table 4

*Group Statistics for Single and Married*

	MaritalStatus	N	Mean	Std. Deviation	Std. Error Mean
TrustAvg	Single	113	3.27	.805	.076
	Married	104	3.41	.758	.074

Levene's test for Equality of Variances in Table 5 indicates that the variances for single and married persons did not differ significantly from each other (note:  $p = 0.452$ ). Significance (2-tailed) on the equal variances assumed section was 0.192 and equal variances not assumed section was 0.191. Therefore, there was no statistical significance difference between single and married people as to the level of online consumer trust because  $p$  values were not less than 0.05.

Table 5

*Independent Samples t-test for Single and Married*

		Levene's Test for Equality of Variances	t-test for Equality of Means
		Sig.	Sig. (2-tailed)
TrustAvg	Equal variances assumed	.452	.192
	Equal variances not assumed		.191

**Hypothesis 1**

Perceived online security is positively related to online consumer trust.

The Pearson (*r*) correlation coefficient was a measure of the linear relationship between two quantitative variables. Perceived online security was the subject of 2 questions in the questionnaire. Question 1 is “Internet vendors implement security measures to protect Internet shoppers”, and question 2 is “Internet vendors usually ensure that transactional information is protected from accidentally altered destroyed during transmission on the Internet” (Cheung & Lee, 2000, p. 4). Table 6 indicates the relationship between the independent variable (perceived online security) and dependent variable (trust).

Table 6

*Pearson r Correlation Coefficient Test Results for Security and Trust*

		SecurityAvg
TrustAvg	Pearson Correlation	.228**
	Sig. (2-tailed)	.001
	<i>N</i>	217

\*\* Correlation is significant at the 0.01 level (2-tailed).

The level of statistical significance for this correlation was at the 0.01 level ( $r = .228, p < .01$ ) between perceived online security and online consumer trust. This indicated that there was less than 1 chance in 100 that this relationship could have

happened by chance. This was a positive, moderately strong and statistically significant result. Online consumers who scored high on perceived online security tended to also score high on trust. Therefore, research hypothesis 1 was supported.

### **Hypothesis 2**

Perceived online privacy is positively related to online consumer trust.

The Pearson ( $r$ ) was to test linear relationship among two quantitative variables. Perceived online privacy was the subject of 3 questions in the questionnaire. Question 3 is “Internet vendors concern about consumers’ privacy”, question 4 is “Internet vendors will not divulge consumers’ personal data to other parties”, and question 5 is “I feel safe about the privacy control of Internet vendors” (Cheung & Lee, 2000, p. 4). Table 7 indicated the relationship between the independent variable (perceived online privacy) and dependent variable (trust).

Table 7

*Pearson r Correlation Coefficient Test Results for Privacy and Trust*

		PrivacyAvg
TrustAvg	Pearson Correlation	.294**
	Sig. (2-tailed)	.000
	<i>N</i>	217

\*\* Correlation is significant at the 0.01 level (2-tailed).

The level of statistical significance for this correlation was at the 0.01 level ( $r = .294, p < .01$ ) between perceived online privacy and online consumer trust. This indicated that there was less than 1 chance in 100 that this relationship could have happened by chance. This was a positive, moderately strong and statistically significant result. Online consumers who scored high on perceived online privacy tended to score high on trust. Therefore, research hypothesis 2 was supported.



### Hypothesis 3

Internet experience is positively related to online consumer trust.

The Pearson ( $r$ ) was to test linear relationship among two quantitative variables. Internet experience is the subject of 3 questions in the questionnaire. Question 6 is “using the Internet has been a good experience to me personally”, question 7 is “I have positive experiences of using the Internet”, and question 8 is “I have good experiences of using the Internet”. Table 8 indicated the relationship between independent variable (Internet experience) and dependent variable (trust).

Table 8

*Pearson  $r$  Correlation Coefficient Test Results for Internet Experience and Trust*

	Experience and Trust
Pearson Correlation	.207**
Sig. (2-tailed)	.002
$N$	217

\*\* Correlation is significant at the 0.01 level (2-tailed).

The level of statistical significance for this correlation was at the 0.01 level ( $r = .207, p < .01$ ) between Internet experience and online consumer trust. This indicated that there was less than 1 chance in 100 that this relationship could have happened by chance. This was a positive, low strong and statistically significant result. Online consumers who have good Internet experience tended to have more trust in Internet shopping. Therefore, research hypothesis 3 was supported.

### Hypothesis 4

Third-party assurance seal is positively related to online consumer trust.

The Pearson ( $r$ ) was to test linear relationship among two quantitative variables. Third-party assurance seal is the subject of 3 questions in the questionnaire. Question 9

is “there are many reputable third party certification bodies available for assuring the trustworthiness of Internet vendors”, question 10 is “I think third party recognition bodies are doing a good job”, and question 11 is “existing third party recognition bodies are adequate for the protection of Internet shoppers’ interest” (Cheung & Lee, 2000, p. 4). Table 9 indicated the relationship among this independent variable (third-party assurance seal) and this dependent variable (trust).

Table 9

*Pearson r Correlation Coefficient Test Results for Third-Party Assurance Seal and Trust*

	Third Party Seal and Trust
Pearson Correlation	.221**
Sig. (2-tailed)	.001
N	217

\*\* Correlation is significant at the 0.01 level (2-tailed).

The level of statistical significance for this correlation was at the 0.01 level ( $r = .221, p < .01$ ) between third-party assurance seal and online consumer trust. This indicated that there was less than 1 chance in 100 that this relationship could have happened by chance. This was a positive, moderately strong and statistically significant result. Online stores that provided a third-party assurance seal on their websites tended to be trusted more by online consumers. Therefore, research hypothesis 4 was supported.

### **Hypothesis 5**

Perceived risk is negatively associated with online consumer trust.

The Pearson ( $r$ ) was to test linear relationship among two quantitative variables. Perceived risk was the subject of 3 questions in the questionnaire. Question 15 is “Internet shopping is risky”, question 16 is “shopping on the Internet entails uncertainty

or vulnerability”, and question 17 is “I find it dangerous to shop on the Internet” (Cheung & Lee, 2000, p. 4). Table 10 indicated this relationship between this independent variable (perceived risk) and the dependent variable (trust).

Table 10

*Pearson r Correlation Coefficient Test Results for Perceived Risk and Trust*

	Risk and Trust
Pearson Correlation	-.549**
Sig. (2-tailed)	.000
N	217

\*\* Correlation is significant at the 0.01 level (2-tailed).

The level of statistical significance for this correlation was at the 0.01 level ( $r = -.549, p < .01$ ) between perceived risk and online consumer trust. This indicated that there was less than 1 chance in 100 that this relationship could have happened by chance. This was a negative, highly strong and statistically significant result. Online consumers who have higher perceived risk tended to have lower trust in Internet shopping. Therefore, research hypothesis 5 was supported.

***Multiple Regression Analysis***

Multiple regression analysis technique was used to measure and predict which independent variables were the most important and the least important factors to the dependent variable (online consumer trust).

Table 11 indicated that the range of *R* Square was from 0.0 to 1.0. The larger the value, the better (George & Mallery, 2003). The *R* square value showed that the model accounts for 35.1% of the variation in online consumer trust.

Table 11

*R Square Regression Analysis On Trust*

Model <sup>a</sup>	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.592 <sup>a</sup>	.351	.335	.639

a Predictors: (Constant), Risk, Security, Experience, ThirdParty, Privacy

Table 12 indicated the *F* statistic represents a probability value, *p*, associated with *R* to reveal the significance of this relationship among this independent variables and this dependent variable (George & Mallery, 2003). The *F* value of 22.782 ( $p < 0.001$ ) indicated a significant relationship among these independent variables and this dependent variable. This value of significance (0.000) also indicated a high statistical significance.

Table 12

*ANOVA for Multiple Regression Analysis On Trust*

Model <sup>a</sup>		Sum of Square	df	Mean Square	<i>F</i>	Sig.
1	Regression	46.547	5	9.309	22.782	.000 <sup>a</sup>
	Residual	86.218	211	.409		
	Total	132.765	216			

a Predictors: (Constant), Risk, Security, Experience, ThirdParty, Privacy

Table 13 indicates the *B* coefficients for the regression equation, which measure predicted values of the dependent variable (George & Mallery, 2003). In other words, Table 13 tells the actual effect of these independent variables on online consumer trust. This fitted equation for this model was as follows:

$$Y = (-0.032)(\text{Internet Security}) + (-0.133)(\text{Internet Privacy}) + (-0.038)(\text{Internet Experience}) + (-0.047)(\text{Third-party assurance seal}) + 0.516(\text{Perceived Risk})$$

This equation indicated that if the variable of Internet security is 1 unit change; online consumer trust will have a (-0.032) unit change. If the variable of perceived risk is 1 unit change; online consumer trust will have a 0.516 unit change.

Table 13

*Results of Multiple Regression On Trust*

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		<i>B</i>	Std. Error	Beta Weight		
1	(Constant)	2.284	.378		6.041	.000
	SecurityAvg	-.032	.052	-.042	-.615	.539
	PrivacyAvg	-.133	.055	-.167	-2.417	.016
	ExperienceAvg	-.038	.059	-.038	-.649	.517
	ThirdPartyAvg	-.047	.064	-.045	-.735	.463
	RiskAvg	.516	.060	.499	8.647	.000

Table 13 also indicates that the range of Beta weights was from -1 to +1. If the value or result of Beta weights is a large number, that indicates that this independent variable had a large effect on the dependent variable (George & Mallery, 2003).

In conclusion, the results show the first, the second, the third, the fourth, and the fifth most important independent variable to affect the dependent variable. Therefore, the first most important independent variable to affect the dependent variable (online consumer trust) was perceived risk (0.499), the second most important independent variable was perceived online privacy (-0.167), the third most important independent variable was the third-party assurance seal (-0.045), the fourth most important independent variable was perceived online security (-0.042), and the fifth most important independent variable was Internet experience (-0.038).

Table 13 also indicates the calculated  $t$  values and associated  $p$  values (significance). The parameter estimates are significant at 0.05. Therefore, according to this finding,  $p$  values for perceived risk and perceived privacy are less than 0.05.

### *Descriptive Statistics*

Table 14 shows the descriptive statistics (mean, median, mode, standard deviation, minimum, and maximum) of age, educational level, gender, marital status, and Internet experience variables.

Table 14

#### *Descriptive Statistics of the Demographic Variables*

	Age	Educational Level	Gender	Marital Status	Internet Experience
Mean	34	College	Female	Single	2 years
Median	35	College	Female	Single	Over 3 years
Mode	26	College	Female	Single	Over 3 years
Std. Deviation	1.389	.936	.501	.501	1.276
Minimum	20	Junior High	Male	Single	2 months
Maximum	53	Master	Female	Married	Over 3 years

Table 15 and Figure 2 show the results of respondents' ages. Table 15 indicates that 12.9% are among 20 and 25, 32.7% are among 26 and 30, 27.2% are among 31 and 35, 12.9% are among 36 and 40, 7.8% are among 41 and 45, 5.5% are among 46 and 50, and 0.9% are among 51-55 years old.

Table 15

*Frequency Table for Respondent Age Category*

Age Category	Frequency	Percent	Valid Percent	Cumulative Percent
20-25	28	12.9	12.9	12.9
26-30	71	32.7	32.7	45.6
31-35	59	27.2	27.2	72.8
36-40	28	12.9	12.9	85.7
41-45	17	7.8	7.8	93.5
46-50	12	5.5	5.5	99.1
51-55	2	0.9	0.9	100.0
Total	217	100.0	100.0	

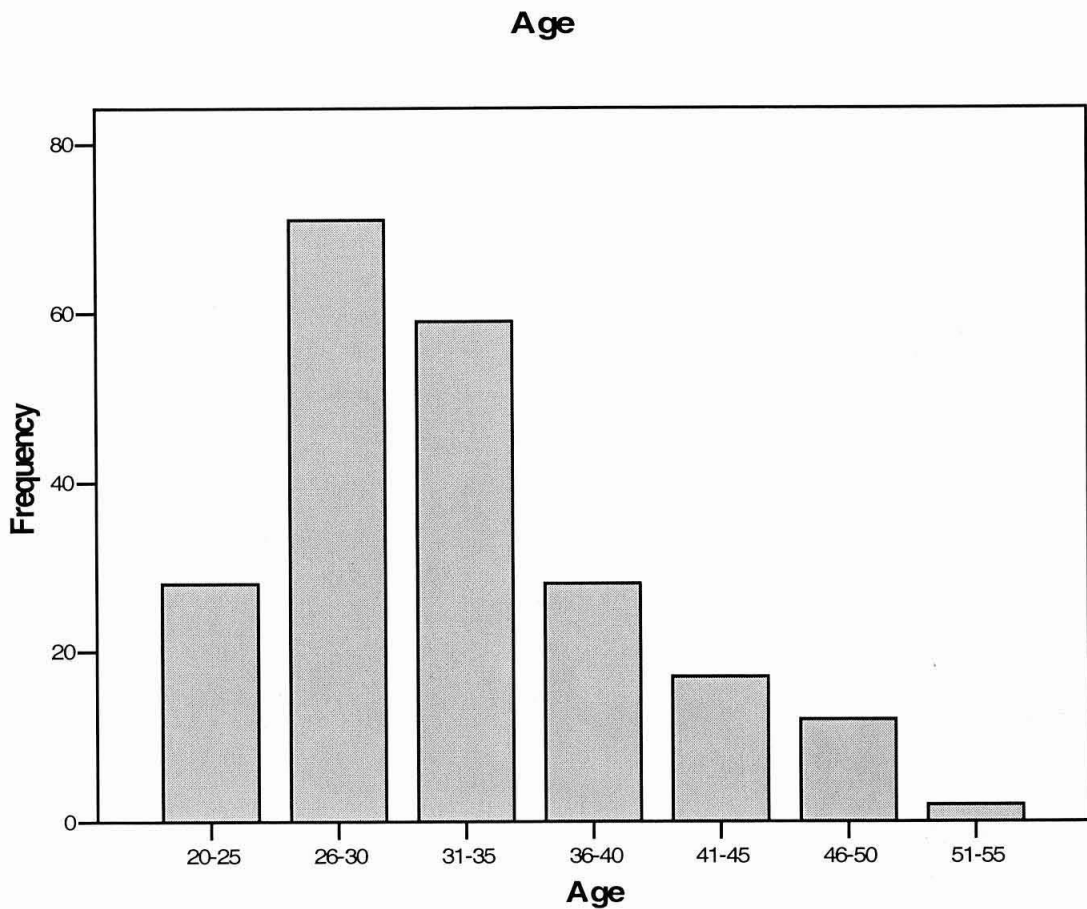


Figure 2. Bar chart for respondents' ages.

