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Examining the Factors Associated with Consumer's Trust in the Context of Business-to-Consumer E-Commerce

Student: Phung Kim Dung

Advisor: Ming- Hsiung Hsiao

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樹 德 科 技 大 學
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本校 Institute of Information Management　碩
士班 Phung Kim Dung　君

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Shu-Te University

ABSTRACT

In recent years, the emergence of electronic commerce has provided another access for consumer to purchase products. Some researches have pointed out that there are difficulties as well as a number of factors that impede companies to run business on web. One of those factors that were stressed in the literature is consumer's trust. In other words, consumers may refuse to purchase products or services from specific online companies due to the low level of trust in that company. Therefore, the main purpose of this study is to examine the influence of antecedents on consumer's trust in online companies. Specifically, this study examine the relationship between perceptions about the company (including perceived size and perceived reputation) as well as perceptions about the web site quality (including system quality, information quality, and service quality) on consumer's trust in online company, and then on purchase intention. In this study, in order to examine proposed model, I conducted a survey by delivering and sending email questionnaires to 330 Vietnamese and Taiwanese students in the Shu-Te University. After eliminating poor quality responses, I was left 292 effective samples. The results indicated that consumer's trust in online company can significantly affect purchase intention. Perceived size, system quality, information quality, and service quality are significant antecedents of consumer's trust. Finally, this study found no support for the hypothesized effect of perceived reputation on consumer's trust in online company.

Keywords: Purchase Intention, Consumer's Trust, Perceived Size, Perceived Reputation, Website Quality, System Quality, Information Quality, Service Quality.

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Chapter 1 Introduction

As one of the important models of electronic commerce (EC), business-to-consumer (B2C) e-commerce is growing rapidly with the proliferation of commercial websites and the increasing acceptance of online transactions by consumers. Studies showed that in the US, there were about 114.2 million web customers, approximately 12% more than in 2002 (Ethier et al., 2006), and sales is estimated to grow from $172 billion in 2005 to $329 billion in 2010 (Johnson, 2005). According to the one of the leading advisors in Chinese TMT (technology, media and telecom) industries, Chinese B2C market has amounted to RMB 945 million in the third quarter of 2006, representing an increase of 4.1% over the second quarter and 49% over the same period of 2005. Such a rapid development of B2C attracts more and more firms to enter the online arena, build their online shops, and try to extend their online market. And as the competition in B2C e-commerce is intensified, it becomes more important for firms to understand how and why consumers purchase products or services from an online retailer.

As discussed in the literature, there are many factors determined the success for an online business, such as trust, price, and deliver on time. Trust is not the only factor, but is certainly one of the most important factors of all (Donney & Cannon, 1997). Trust is a critical factor in stimulating purchases over the Internet (Quelch & Klein, 1996; Gefen & Straub, forthcoming), and the most significant long-term barrier for realizing the potential of Internet marketing will be the lack of trust, both in the merchant's honesty and in the merchant's competence to fill Internet orders (Keen, 1997). In a clear

indication of this relationship, 35 percent of non-buyers (i.e. those who have never bought any products online) in North America surveyed recently by Forrester Research Inc. had abandoned a credit card while shopping online because they were concerned about providing their personal information, and 24 percent had done so due to fears about credit card fraud (Kelley, Rhinelander & DeMoulin, 2001). A recent Gallup research survey provided further evidence when it found that more than 40 percent of Canadian Internet users would complete more online purchases if they