Table 16 and Figure 3 show the results of respondents' educational level. Table 16 indicates that 5.5% of the respondents' education was at the junior-high-school level, 21.7% of the respondents' education was at the senior-high-school level, 35.9% of the respondents' education was at the college level, 34.6% of the respondents' education was at the university level, and 2.3% of the respondents' education was at the master level.

Table 16

*Frequency Table for Respondents' Education Category*

Education Category	Frequency	Percent	Valid Percent	Cumulative Percent
JuniorHigh	12	5.5	5.5	5.5
SeniorHigh	47	21.7	21.7	27.2
College	78	35.9	35.9	63.1
University	75	34.6	34.6	97.7
Master	5	2.3	2.3	100.0
Total	217	100.0	100.0	



### Educational Level

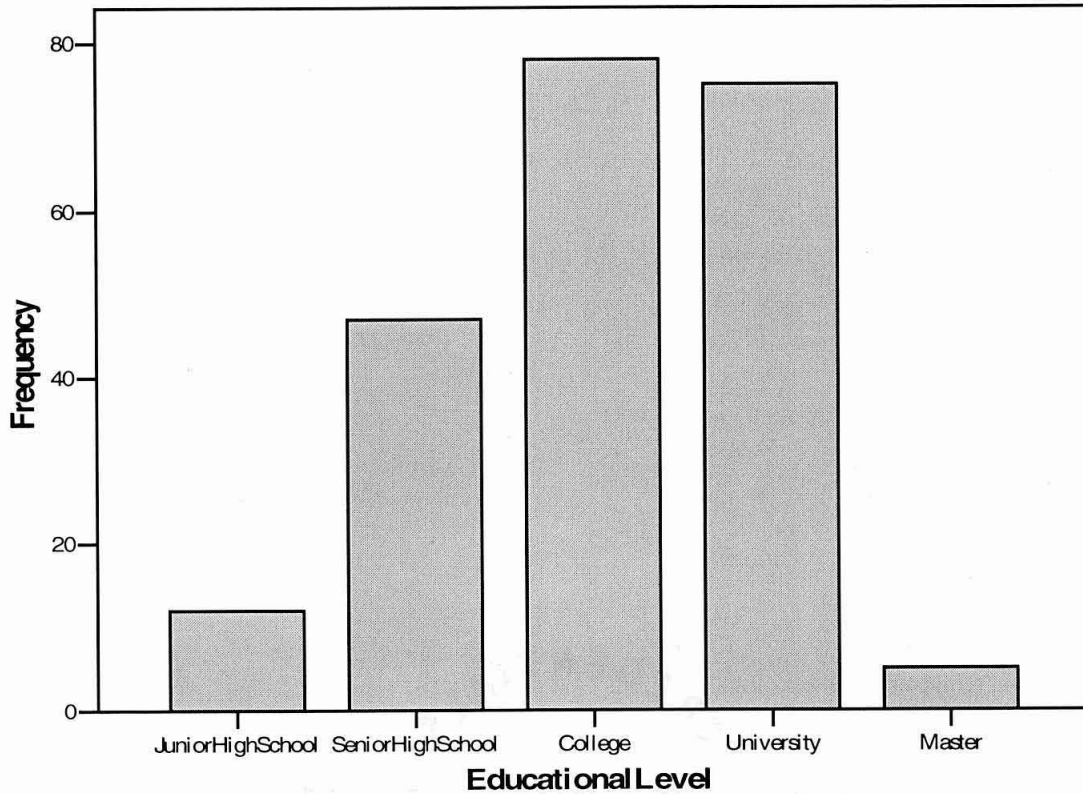


Figure 3. Bar chart for respondents' educational level.

Table 17 and Figure 4 show the results of respondents' gender. Table 17 indicates that 48.4% of the respondents were male and 51.6% of the respondents were female.

Table 17

*Frequency Table for Respondents' Gender Category*

Gender Category	Frequency	Percent	Valid Percent	Cumulative Percent
Male	105	48.4	48.4	48.4
Female	112	51.6	51.6	100.0
Total	217	100.0	100.0	

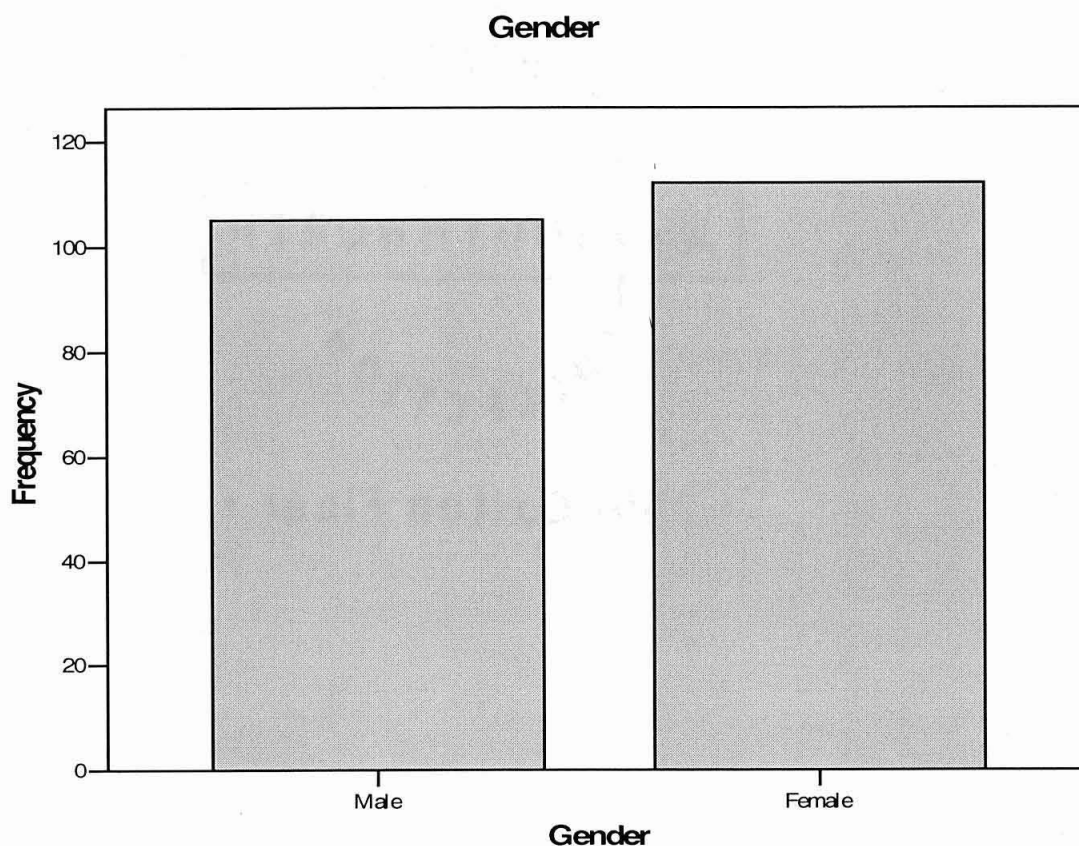


Figure 4. Bar chart for respondents' gender.

Table 18 and Figure 5 show the results of respondents' marital status. Table 18 indicates that 52.1% of the respondents were single and 47.9% of the respondents were married.

Table 18

*Frequency Table for Respondents' Marital Status Category*

Marital Status Category	Frequency	Percent	Valid Percent	Cumulative Percent
Single	113	52.1	52.1	52.1
Married	104	47.9	47.9	100.0
Total	217	100.0	100.0	

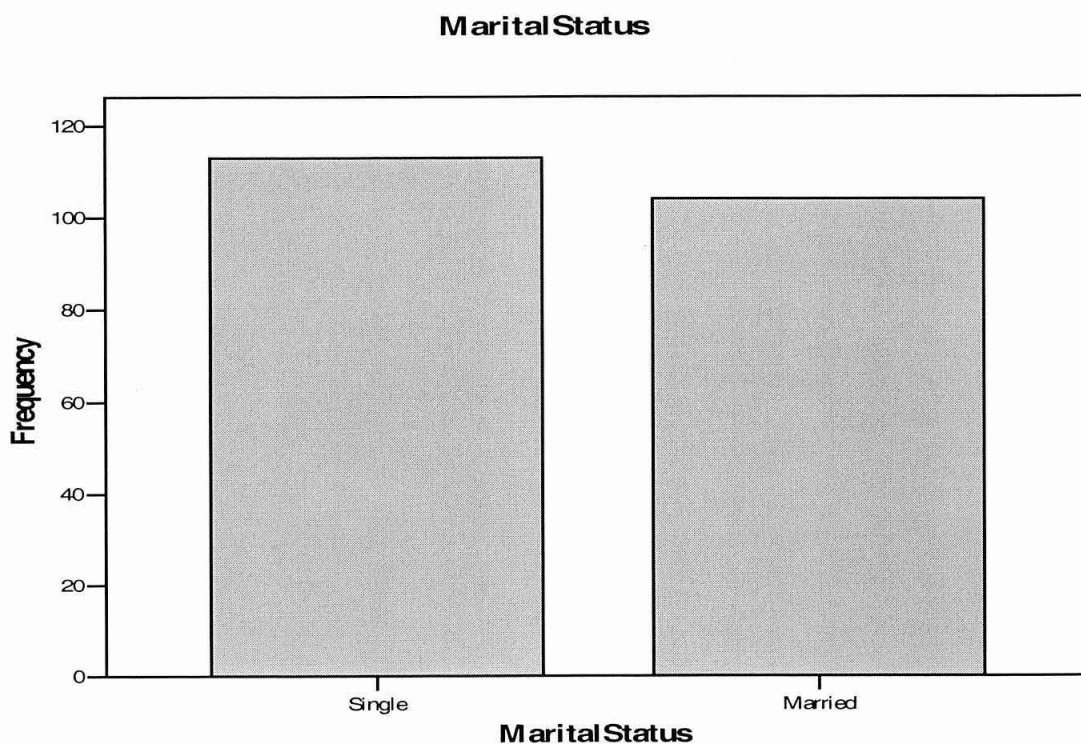


Figure 5. Bar chart for respondents' marital status.

Table 19 and Figure 6 show the results of respondents' Internet experience. Table 19 indicates that 7.4% of the respondents had 1-6 months Internet experience, 6.0% of the respondents had 7-12 months, 15.2% of the respondents had 1-2 years, 14.3% of the respondents had 2-3 years, and 57.1% of the respondents had more than 3 years. The majority of the respondents had more than 3 years Internet experience.

Table 19

*Frequency Table for Respondents' Internet Experience Category*

Internet Experience Category	Frequency	Percent	Valid Percent	Cumulative Percent
1-6 Months	16	7.4	7.4	7.4
7-12 Months	13	6.0	6.0	13.4
1-2 Years	33	15.2	15.2	28.6
2-3 Years	31	14.3	14.3	42.9
Above 3 years	124	57.1	57.1	100.0
Total	217	100.0	100.0	

### InternetExperience

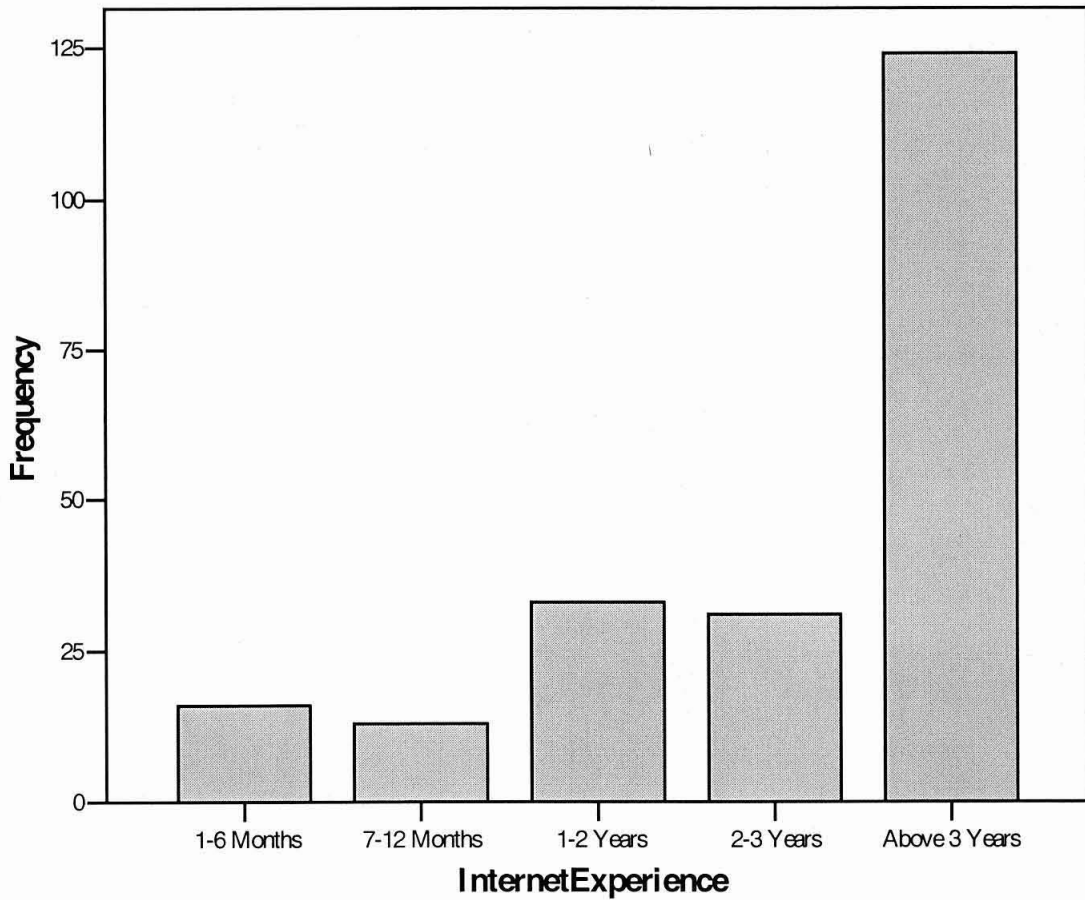


Figure 6. Bar chart for respondents' Internet experience.

### *Reliability*

Table 20 indicates the Cronbach Alpha for internal consistency.  $\alpha = 0.70$  is the acceptance value of reliability (Hair, Anderson, Tatham, & Black, 1998). The Cronbach Alpha values range was from 0.739 to 0.869. All of them were more than 0.70; therefore, internal consistency is high.

Table 20

*Reliability Statistics On Trust In Internet Shopping Survey*

Construct	Cronbach's <i>a</i>	N of Items
Perceived Online Security	0.739	2
Perceived Online Privacy	0.803	3
Internet Experience	0.869	3
Third Party Assurance Seal	0.836	3
Perceived Risk	0.821	3
Trust	0.793	3

*Factor Analysis for Construct Validity*

In order to test construct validity, the 17 items are subjected to this analysis and it is performed with varimax rotation. To validate appropriateness of this analysis, Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity measures were calculated. Table 21 shows the results of KMO and Bartlett's test of sphericity. The value of KMO was 0.817.

Table 21

*KMO and Bartlett's Test Results*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.817
Bartlett's Test of Sphericity	Approx. Chi-Square	1776.784
	df	136
	Sig.	.000

Table 22 and Figure 7 show the results of factor analysis. Table 22 indicates that 4 factors values were larger than 1 after varimax rotation was extracted, which accounts for approximately 66.68% of common variance. All of the factors loading are high.

Table 22

*Extraction Sums of Squared Loadings*

Components	Total	% of Variance	Cumulative %
1	5.295	31.144	31.144
2	2.546	14.978	46.122
3	1.961	11.533	57.655
4	1.534	9.026	66.681

Figure 7 indicates this Scree Plot for factor analysis. This function of the scree plot is to select how many factors to rotate to a final solution, and the SPSS default is to select and rotate any factor with an eigenvalue greater than 1.0 (George & Mallery, 2003). Therefore, based on Figure 7, there were four factors greater than 1.0 and these factors need to rotate to a final solution.

**Scree Plot**

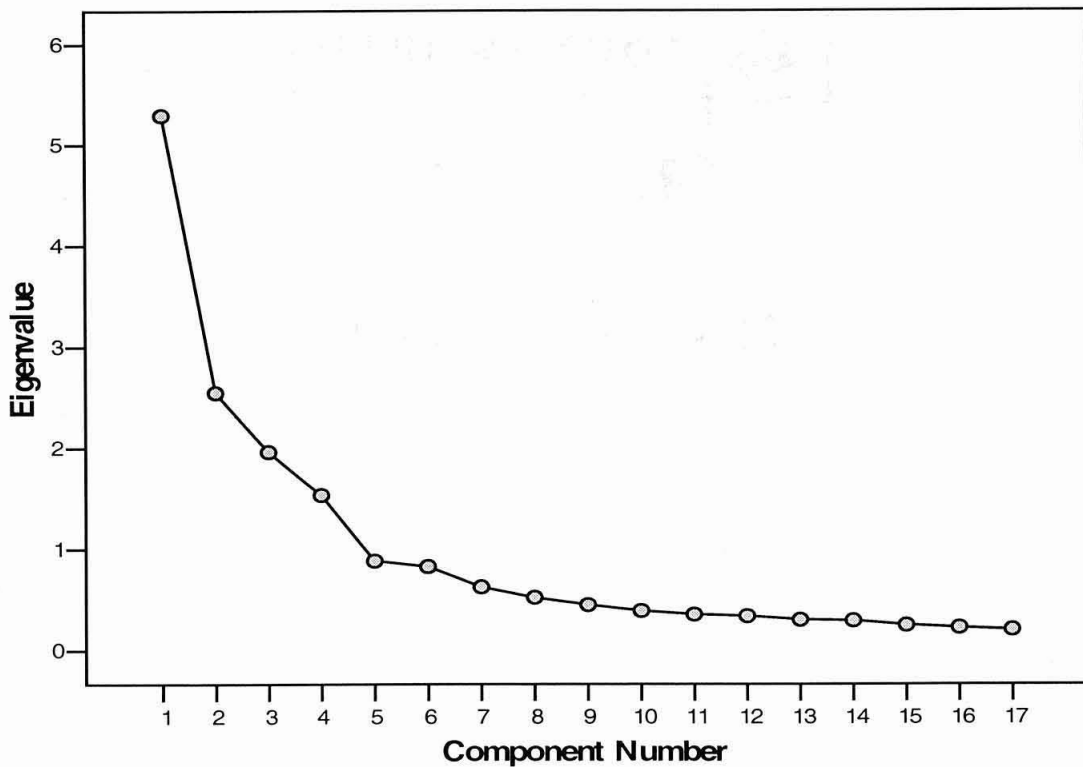


Figure 7. Scree plot for factor analysis.

Chapter V provides a discussion of the findings, interpretations, practical implications, conclusions, limitations, and recommendations for future study.

## CHAPTER V

### DISCUSSION

Chapter 5 discusses the interpretations, practical implications, conclusions, limitations, and recommendations for future study on the topic of the factors that affect online consumer trust in Taiwan. A survey of trust in Internet shopping was used in the research. This data-producing sample had 217 participants, resulting in a response rate of 94.34%. The participants are employees in seven companies and two schools in Taiwan.

An independent *t*-test was used to measure the difference in online consumer trust among males and females, and between married and single people. Multiple regression analysis was used to measure and predict which independent variable had the most effect upon the dependent variable (online consumer trust), which independent variable had the second most critical effect upon the dependent variable, and which independent variable had the third largest effect upon the dependent variable. The Pearson correlational coefficient (*r*) was used to measure and test the research hypotheses and identify which one could be supported. Reliability estimates were high for internal consistency, and factor analysis for construct validity was established. Data collection procedures were described, and the study was approved by Lynn University's Institutional Review Board.

The results found no difference between males and females in their perceived level of trust of Internet shopping, nor was there any difference between single and married subjects. Findings supported the hypotheses that (a) perceived online security is positively associated with online consumer trust, (b) perceived online privacy is positively associated with online consumer trust, (c) Internet experience is positively associated with online consumer trust, (d) third-party assurance seal is positively



associated with online consumer trust, and (e) perceived risk is negatively associated with online consumer trust. Perceived risk and perceived online privacy are the two most important factors on online consumer trust.

## **Interpretations**

### ***Research Questions (Socio-Demographic Characteristics)***

The purpose of Research Questions 1 and 2 was to explore the differences among males and females and among single and married people on online consumer trust. The results found that there was no difference.

According to the Socio-Demographic Profile, 48.4% of the participants in the study were male and 51.6% were female. In terms of marital status, 52.1% were single and 47.9% were married. The demographic findings about gender in this study were not consistent with those in the study by Shu (2003), who surveyed university students about their willingness to shop online. In his study, males were the majority of respondents whereas in this study females were. This study did not support Shu's (2003) sample. According to Jarvenpaa, Tractinsky, and Vitale's (2000) study of consumer trust in an Internet store, this study's demographic findings were also not consistent with Jarvenpaa et al., (2000) in terms of gender. Their study mentioned that males were the major respondents whereas this study found females were the majority of respondents.

When comparing online consumer trust between male and female online shoppers, this study found that there was no difference. However, according to Chen and Dhillon's (2003) interpretation, males and females have different levels of trust in online shopping. For male online shoppers, the study includes factors of reliability, emotional trust, and

general trust (Chen & Dhillon, 2003). For female online consumers, the factors are similar to males, but not identical (Chen & Dhillon, 2003). Therefore, this finding does not support Chen and Dhillon's (2003) finding.

This finding was also inconsistent with Liebermann and Stashevsky's (2002) finding that reported that females have higher risks than males. According to Slyke, Comunale, and Belanger's (2002) study of gender differences in perceptions of online shopping, this study's finding was also inconsistent with Slyke's et al., (2002) finding. Their study concluded that females were more conservative in online shopping than males. This study, however, found that there was no difference between male and female perception of online trust.

To compare online consumer trust between single and married online shoppers, this study found that there was no difference between single and married online consumers when it came to online consumer trust. However, according to Liebermann and Stashevsky's (2002) study, married people are likely to perceive higher risks in the Internet than single people. Therefore, this finding did not support Liebermann and Stashevsky's (2002) finding.

### ***Research Hypothesis 1***

The purpose of research hypothesis 1 was to explore the relationship between perceived online security and online consumer trust. This relationship was found to be positive ( $r = .228, p < .01$ ) and statistically significant. Therefore, research hypothesis 1 was supported.

This study's findings confirm Salisbury, Pearson, Pearson, and Miller's (2001) hypothesis that perceived online security will affect online consumer behavior. Salisbury

et al., (2001) believe that if online shoppers believe that an online store is safe, they will have confidence in that online store. They will therefore shop at that store. Therefore, this research hypothesis confirms the theory of reasoned action from the literature review. This finding also supports Udo's (2001) finding that perceived online security is a major factor in online consumer trust.

This study's finding was consistent with Chellappa and Pavlou's (2002) conclusion that perceived security was positively related to trust in electronic commerce. The higher perceived security online consumers have, the more trust online shoppers own.

This study's finding also confirms Cheung and Lee's (2000) proposition. This study's finding was consistent with Shu's (2003) finding that perceived online security was positively and significantly correlated with trust in Internet shopping and with consumers' willingness to online shopping.

### ***Research Hypothesis 2***

The purpose of hypothesis 2 was to explore the relationship between perceived online privacy and online consumer trust. This relationship was found to be positive ( $r = .294, p < .01$ ) and statistically significant. Therefore, research hypothesis 2 was supported.

This study confirms Brown and Muchira's (2004) finding that if e-retailers had privacy policies, online consumers would be more willing to disclose personal data. When e-retailers have high-perceived online privacy, online consumers would visit these websites and purchase products from them. A high level of online privacy can increase online shoppers' trust in an e-retailer. Therefore, this research hypothesis supports the theories of privacy and reasoned action from the literature review. However, online

consumers who received unwanted and unsolicited communications from companies via the Internet were less likely to buy products online. Brown and Muchira's (2004) findings were consistent with those of the literature on direct marketing (Berman & Mulligan, 1999; Campbell, 1997; Mand, 1998).

According to Liu, Marchewka, and Ku's (2004) study, there was no significant difference between U.S. and Taiwan participants among privacy and trust, and people from these two countries have similar feelings about online privacy and online consumer trust. This study's finding is consistent with Liu's et al., (2004) finding that online privacy and trust are positive relationship.

This study's finding also confirms Cheung and Lee's (2000) finding. Cheung and Lee (2000) claimed that online consumers have more trust in Internet shopping if their privacy data are well protected. This study's finding was inconsistent with Shu's (2003) finding that perceived online privacy was not significantly linked to trust in Internet shopping.

### ***Research Hypothesis 3***

Research Hypothesis 3 examined the relationship between Internet experience and online consumer trust. This relationship was found to be positive ( $r = .207, p < .01$ ) and statistically significant. Therefore, research hypothesis 3 was supported.

This study's finding confirms Cheung and Lee's (2001) finding that personal Internet experience is positively associated with propensity to trust. This study also confirms Hoffman, Novak, and Peralta's (1999) finding that Internet experience was an important factor in Internet purchases. According to George's (2002) finding that experienced Internet users believed that the Internet was a more trustworthy environment

than users with little Internet experience, this study is in agreement with George's (2002) finding.

This study's finding was consistent with Miyazaki and Fernandez's (2001) finding that Internet experience is negatively related to the perceived risks of conducting online purchases. They indicated that when online shoppers have more Internet experience, they have fewer risk concerns and more trust because they understand the process of electronic commerce. This research hypothesis supports the theory of perceived risk in the literature review.

#### ***Research Hypothesis 4***

The purpose of research hypothesis 4 was to examine a third-party assurance seal and online consumer trust. This relationship was found to be positive ( $r = .221, p < .01$ ) and statistically significant. Therefore, research hypothesis 4 was supported.

According to Kimery and McCord's (2002) study, they stated that in recent years many e-retailers earned a third-party seal in order to foster trust within e-retailers and online shoppers. Kimery and McCord (2002) also claimed that a third-party assurance seal showed that the e-retailer met the specific standards or requirements and could be trusted by online consumers. This study does not confirm Kimery and McCord's (2002) finding that when online shoppers saw a third-party seal, they would not have more trust at that store. They explained that third-party seals did not have a significant effect on online consumers when online shoppers visit an online store for the first time.

This study's finding confirms Borchers' (2000) conclusion that a third-party seal and online consumer trust are positive relationship. This finding also confirms Cheung and Lee's (2000) finding.

### ***Research Hypothesis 5***

The purpose of research hypothesis 5 was to explore the relationship between perceived risk and online consumer trust. This relationship was found to be negative ( $r = -.549, p < .01$ ) and statistically significant. Therefore, research hypothesis 5 was supported.

This study confirms Milloy, Fink, and Morris' (2002) concept that online shoppers who feel or have higher perceived risk on an online store will have lower trust in that store and will be afraid to shop at that online store. Thus, a level of perceived high risk can decrease online consumer trust. This research hypothesis supports the theory of risk propensity in the literature review.

According to Miyazaki and Fernandez's (2001) finding that the perceived risk is negatively related to purchase goods on the Internet, this result of the research is in agreement with Miyazaki and Fernandez's (2001) finding. This study confirms Cheung and Lee's (2000) finding. This finding also confirms Kimery and McCord's (2002) conclusion.

### **Practical Implications**

The research found that providing a refund policy can reduce perceived risk, improve online consumer trust, and encourage online purchases in Taiwan. Therefore, it is recommended that Taiwanese online stores need to offer a refund policy. For instance, when online shoppers shop online, online consumers only see the picture of a product. If Taiwanese online stores provide a refund policy, online consumer trust will increase and perceived risk will be reduced.

Offering a secure online transaction environment can improve online consumer trust. Therefore, it is recommended that Taiwanese e-retailers need to provide this for online shoppers. Online shoppers worry about transaction security, information security, and fear that their data will be stolen by the hackers. If Taiwanese online stores offer a secured online transaction environment, more Taiwanese will be encouraged to shop online, and current online shoppers will have more confidence in Internet security.

A privacy policy can improve online consumer trust and reduce perceived risk. Therefore, it is recommended that Taiwanese online stores need to offer a privacy policy. Taiwanese online shoppers worry that their personal data and financial data will be revealed and sold to a third party. If Taiwanese e-retailers can offer a privacy policy or privacy statement, the trust of Taiwanese online consumers will increase.

Only a few large Taiwanese e-retailers display a third-party assurance seal (such as TrustE, SOSA, BBB, or VeriSign) on their websites. Taiwanese online shoppers prefer websites that have a third-party assurance seal. Every Taiwanese online store should have a third-party assurance seal to protect Taiwanese online shoppers and gain their trust.

The more that consumers use the Internet experience the more knowledge they have of it. Online shoppers should make sure that Taiwanese e-retailers provide a secure online transaction environment, privacy policy, refund policy, and third-party assurance seal. All of these factors have been proven to affect online consumer trust in Internet shopping.

The findings of the study are important to e-retailers, online shoppers, and other researchers in Taiwan. E-retailers may benefit by knowing which factors promote online

consumer trust in Internet shopping. Then, e-retailers can improve these sections. Taiwanese online shoppers may benefit from knowing the results of this study and may increase their trust and confidence in e-retailers. In addition, online shoppers may influence e-retailers' or government's decisions or strategies. Other researchers may benefit by duplicating or modifying this study.

The findings of this study show that perceived online security, perceived online privacy, Internet experience, and third-party assurance seal are positively associated with online consumer trust in Taiwan, as well as perceived risk is negatively associated with online consumer trust. Perceptions of online security, online privacy, risk, and Internet experience, and a third-party assurance seal are important factors in online consumer trust in Taiwan. For online security, e-retailers can install anti-hacker software in order to protect and prevent online consumers' data from being stolen. Taiwanese e-retailers need to tell shoppers how they can be compensated if their personal data is released to a third party. Finally, e-retailers should notify their consumers that they have obtained a third-party assurance seal. Online stores need to be trusted by their consumers, or they will not remain in business.

According to this study, the effect of perceived risk is stronger than perceived online privacy on trust. Perceived online privacy on trust is stronger than the effect of a third-party assurance seal. The effect of a third-party assurance seal on trust is stronger than the effect of perceived online security. The effect of perceived online security on trust is stronger than the effect of Internet experience.



## **Conclusions**

1. Multiple regression analysis shows that perceived risk and perceived online privacy significantly influences online consumer trust.
2. The factors of perceived online security, perceived online privacy, Internet experience, third-party assurance seal, and perceived risk were shown to be related to online consumer trust. All of these factors were useful in predicting and understanding online consumer trust.
3. This study found no difference between males and females and online consumer trust; there was no difference between single and married subjects; perceived risk was the most important factor in online consumer trust; perceived online privacy was the second; third-party assurance seal was the third; perceived online security was the fourth; and Internet experience was the fifth.
4. The theoretical framework supported in this study improves the understanding of trust and electronic commerce in Taiwan.
5. The outcomes of this study can inform online stores to improve trust, and then increase the use of Internet shopping in Taiwan.

## **Limitations**

1. The sampling method of the study was limited to non-probability, and the design of the study was limited to non-experimental. This threatens internal validity.
2. The organizations in this study were limited to seven companies and two schools in Taiwan. There were only 230 people in the sample population.
3. The study was conducted in Taichung County, Taiwan.
4. All of the participants were Taiwanese.
5. The study was limited to participants who had online shopping experience.

6. The research findings may not be generalized to other counties in Taiwan.

### **Recommendations for Future Study**

1. Future studies might adopt a qualitative research design by interviewing participants and eliciting their opinions about online consumer trust.
2. Future studies should add other factors such as stores' size, stores' reputation, and service quality.
3. Future studies should utilize a probability sampling method, and focus on experimental research design to measure the difference among this study and this proposed study.
4. Future studies should enlarge the sample size and broaden the population in order to strengthen generalizability of the study.
5. Future studies might include other cultures or countries to explore the difference between American and Taiwanese online shoppers.
6. Future studies should explore the relationship between age, education, and online consumer trust. Such research would investigate which age group and which education group will have the most and the least online consumer trust.
7. Future studies can apply and replicate this study's findings to different e-retailers in Taiwan.

## REFERENCES

- Agarwal, R., & Venkatesh, V. (2002). Assessing a firm's Web presence: A heuristic evaluation procedure for the measurement of usability. *Information Systems Research, 13*(2), 168-186. Retrieved October 10, 2004 from ProQuest database.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Attaran, M. (2000). Managing legal liability of the net: A ten step guide for IT managers. *Information Management and Computer Security, 8*(2), 98-103. Retrieved September 23, 2004 from ProQuest database.
- Bellman, S., Lohse, G., & Johnson, E. (1999). Predictors of online buying behavior. *Communications of the ACM, 42*(12), 32-38. Retrieved November 12, 2004 from ProQuest database.
- Berman, J., & Mulligan, D. (1999). *Privacy in the digital age*. Retrieved September 23, 2004, from <http://www.cdt.org/publications/lawreview/1999nova.shtml>
- Brown, D. H., & Blevins, J. L. (2002). The safe-harbor agreement between the United States and Europe: A missed opportunity to balance the interests of e-commerce and privacy online? *Journal of Broadcasting & Electronic Media, 46*(4), 565-586. Retrieved September 23, 2004 from ProQuest database.
- Brown, M., & Muchira, R. (2004). Investigating the relationship between Internet privacy concerns and online purchase behavior. *Journal of Electronic Commerce Research, 5*(1), 62-70. Retrieved September 22, 2004 from ProQuest database.
- Carroll, K. (1999). E-commerce success may depend on online privacy. *Telephony, 237*(17), 46-48. Retrieved September 22, 2004 from ProQuest database.

- Chellappa, R. K., & Pavlou, P. A. (2002). Perceived information security, financial liability and consumer trust in electronic commerce transactions. *Logistics Information Management*, 15(5), 358-369. Retrieved August 19, 2004 from ProQuest database.
- Chen, S. C., & Dhillon, G. S. (2003). Interpreting dimensions of consumer trust in E-commerce. *Information Technology and Management*, 4(3), 303-318. Retrieved September 13, 2004 from ProQuest database.
- Chen, L., Gillenson, M., & Sherrell, D. (2002). Enticing online consumers: An extended technology acceptance perspective. *Information & Management*, 39(8), 705-719. Retrieved March 05, 2005 from ProQuest database.
- Chen, P., & Hitt, L. (2002). Measuring switching costs and the determinants of customer retention in Internet-enabled businesses: A study of the online brokerage industry. *Information Systems Research*, 13(3), 255-274. Retrieved November 12, 2004 from ProQuest database.
- Cheung, C. M. K., & Lee, M. K. O. (2001). Trust in Internet shopping: Instrument development and validation through classical and modern approaches. *Journal of Global Information Management*, 9(3), 23-35.
- Childers, T., Carr, C., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77(4), 511-535. Retrieved October 15, 2004 from ProQuest database.
- Chow, S., & Holden, R. (1997). Toward an understanding of loyalty: The moderating role of trust. *Journal of Management Issues*, 9(3), 275-298. Retrieved November 11, 2004 from ProQuest database.

- Cordy, E. D. (2003). The legal regulation of e-commerce transactions. *Journal of American Academy of Business*, 2(2), 400-408. Retrieved August 19, 2004 from ProQuest database.
- Csikszentmihalyi, M. (2000). *Beyond boredom and anxiety: Experiencing flow in work and play*. San Francisco, CA: Jossey-Bass Publishers.
- Csikszentmihalyi, M. (1988). *Optimal experience: Psychological studies of flow in consciousness*. UK: Cambridge University Press.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003. Retrieved May 04, 2005 from ProQuest database.
- Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: Three experiments. *International Journal of Human-Computer Studies*, 45(1), 19-45. Retrieved June 03, 2005 from ProQuest database.
- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, 61(2), 35-51. Retrieved May 10, 2005 from ProQuest database.
- Eighmey, J. (1997). Profiling user responses to commercial Web sites. *Journal of Advertising Research*, 37(3), 59-66. Retrieved September 26, 2004 from ProQuest database.
- Federal Trade Commission (1999). Privacy policies online: Improving for consumers. *Consumers Research Magazine*, 82(10), 26-30. Retrieved September 23, 2004 from ProQuest database.

- Fishbein, M., & Ajzen, I. (1975). *Belief attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley Publishing.
- Fox, S. (2000). *Trust and privacy online: Why Americans want to rewrite the rules*. Retrieved September 27, 2004, from <http://www.pewinternet.org/>
- Ganesan, S. (1994). Determinants of long-term orientation in buyer-seller relationships. *Journal of Marketing*, 58(2), 1-19. Retrieved July 13, 2005 from ProQuest database.
- George, J. F. (2002). Influences on the intent to make Internet purchase. *Internet Research*, 12(2), 165-181. Retrieved September 27, 2004 from ProQuest database.
- George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference*. Boston, MA: Allyn and Bacon.
- Ghosh, A. K. (2001). Strategies for developing policies and requirements for secure and private electronic commerce. In S. Jajodia (Eds.), *E-commerce security and privacy* (pp. 68-86). Norwell, MA: Kluwer Academic Publishers.
- Gillmor, D. (1998). Violating privacy is bad business. *Computerworld*, 32(12), 38-39. Retrieved September 22, 2004 from ProQuest database.
- Grandinetti, M. (1996). Establishing and maintaining security on the Internet. *Sacramento Business Journal*, 13(25), 22-38. Retrieved July 15, 2005 from ProQuest database.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis*. Englewood Cliffs, NJ: Prentice-Hall.

- Hoffman, D. L., Novak, T., & Poralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42(4), 80-85. Retrieved September 18, 2004 from ProQuest database.
- International Data Corporation (1999a). *Internet commerce will rocket to more than \$1 trillion by 2003*. Retrieved September 28, 2004, from <http://www.idc.com/Data/Internet/content/NET062899PR.htm>
- Jarvenpaa, S. L., Tractinsky, N., & Vitale, M. (2000). Consumer trust in an Internet store. *Information Technology and Management*, 1(1), 45-71. Retrieved September 27, 2004 from ProQuest database.
- Jones, M. A. (2002). *Mitigating uncertainty through government intervention: Exploring the impact of public policy on Internet privacy concerns*. Retrieved September 29, 2004, from UMI ProQuest Digital Dissertations. (UMI No. 3053838)
- Kakalik, J., & Wright, M. (1996). Responding to privacy concerns of consumers. *Review of Business*, 18(1), 15-18. Retrieved September 22, 2004 from ProQuest database.
- Keen, P. G. (1997). Are you ready for trust economy. *ComputerWorld*, 31(16), 80-81. Retrieved September 27, 2004 from ProQuest database.
- Kehoe, C., Pitkow, J., & Morton, K. (1997). *Eighth WWW user survey*. Retrieved September 22, 2004, from [http://www.cc.ptech.edu/gvu/user\\_surveys/survey-1997-10](http://www.cc.ptech.edu/gvu/user_surveys/survey-1997-10)

- Kimery, K. M., & McCord, M. (2002). Third-party assurances: Mapping the road to trust in e-retailing. *Journal of Information Technology Theory and Application*, 4(2), 63-83. Retrieved September 27, 2004 from ProQuest database.
- Korgaonkar, P., & Wolin, L. (1999). A multivariate analysis of Web usage. *Journal of Advertising Research*, 39(2), 53-70. Retrieved September 23, 2004 from ProQuest database.
- Koufaris, M. (2002). Applying the technology acceptance model and flow theory to online consumer behavior [Electronic version]. *Information Systems Research*, 13(2), 205-225.
- Merkow, M. S., & Breithaupt, J. (2001). *The E-privacy imperative: Protect your customers' Internet privacy and ensure your company's survival in the electronic age*. New York, NY: AMACOM.
- Milloy, M., Fink, D., & Morris, R. (2002). Modeling online security and privacy to increase consumer purchasing intent. *Informing Science*. [Electronic version] Retrieved September 28, 2004, from <http://proceedings.informingscience.org/IS2002Proceedings/papers/Millo097Model.pdf>
- Ministry of Economic Affairs (2005). *E-commerce survey*. Retrieved April 16, 2005, from <http://www.moea.gov.tw/~meco/doc/ndoc/default.htm>
- Miyazaki, A. D., & Fernandez, A. (2001). Consumer perceptions of privacy and security risks for online shopping. *The Journal of Consumer Affairs*, 35(1), 27-45. Retrieved September 27, 2004 from ProQuest database.



- Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing*, 57(1), 81-101. Retrieved August 01, 2005 from ProQuest database.
- Nowak, G., & Phelps, J. (1995). Understanding privacy concerns: An assessment of consumer information related knowledge and beliefs. *Journal of Direct Marketing*, 6(4), 28-39. Retrieved September 22, 2004 from ProQuest database.
- Park, C. H., & Kim, Y. G. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management*, 31(1), 16-30. Retrieved September 18, 2004 from ProQuest database.
- Phelps, J., Nowak, G., & Ferrell, E. (2000). Privacy concerns and consumer willingness to provide personal information. *Journal of Public Policy & Marketing*, 19(1), 27-42. Retrieved September 23, 2004 from ProQuest database.
- Prabhaker, P. R. (2000). Who owns the online consumer? *Journal of Consumer Marketing*, 25(4), 329-346. Retrieved September 22, 2004 from ProQuest database.
- Ratnasingham, P. (1998). The importance of trust in electronic commerce. *Internet Research*, 8(4), 313-321. Retrieved September 22, 2004 from ProQuest database.
- Reddy, A. C., & Lyer, R. (2002). A conceptual model of the principles governing effective e-commerce. *International Journal of Management*, 19(3), 517-524. Retrieved August 19, 2004 from ProQuest database.
- Rice, M. (1997). What makes users revisit a Web site? *Marketing News*, 31(6), 12-13. Retrieved January 26, 2005 from ProQuest database.

- Saeed, K. A., Hwang, Y., & Yi, M. Y. (2003). Toward an integrative framework for online consumer behavior research: A meta-analysis approach. *Journal of End User Computing*, 15(4), 1-19. Retrieved September 26, 2004 from ProQuest database.
- Salisbury, W. D., Pearson, R. A., Pearson, A. W., & Miller, D. W. (2001). Perceived security and World Wide Web purchase intention [Electronic version]. *Industrial Management & Data Systems*, 101(3), 165-177. Retrieved May 18, 2005 from ProQuest database.
- Seddon, P. B. (1997). A respecification and extension of the DeLone and McLean model of IS success. *Information Systems Research*, 8(3), 240-253. Retrieved August 12, 2005 from ProQuest database.
- Sheehan, K. B., & Hoy, M. G. (1999). Flaming, complaining, abstaining: How online users respond to privacy concerns. *Journal of Advertising*, 28(3), 37-61. Retrieved September 23, 2004 from ProQuest database.
- Shu, J. O. (2003). *Identifying the factors that affect consumers' willingness to do Internet shopping*. Unpublished master's thesis, Concordia University. Retrieved September 29, 2004, from UMI ProQuest Digital Dissertations.
- Sitkin, S. (1995). Determinants of risky decision-making behavior. *Academy of Management Journal*, 38(6), 1573-1592. Retrieved February 10, 2005 from ProQuest database.
- Sitkin, S., & Roth, N. (1993). Examining the limited effectiveness of legalistic remedies for trust/distrust. *Organization Science*, 4(3), 367-392. Retrieved June 14, 2005 from ProQuest database.

- Slyke, C. V., Comunale, C. L., & Belanger, F. (2002). Gender differences in perceptions of web-based shopping. *Communications of the ACM*, 45(7), 82-86. Retrieved May 05, 2005 from ProQuest database.
- Turban, E., & King, D. (2003). *Introduction to E-commerce*. Upper Saddle River, NJ: Pearson Education.
- Udo, G. J. (2001). Privacy and security concerns as major barriers for e-commerce: A survey study. *Information Management & Computer Security*, 9(4), 165-175. Retrieved August 19, 2004 from ProQuest database.
- Wang, H., Lee, M., & Wang, C. (1998). Consumer privacy concerns about Internet marketing. *Communications for the ACM*, 41(3), 63-70. Retrieved September 28, 2004 from ProQuest database.

## BIBLIOGRAPHY

- Aljifri, H. A., Pons, A., & Collins, D. (2003). Global e-commerce: A framework for understanding and overcoming the trust barrier. *Information Management & Computer Security*, 11(3), 130-139. Retrieved September 27, 2004, from ProQuest database.
- American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5<sup>th</sup> ed.). Washington, DC: Author.
- Bapna, R., Goes, P., & Gupta, A. (2003). Analysis and design of business-to-consumer online auctions. *Management Science*, 49(1), 85-102. Retrieved September 27, 2004, from ProQuest database.
- Birch, A. (2000). *The age of e-tail: Conquering the new world of electronic shopping*. Milford, CT: Capstone Publication.
- Caudill, E. M., & Murphy, P. E. (2000). Consumer online privacy: Legal and ethical issues. *Journal of Public Policy & Marketing*, 19(1), 7-20. Retrieved November 13, 2004 from ProQuest database.
- Chang, J., & Samuel, N. (2004). Internet shopper demographics and buying behavior in Australia. *Journal of American Academy of Business*, 5(2), 171-177. Retrieved September 29, 2004, from ProQuest database.
- Chen, Z., & Dubinsky, A. J. (2003). A conceptual model of perceived customer value in E-commerce: A preliminary investigation. *Psychology & Marketing*, 20(4), 323-347. Retrieved March 13, 2005 from ProQuest database.

- Cordy, E. D. (2003). The legal regulation of e-commerce transactions. *Journal of American Academy of Business*, 2(2), 400-408. Retrieved May 17, 2005 from ProQuest database.
- Cranor, L. F. (1999). Internet privacy. *Communications of the ACM*, 42(2), 28-32. Retrieved April 11, 2005 from ProQuest database.
- Danish, S. (1998). *Building database-driven web catalogs*. New York, NY: McGraw-Hill.
- Desai, M. S., Richards, T. C., & Desai, K. J. (2003). E-commerce policies and consumer privacy. *Information Management & Computer Security*, 11(1), 19-28. Retrieved September 26, 2004, from ProQuest database.
- Fitzsimons, G. J., & Morwitz, V. G. (1996). The effect of measuring intent on brand-level purchase behavior. *Journal of Consumer Research*, 23(1), 1-11. Retrieved February 02, 2005 from ProQuest database.
- Franzak, F., Pitta, D., & Fritsche, S. (2001). Online relationships and the consumer's right to privacy. *The Journal of Consumer Marketing*, 18(7), 631-642. Retrieved September 28, 2004, from ProQuest database.
- Furnell, S. M., & Karweni, T. (1999). Security implications of electronic commerce: A survey of consumers and business. *Internet Research*, 9(5), 372-382. Retrieved March 15, 2005 from ProQuest database.
- Graeff, T. R., & Harmon, S. (2002). Collecting and using personal data: Consumers' awareness and concerns. *The Journal of Consumer Marketing*, 19(4), 302-319. Retrieved September 28, 2004, from ProQuest database.

- Grewal, D., Munger, J. L., Iyer, G. R., & Levy, M. (2003). The influence of Internet retailing factors on price expectations. *Psychology & Marketing*, 20(6), 477-493. Retrieved September 28, 2004, from ProQuest database.
- Han, P., & Maclaurin, A. (2002). Do consumers really care about online privacy? *Marketing Management*, 11(1), 35-39. Retrieved June 05, 2005 from ProQuest database.
- Hopwood, W. S., Sinason, D., & Tucker, R. (2000). Security in a Web-based environment. *Managerial Finance*, 26(11), 42-56. Retrieved September 25, 2004, from ProQuest database.
- Hsu, M. H., & Kuo, F. Y. (2003). The effect of organization-based self-esteem and deindividuation in protecting personal information privacy. *Journal of Business Ethics*, 42(4), 305-318. Retrieved September 26, 2004, from ProQuest database.
- Jayawardhena, C., Wright, L. T., & Masterson, R. (2003). An investigation of online consumer purchasing. *Qualitative Market Research*, 6(1), 58-66. Retrieved September 25, 2004, from ProQuest database.
- Karakaya, F., & Charlton, E. T. (2001). Electronic commerce: Current and future practices. *Managerial Finance*, 27(7), 42-54. Retrieved September 27, 2004, from ProQuest database.
- Lee, M. (2004). Attitudes towards direct marketing, privacy, environment, and trust: Taiwan vs. US. *International Journal of Commerce & Management*, 14(1), 1-13. Retrieved July 10, 2005 from ProQuest database.

- Mason, K. (1998). Securities fraud over the Internet: The files in the ointment and a hope of fly paper. *Case Western Reserve Journal of International Law*, 30(2), 489-506. Retrieved September 29, 2004, from ProQuest database.
- Milne, G. R., & Rohm, A. J. (2000). Consumer privacy and name removal across direct marketing channels: Exploring opt-in and opt-out alternatives. *Journal of Public Policy & Marketing*, 19(2), 238-250. Retrieved September 29, 2004, from ProQuest database.
- Miyazaki, A. D., & Krishnamurthy, S. (2002). Internet seals of approval: Effects on online privacy policies and consumer perceptions. *The Journal of Consumer Affairs*, 36(1), 28-50. Retrieved September 26, 2004, from ProQuest database.
- Raisch, W. D. (2001). *The E-marketplace strategies for success in B2B E-commerce*. New York, NY: McGraw-Hill.
- Sarathy, R., & Robertson, C. J. (2003). Strategic and ethical considerations in managing digital privacy. *Journal of Business Ethics*, 46(2), 111-126. Retrieved September 27, 2004, from ProQuest database.
- Stewart, K. A., & Segars, A. H. (2002). An empirical examination of the concern for information privacy instrument. *Information Systems Research*, 13(1), 36-51. Retrieved May 13, 2005 from ProQuest database.
- Wen, H. J., & Tarn, J. H. (1998). Internet security: A case study of firewall selection. *Information Management & Computer Security*, 6(4), 178-186. Retrieved September 27, 2004, from ProQuest database.
- Windham, L., & Orton, K. (2000). *The soul of the new consumer: The attitudes, behaviors, and preferences of E-customers*. New York, NY: Laurie Windham.

## **Appendix A**

### **E-Mail Permission Letter for Trust in Internet Shopping Survey**



From: Matthew Lee <[REDACTED]> [Add to Address Book] [View Source]

To: [REDACTED]

Subject: Re: Lynn University student (USA): Tony (Yu-Wen, Chen)

Date: Thu, 31 Mar 2005 03:35:29 +0000

Dear Tony,

Yes, you are welcome to use the questionnaire in my AMICIS 2000 paper in your graduate dissertation research, so long as you acknowledge the source properly.

Regards,  
Matthew Lee

[REDACTED]

Hi, Professor M. Lee:

This is Tony. Sorry to bother you. I am a graduate student at Lynn University in the USA. I read the Professor's professional topic of "Trust in Internet shopping: A proposed model and measurement instrument" (2000) in the AMCIS.

I am interested in this field. So, may I get the permission from Professor (you) to use this wonderful questionnaire?

Thanks.

Sincerely,

Tony

--

---

Professor Matthew K. O. Lee, Ph.D.  
Professor of Information Systems  
Associate Dean (Research and Graduate Programmes)  
Faculty of Business  
City University of Hong Kong  
Kowloon Tong, Hong Kong  
Tel: [REDACTED]

Email: [REDACTED]

Web: <http://www.is.cityu.edu.hk/staff/ismatlee>

*Created With a Trial Copy of SmartDraw*

*To remove this watermark please purchase a copy*

**Appendix B**  
**Socio-Demographic Profile**

## Appendix B Socio-Demographic Profile

Instructions: Please check the appropriate box for your response

### Socio-Demographic Profile

#### Age

- 20 – 25     26 – 30     31 – 35     36 – 40     41 – 45     46 – 50     51 – 55

#### Education

- Junior High School     Senior High School     College     University  
 Master     Ph.D.

#### Gender

- Male     Female

#### Marital Status

- Single     Married

#### Experience working with the Internet

- 1 – 6 months     7 – 12 months     1 – 2 years     2 – 3 years     Over 3 years

## **Appendix C**

### **Adapted and Original Trust in Internet Shopping Survey**

Using the following scale, please answer questions by circling the number that best represents your opinion.

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

**Perceived Security Control**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. Internet vendors implement security measures to protect Internet shoppers.   | 1 | 2 | 3 | 4 | 5 |
| 2. Internet vendors usually ensure that transactional information is protected from accidentally altered destroyed during transmission on the Internet. | 1 | 2 | 3 | 4 | 5 |

**Perceived Privacy Control**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 3. Internet vendors concern about consumers' privacy.                           | 1 | 2 | 3 | 4 | 5 |
| 4. Internet vendors will not divulge consumers' personal data to other parties. | 1 | 2 | 3 | 4 | 5 |
| 5. I feel safe about the privacy control of Internet vendors.                   | 1 | 2 | 3 | 4 | 5 |

**Experience**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 6. Using the Internet has been a good experience to me personally. | 1 | 2 | 3 | 4 | 5 |
| 7. I have positive experiences of using the Internet.              | 1 | 2 | 3 | 4 | 5 |
| 8. I have good experiences of using the Internet.                  | 1 | 2 | 3 | 4 | 5 |

Source: From "Trust in Internet Shopping: A Proposed Model and Measurement Instrument," by C. Cheung and M. Lee, 2000, *AMCIS*, pp. 681-689. Adapted with permission of the author.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

**Third Party Recognition**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 9. There are many reputable third party certification bodies available for assuring the trustworthiness of Internet vendors. | 1 | 2 | 3 | 4 | 5 |
| 10. I think third party recognition bodies are doing a good job.   | 1 | 2 | 3 | 4 | 5 |
| 11. Existing third party recognition bodies are adequate for the protection of Internet shoppers' interest.                  | 1 | 2 | 3 | 4 | 5 |

**Trust in Internet Shopping**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 12. Internet shopping is unreliable.   | 1 | 2 | 3 | 4 | 5 |
| 13. Internet shopping cannot be trusted, there are just too many uncertainties.        | 1 | 2 | 3 | 4 | 5 |
| 14. In general, I cannot rely on Internet vendors to keep the promises that they make. | 1 | 2 | 3 | 4 | 5 |

**Perceived Risk**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 15. Internet shopping is risky.                                    | 1 | 2 | 3 | 4 | 5 |
| 16. Shopping on the Internet entails uncertainty or vulnerability. | 1 | 2 | 3 | 4 | 5 |
| 17. I find it dangerous to shop on the Internet.                   | 1 | 2 | 3 | 4 | 5 |

## **Professor Cheung's and Lee's (2000) original instrument.**

### **Perceived Security Control**

1. Internet vendors implement security measures to protect Internet shoppers.
2. Internet vendors usually ensure that transactional information is protected from accidentally altered destroyed during transmission on the Internet.

### **Perceived Privacy Control**

3. Internet vendors concern about consumers' privacy.
4. Internet vendors will not divulge consumers' personal data to other parties.
5. I feel safe about the privacy control of Internet vendors.

### **Perceived Integrity**

6. Internet vendors are honest to their consumers.
7. Internet vendors act sincerely in dealing with customers.

### **Perceived Competence**

8. Internet vendors have the ability to handle sales transactions on the Internet.
9. Internet vendors have sufficient expertise and resources to do business on the Internet.
10. Internet vendors have adequate knowledge to manage their business on the Internet.

### **Personality**

11. It is easy for me to trust a person/thing.
12. My tendency to trust a person/thing is high.
13. I tend to trust a person/thing, even though I have little knowledge of it.
14. Trusting someone or something is not difficult.

### **Cultural Environment**

15. A high degree of trust exists in my family.
16. I am living in a high trust society.

### **Experience**

17. Using the Internet has been a good experience to me personally.
18. I have positive experiences of using the Internet.
19. I have good experiences of using the Internet.

### **Third Party Recognition**

20. There are many reputable third party certification bodies available for assuring the trustworthiness of Internet vendors.
21. I think third party recognition bodies are doing a good job.
22. Existing third party recognition bodies are adequate for the protection of Internet shoppers' interest.

### **Legal Framework**

23. The existing law is adequate for the protection of Internet shoppers' interest.
24. The existing legal framework is good enough to protect Internet shoppers.

### **Trust in Internet Shopping**

25. Internet shopping is unreliable.
26. Internet shopping cannot be trusted, there are just too many uncertainties.
27. In general, I cannot rely on Internet vendors to keep the promises that they make.

### **Perceived Risk**

28. Internet shopping is risky.
29. Shopping on the Internet entails uncertainty or vulnerability.
30. I find it dangerous to shop on the Internet.



**Appendix D**

**Lynn University's IRB Approval Letter**



Lynn University

Principal Investigator: Yu-Wen, Chen

Project Title: The Factors That Affect Online Consumer Trust in Taiwan

IRB Project Number 2005-09 :

APPLICATION AND PROTOCOL FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS OF A  
NEW PROJECT: Request for Exempt Status  Expedited Review  Convened Full-Board

**IRB ACTION by the CONVENED FULL BOARD**

Date of IRB Review of Application and Research Protocol 7/21/2005  
IRB ACTION: Approved  Approved w/provision(s)  Not Approved  Other

**COMMENTS**

Consent Required: No  Yes  Not Applicable  Written  Signed

Consent forms must bear the research protocol expiration date of 7/21/2006.

Application to Continue/Renew including an updated consent, is due.

(1) For a Convened Full-Board Review, two months prior to the due date for renewal

Name of IRB Chair (Print) Farideh Farazmand

Signature of IRB Chair \_\_\_\_\_ Date: 7/21/05

Cc. Jeanette Francis

Institutional Review Board for the Protection of Human Subjects  
Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431

## Appendix E

### Permission Letters from Nine Organizations in Taiwan

## 國泰人壽保險股份有限公司

### 同意書

#### Letter of consent

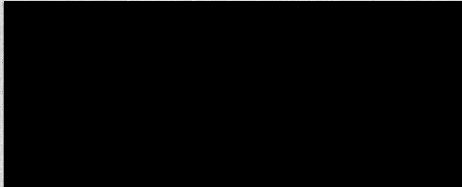
茲同意陳昱文到本公司針對他的博士論文進行問卷調查，研究關於哪些因數會影響台灣網路上的消費者的信任問題。本公司提供 20 位員工接受陳昱文進行問卷研究，謝謝。

I give the consent to Yu-Wen Chen for conducting his survey in our company. His dissertation topic is about the factors that affect online consumer trust in Taiwan. Our department has 20 available employees for Yu-Wen, Chen to do his research. Thank you very much.

Regards,

May 21, 2005

Cathay Financial Holdings Co., Ltd.



*Cheng Tai Rubber Industrial Co., Ltd.*

進泰橡膠工業股份有限公司

*Manufacturers & Exporters*

NO. 100-20, HSIN PING ROAD, TAI PING  
SHIANG, TAICHUNG HSIEN, TAIWAN, R. O. C.

臺灣省臺中縣太平鄉東平村新平路100之20號  
P.O. BOX: 939 TAICHUNG  
CABLE: "CTRIROLL" TAICHUNG  
TELEX: 51317 HSINHWA  
TEL: (042) 291607, 286080

*Rubber Roller For Rice Huller*

### Permission letter


This is to confirm that Mr. Yu-Wen, Chen has been approved and gave the permission by Chen Tai Rubber Industry Co., Ltd. (Taichung County, Taiwan), to conduct a research survey in order to complete his Ph.D. dissertation at Lynn University. His topic is about the factors that affect online consumer trust in Taiwan, and the survey is trust in Internet shopping. We have 20 employees available to do this survey, and we hope that Mr. Yu-Wen, Chen could succeed in his endeavor. Thanks.

Sincerely,

May 21, 2005

Chen Tai Rubber Industry Co., Ltd.

President





建智聯合會計師事務所  
EnWise CPAs & Co.  
台中市 404 太原北路 130 號 8 樓之 1  
Tel:(04)22966234 Fax:(04)22960607 / (04)22976918



## 同意書

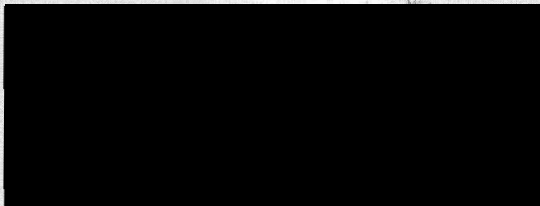
### Letter of consent

建智聯合會計師事務所同意陳昱文針對他的博士論文進行問卷調查，研究關於哪些因數會影響台灣網路上的消費者的信任問題。本事務所提供 20 位同仁接受陳昱文進行問卷研究。

En Wise CPA firm (AGN international) give the consent to Yu-Wen Chen (the researcher) for conducting his survey in our accounting firm. His dissertation topic is about the factors that affect online consumer trust in Taiwan. We has 20 available employees for Yu-Wen, Chen to do his research. Thanks.

Regards,

May 21, 2005



## **Jiann Gwo Plastic Industry Co., Ltd.**

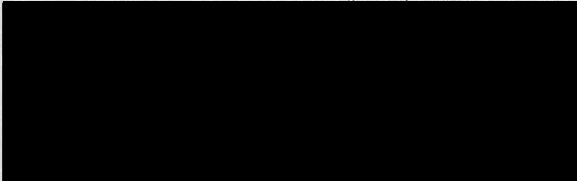
No. 298, Peng Yi Rd., Taiping City, Taichung Hsien, Taiwan, R.O.C.  
TEL : 886-4-22789540 FAX : 886-4-22794235, 22751560 <http://www.jiann-gwo.com>

### Consent letter

We are hereby confirmed that gave the consent to Yu-Wen, Chen to conducting his survey in our company for his Ph.D. dissertation at Lynn University. His dissertation topic is about the factors that affect online consumer trust in Taiwan, and the survey is trust in Internet shopping. Jiann Gwo Company has 50 available employees for Yu-Wen, Chen to do his survey. Thanks.

Regards,

Jiann Gwo Plastic Industry Co., Ltd.



President / May 21, 2005



凱美塑膠機械股份有限公司  
KAI MEI PLASTIC MACHINERY CO., LTD.

## 同意書

### Letter of consent

凱美公司同意陳昱文到本公司做問卷，他的博士論文是關於哪些因數會影響台灣網路上的消費者的信任問題。凱美公司提供 50 位員工提供陳昱文去做他的研究；謝謝您。

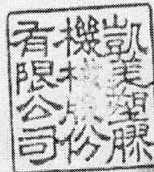
Kai Mei Company allows and give the permission to Yu-Wen Chen (the researcher) to come here to conduct his survey. His dissertation topic is about the factors that affect online consumer trust in Taiwan. Kai Mei company has 50 available employees for Yu-Wen, Chen to do his research.Thanks.

Best regards,

May 19, 2005

Kai Mei Plastic Machinery Co., Ltd.

General Manager



NO. 15, YEONG YI 5th ST., TAIPING, TAICHUNG, TAIWAN, R.O.C.  
TEL:886-4-2777457 FAX:886-4-2777455  
E-mail: kaimel@tcts.seed.net.tw <http://www.kai-mei.com.tw>



慶銳機械股份有限公司

**KING SIA CO., LTD.**

台灣台中縣太平市永平路 2 段 123 巷 36 號

NO.36, LAND 123, SEC.2, YONG PING RD., TAIPING TAICHUNG, TAIWAN, R. O. C.

TEL: 886-4-22765600 FAX: 886-4-22757826

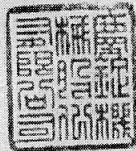
## Consent

We give the consent to Yu-Wen Chen for conducting his survey in King Sia Co., Ltd. (Taichung, Taiwan). The topic is about the factors that affect online consumer trust in Taiwan for his Ph.D. dissertation at Lynn University. King Sia has 10 available employees for Yu-Wen, Chen to receive this survey. Thanks.

Yours truly,

Dated on May 19, 2005

King Sia Co., Ltd.



President

## Taiping Kindergarten

No. 65, Lane 618, Dong Ping Rd., Taiping, Taichung, Taiwan, R.O.C.  
Tel: 886-4-22706896 Fax: 886-4-22771719

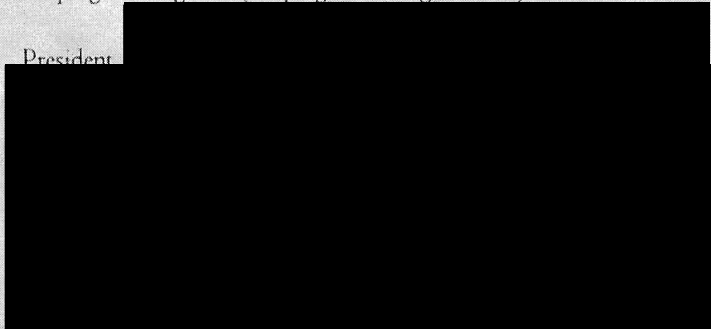
### Letter of consent

I give the permission that Yu-Wen Chen to conduct his survey in our kindergarten for his Ph.D. dissertation at Lynn University. The topic is about the factors that affect online consumer trust in Taiwan. Our kindergarten has 10 available employees for Yu-Wen, Chen to do his research. Thanks.

Regards,

Taiping Kindergarten (Taiping, Taichung, Taiwan)

President





臺灣中小企業銀行

TAIWAN BUSINESS BANK

總行：台北市塔城街30號 TEL: (02)25597171

Head Office: 30 Ta Cheng St., Taipei, Taiwan, R.O.C.

## 問卷同意書

### Letter of consent

茲同意陳昱文到本銀行針對他的博士論文進行問卷調查，研究關於哪些因數會影響台灣網路上的消費者的信任問題。本分行提供20位同仁接受陳昱文進行問卷研究。

I allow and give the consent to Yu-Wen Chen (the researcher) for conducting his survey in our company. His dissertation topic is about the factors that affect online consumer trust in Taiwan. Our branch has 20 colleagues for Yu-Wen, Chen to do his research. Thanks.

Yours truly,

May 19, 2005

Taiwan Business Bank Co., Ltd.





國立勤益技術學院

NATIONAL CHIN-YI INSTITUTE OF TECHNOLOGY

NO.35, LANE 215, ZHONG SHAN RD., TAIPING, TAICHUNG, TAIWAN, R. O. C.

TEL:886-4-23924505 FAX:886-4-23930062


### Letter of consent for survey

I give the consent to Yu-Wen Chen (the researcher) to conducting his survey in our department for his Ph.D. dissertation at Lynn University. His dissertation topic is about the factors that affect online consumer trust in Taiwan, and the survey is trust in internet shopping. Our organization has 30 available colleagues for Yu-Wen, Chen to do his research, and I hope that Mr. Yu-Wen, Chen could succeed in his endeavor. Thanks.

Yours truly,

National Chin-Yi Institute of Technology

Department of Business Administration / Lecturer

 May 19, 2005

**Appendix F**

**Certification of Translation of Consent Form**

AFFIDAVIT

I, LISA YU, SWEAR THAT I AM FLUENT WITH BOTH THE Chinese  
AND English LANGUAGES AND FURTHER SWEAR THAT THE  
ATTACHED TRANSLATION IS TRUE AND CORRECT TO THE ORIGINAL  
TO THE BEST OF MY KNOWLEDGE.

[Redacted Signature]

LISA YU /  
TRANSLATOR

STATE OF FLORIDA )

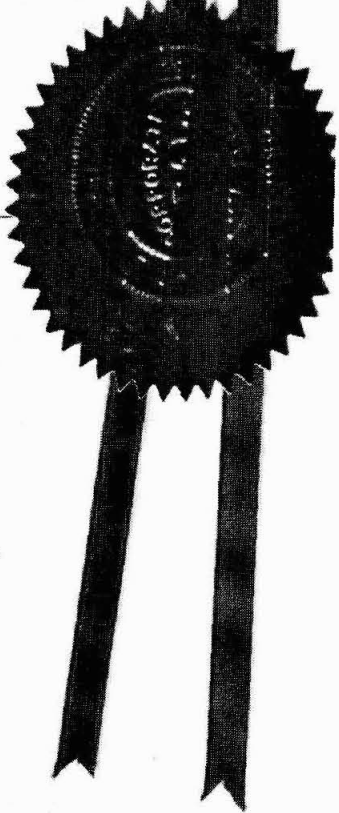
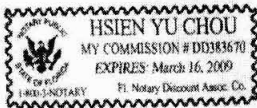
COUNTY OF DADE )

SWORN AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_  
JUL 18 2005

[Redacted Notary Name]

NOTARY PUBLIC

MY COMMISSION EXPIRES:



# BOMING 國際翻譯

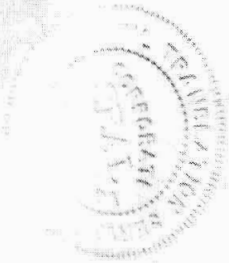
INTERNATIONAL TRANSLATION SERVICE INC

8830 NW 146 LANE

MIAMI LAKES, FL 33018

TEL: (305) 828-5828; FAX: (305) 362-2532

E-MAIL: [chou8830@gmail.com](mailto:chou8830@gmail.com)





林恩大學

這個文件只有被使用提供授權給自願的同意書

企劃案的主題: 哪些因素會影響網路上消費者的信任在台灣

企劃案 IRB 號碼: \_\_\_\_\_ 林恩大學 3601 N. Military Trail Boca Raton, Florida 33431

我 陳昱文, 是一位博士生在林恩大學。我現在在讀全球化的領導學, 主修是公司上的和組織上的管理。我的學業的一部份是要去做一個學術研究調查。

#### 指導方向對於參加者:

你已經被邀請去參加我的學術研究調查。請小心閱讀下面的描述。這個表格提供你資訊關於這個研究。主要的研究者(陳昱文)將會回答你所有的問題。你可以問所有你不清楚的問題在於你決定是否去參加之前。在任何時間(在做研究調查之前, 期間, 或在做研究調查之後), 你可以自由的去問任何問題。你的參加是完全地出自於你的自願而且你可以拒絕去參加這個研究調查而不會有任何的處罰或利益上的損失。

這個研究調查的目的: 這個研究是關於哪些因素會影響網路上消費者的信任在台灣。這個研究將會大約有 230 個人參加。參加者的年紀大約在 20 歲到 55 歲之間。7 個機構是公司, 2 個機構是學校。參加者是在台中縣, 台灣的員工而且他們必須能夠去讀, 寫, 說中文。

過程: 假如你選擇去參加這個研究, 研究者將會給你一份 5 個問題的社會人口統計學的檔案和一份 17 個問題的信任在網路購物的問卷。假如你同意去參加的話, 你將會私下地完成這份問卷。這兩份問卷大約會花費 15 分鐘去完成。參加者將會被告知那些資料將會機密地被保存。沒有任何的參加者識別符號在於問卷上。在研究者發問卷給參加者之前, 研究者將會解釋這個論文的調查和參加者的權利而且將會得到參加者的同意。在研究者發問卷給參加者之後, 研究者將會離開場所。在參加者完成問卷之後, 參加者將會把完成的問卷放入每一個空的信封裡而且將會密封它而且參加者會把完成的問卷放入一個箱子裡。一個箱子將會被研究者放在場所裡。在每位參加者離開場所之後, 研究者將會進入場所裡而且把箱子帶走。

可能的風險或不適: 這個研究包含極小的風險。你可能會發現一些問題是敏感的。除此之外, 參加在這個研究中會要求你一點點的時間和努力。

可能的利益: 在參加這個研究中可能沒有直接的利益給你。但是你可能得到網路零售商如何去改善和增加網路消費者的信任在網路購物中的知識。

Institutional Review Board for the Protection of Human Subjects

Lynn University

3601 N. Military Trail Boca Raton, Florida 33431



財務上的考慮：對於你的參加在這個研究裡，沒有財務上的補償。你的參加在這個研究裡，沒有任何的費用。

**機密：**

每一個努力將會去維持機密。在這個研究裡，你的身分將會是機密的。研究者將會使用數字去代表每一位參加者。在研究者發問卷給參加者之後，研究者將會離開場所。在參加者完成問卷之後，參加者將會把完成的問卷放入每一個信封裡而且會密封它而且會把問卷放在一個箱子裡。然後，研究者將會創造一個密碼的資料庫爲了完全的機密。全部的研究資料將會被嚴密地保存。資料將會被保存在研究者辦公室的一個上鎖的文件櫃或者上鎖的抽屜。這個研究執行五年之後，這些資料將會被消毀。全部的研究資料將會被嚴密地保存而且資料不會被公開出來除非被法律或規定要求。

這個研究的結果可能會被出版在一個博士論文學術上，科學的期刊或者被呈現在專業上的會議上。除此之外，在所有的出版中或這個研究的結果中，你個人的隱私將會被保護。

權利去退出：你是自由的去選擇是否參加這個研究。假如你選擇不去參加的話，你將不會有任何的處罰或利益上的損失。

問題上的聯絡/同意書的聯絡：現在或者未來的任何時間，你有任何更進一步的問題關於這個研究或你的參加將會被陳昱文(主要的研究者)回答。你可以和他取得聯繫在 [redacted] 和指導教授 Jeanette Francis 博士，你可以和她取得聯繫在 [redacted] 當做一位研究參加者，對於任何的問題關於你的權利，你可以打電話給 Farideh Farazmand 博士，林恩大學 IRB 對於人類參加者的保護的主席，在 [redacted] 在這個研究的結果中，假如你有任何的問題，請直接地聯繫主要的研究者(陳昱文)和指導教授(Jeanette Francis 博士)。一份同意書的副本將會給你。

授權對於自願者的同意：我已經閱讀而且了解這份同意書。我已經被給於機會去問問題而且我所有的問題已經被回答而且我很滿意。我已經被得到保證任何未來的問題也會被回答。我了解這個企劃案的全部的方面將會有信心地被完成而且當做一位人類研究參加者的權力是被保護的。我已經被告知風險和利益。在前面我已經被告知關於我的工作將會是什麼而且什麼過程將會被跟隨。

我自願地選擇去參加。我了解在任何時後我可以取消這個同意去參加而不會有任何的處罰或者損害。我了解藉由簽這份表格，我沒有放棄我任何的合法的權力。我更進一步了解沒有任何事情在這個同意書裡是被打算去取代任何可應用的聯邦的，州的，或者當地的法律。

參加者的姓名 \_\_\_\_\_

參加者的簽名 \_\_\_\_\_

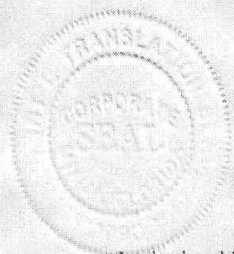
日期 \_\_\_\_\_

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Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431

研究者的宣誓書: 我已經仔細地解識這份企劃案的本質給參加者。參加者已經向我指出他/她至少 18 歲而且他/她沒有醫學上的問題或者語言或者教育上的障礙妨礙他/她的理解能力。我特此保證研究參加者在這個企劃案裡已經明確地了解這個本質,需求,利益,和風險被包含在他/她的參與。

\_\_\_\_\_  
研究者的簽名

IRB 通過的日期: \_\_\_\_\_



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Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431



Lynn University

**THIS DOCUMENT SHALL ONLY BE USED TO PROVIDE AUTHORIZATION FOR VOLUNTARY  
CONSENT**

**PROJECT TITLE:** The Factors That Affect Online Consumer Trust in Taiwan.

Project IRB Number: \_\_\_\_\_ Lynn University 3601 N. Military Trail Boca Raton, Florida 33431

I, Yu-Wen, Chen, am a doctoral student at Lynn University. I am studying Global Leadership, with a specialization in Corporate and Organizational Management. Part of my education is to conduct a research study.

**DIRECTIONS FOR THE PARTICIPANT**

You are being asked to participate in my research study. Please read this carefully. This form provides you with information about the study. The Investigator (Yu-Wen, Chen) will answer all of your questions. Ask questions about anything you don't understand before deciding whether or not to participate. You are free to ask questions at any time before, during, or after your participation in this study. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

**PURPOSE OF THIS RESEARCH STUDY:** The study is about the factors that affect online consumer trust in Taiwan. There will be approximately 230 people participating in this study. The participants' ages are between 20 and 55 years old. Seven organizations will be companies and two organizations will be schools. Participants are employees in Taichung County, Taiwan, and they must be able to read, speak, and write in Chinese language.

**PROCEDURES:**

If you choose to participate in this study, the researcher will give you a socio-demographic profile with 5 questions and a Trust in Internet Shopping Survey with 17 questions. If you agree to participate, you will complete the survey in private. These two surveys should take about 15 minutes to complete. Participants will be informed that data will be confidential. There are no subject identifiers on the survey form. Before the researcher distributes the survey to the participants, the researcher will explain the dissertation research and participants' rights, and will get the consent of the participants. After the researcher distributes the survey to each participant, the researcher will leave the room. After the participants finish the survey, the participants will put survey into an envelope and seal it, as well as the participants will put it in a box. A box will be placed in the room by the researcher. After every participant left the room, the researcher will enter the room and pick up the surveys (box).

**POSSIBLE RISKS OR DISCOMFORT:** This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort.

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**POSSIBLE BENEFITS:** There may be no direct benefit to you in participating in this research. But knowledge may be gained which may help online stores to improve the consumer's trust in internet shopping.

**FINANCIAL CONSIDERATIONS:** There is no financial compensation for your participation in this research. There are no costs to you as a result of your participation in this study.

**CONFIDENTIALITY:**

Every effort will be made to maintain the confidentiality. Your identity in this study will be treated as confidential. The researcher will use number to code every participant. After the researcher distributes the survey to each participant, the researcher will leave the room. After the participants finish the survey, the participants will put the survey into an envelope, seal it, and put it in a box with a slot placed in the room. Then, the researcher will create a database with password on it for complete confidentiality. All the data gathered during this study, which were previously described, will be kept strictly confidential. Data will be stored in a locked filing cabinet or locked desk drawer at the researcher's office. Five years after the study is conducted the data will be destroyed. All information will be held in strict confidence and may not be disclosed unless required by law or regulation.

The results of this study may be published in a dissertation, scientific journals or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

**RIGHT TO WITHDRAW:** You are free to choose whether or not to participate in this study. There will be no penalty or loss of benefits to which you are otherwise entitled if you choose not to participate.

**CONTACTS FOR QUESTIONS/ACCESS TO CONSENT FORM:** Any further questions you have about this study or your participation in it, either now or any time in the future, will be answered by Yu-Wen, Chen (Principal Investigator) with [redacted] and Dr. Jeanette Francis, faculty advisor who may be reached at [redacted] regarding your rights as a research subject, you may call Dr. Faridel [redacted] University Institutional Review Board for the Protection of Human Subjects [redacted] issues arise as a result of your participation in this study, please call the [redacted] (Dr. Jeanette Francis) immediately. A copy of this consent form will be given to you.

**AUTHORIZATION FOR VOLUNTARY CONSENT:**

I have read and understand this consent form. I have been given the opportunity to ask questions, and all my questions have been answered to my satisfaction. I have been assured that any future questions that may arise will be answered. I understand that all aspects of this project will be carried out in the strictest of confidence, and in a manner in which my rights as a human subject are protected. I have been informed of the risks and benefits. I have been informed in advance as to what my task(s) will be and what procedures will be followed.

I voluntarily choose to participate. I know that I can withdraw this consent to participate at any time without penalty or prejudice. I understand that by signing this form I have not waived any of my legal rights. I further understand that nothing in this consent form is intended to replace any applicable Federal, state, or local laws.

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Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431

Participant's printed name \_\_\_\_\_

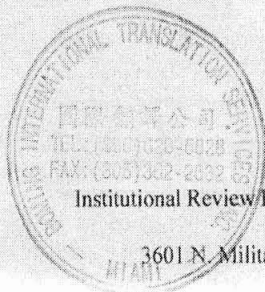
Participant's signature \_\_\_\_\_

Date \_\_\_\_\_

**INVESTIGATOR'S AFFIDAVIT:** I have carefully explained to the subject the nature of the above project. The person participating has represented to me that he/she is at least 18 years of age, and that he/she does not have a medical problem or language or educational barrier that precludes his/her understanding of my explanation. I hereby certify that to the best of my knowledge the person participating in this project understands clearly the nature, demands, benefits, and risks involved in his/her participation.

Signature of Investigator \_\_\_\_\_

Date of IRB Approval: \_\_\_\_\_



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Lynn University  
3601 N. Military Trail Boca Raton, Florida 33431

## **Appendix G**

### **Certification of Translation of Trust in Internet Shopping Survey**

AFFIDAVIT

I, LISA YU, SWEAR THAT I AM FLUENT WITH BOTH THE Chinese  
AND English LANGUAGES AND FURTHER SWEAR THAT THE  
ATTACHED TRANSLATION IS TRUE AND CORRECT TO THE ORIGINAL  
TO THE BEST OF MY KNOWLEDGE.



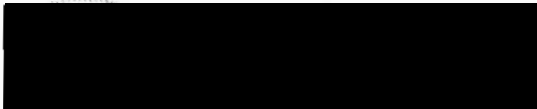
LISA YU  
TRANSLATOR

STATE OF FLORIDA )

COUNTY OF DADE )

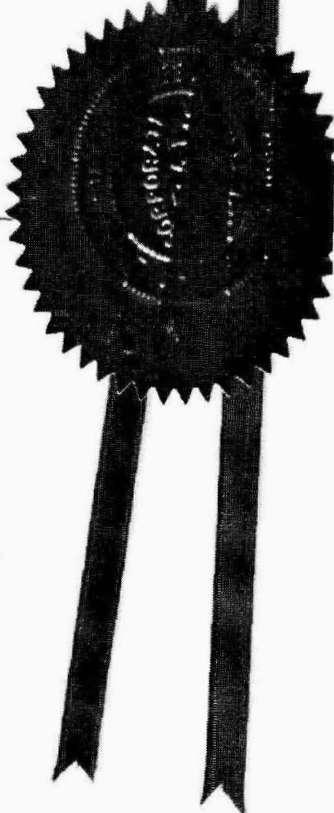
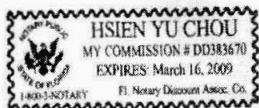
SWORN AND SUBSCRIBED BEFORE ME THIS \_\_\_\_\_

JUL 18 2005



NOTARY PUBLIC

MY COMMISSION EXPIRES:



# BOMING 國際翻譯

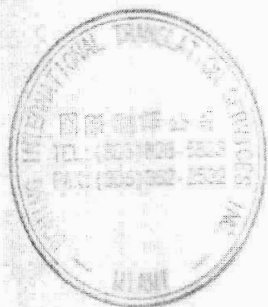
INTERNATIONAL TRANSLATION SERVICE INC

8830 NW 146 LANE

MIAMI LAKES, FL 33018

TEL: (305) 828-5828; FAX: (305) 362-2532

E-MAIL: [chou8830@gmail.com](mailto:chou8830@gmail.com)





請勾選(✓)答案。

年齡

- 20 - 25       26 - 30       31 - 35       36 - 40  
 41 - 45       46 - 50       51 - 55

教育程度

- 國中       高中       專科       大學  
 碩士       博士

性別

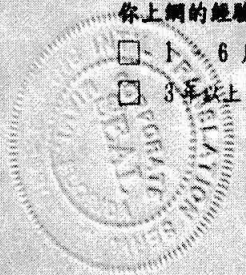
- 男生       女生

婚姻狀況

- 單身       已婚

你上網的經驗有多久

- 1 - 6月       7 - 12月       1 - 2年       2 - 3年  
 3年以上



## 信任在於網路購物問卷

本問卷是關於網路上消費者的信任，網路購物者對於網路零售商是否產生信任感的調查。問卷不需具名。問卷結果僅供學術研究使用。

請圈選下面的數字(1,2,3,4,or 5)代表你寶貴的意見或看法。

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

### 被認知的安全性

1. 網路零售商有實施安全措施去保護網路購物者。 1 2 3 4 5
2. 網路零售商通常保證交易的資料是被保護的，即使在網路傳送中被意外的破壞。 1 2 3 4 5

### 被認知的隱私權

3. 網路零售商關心消費者的隱私權。 1 2 3 4 5
4. 網路零售商不會洩露消費者的個人的資料給其它的團體。 1 2 3 4 5
5. 我覺得很安全關於網路零售商的隱私權控制。 1 2 3 4 5

### 經驗

6. 對我個人而言，使用網路是一個愉快的經驗。 1 2 3 4 5

資料來源：從 Lee 博士和 Cheung 博士(2000)的信任在於網路購物的問卷, *AMCIS*, 頁數 681-689. 得到作者的許可去使用這份問卷。

非常不同意	不同意	沒意見	同意	非常同意
1	2	3	4	5

7. 我有正面的經驗關於使用網路。 1 2 3 4 5

8. 我有好的經驗關於使用網路。 1 2 3 4 5

第三者的識別

9. 有很多聲譽好的第三者保證的組織關於保證網路零售商的  
可信程度。 1 2 3 4 5

10. 我認為第三者保證的組織做得非常好。 1 2 3 4 5

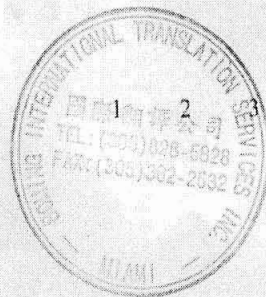
11. 現存的第三者保證的組織是適當的對於網路購物者的  
保護。 1 2 3 4 5

信任在於網路購物

12. 網路購物是不可信任的。 1 2 3 4 5

13. 網路購物無法被信任，有太多的不確定性。 1 2 3 4 5

14. 一般而言，我無法依賴網路零售商關於他們做的承諾。 4 5





Please check (✓) the answers.

Age

- 20-25       26-30       31-35       36-40  
 41-45       46-50       51-55

Educational Level

- Junior High School       Senior High School       College  
 University       Master       Ph.D.

Gender

- Male       Female

Marital Status

- Single       Married

Internet Experience

- 1-6 Months       7-12 Months       1-2 Years       2-3 Years  
 Above 3 years

Using the following scale, please answer questions by circling the number that best represents your opinion.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

#### Perceived Security Control

1. Internet vendors implement security measures to protect Internet shoppers.      1   2   3   4   5
2. Internet vendors usually ensure that transactional information is protected from accidentally altered destroyed during transmission on the Internet.      1   2   3   4   5

#### Perceived Privacy Control

3. Internet vendors concern about consumers' privacy.      1   2   3   4   5
4. Internet vendors will not divulge consumers' personal data to other parties.      1   2   3   4   5
5. I feel safe about the privacy control of Internet vendors.      1   2   3   4   5

#### Experience

6. Using the Internet has been a good experience to me personally.      1   2   3   4   5

Source: From "Trust in Internet Shopping: A Proposed Model and Measurement Instrument," by C. Cheung and M. Lee, 2000, *AMCIS*, pp. 681-689. Adapted with permission of the author.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

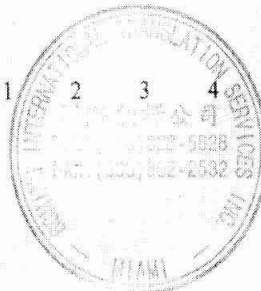
7. I have positive experiences of using the Internet.      1   2   3   4   5
8. I have good experiences of using the Internet.      1   2   3   4   5

**Third Party Recognition**

9. There are many reputable third party certification bodies available for assuring the trustworthiness of Internet vendors.      1   2   3   4   5
10. I think third party recognition bodies are doing a good job.      1   2   3   4   5
11. Existing third party recognition bodies are adequate for the protection of Internet shoppers' interest.      1   2   3   4   5

**Trust in Internet Shopping**

12. Internet shopping is unreliable.      1   2   3   4   5
13. Internet shopping cannot be trusted, there are just too many uncertainties.      1   2   3   4   5
14. In general, I cannot rely on Internet vendors to keep the promises that they make.      1   2   3   4   5







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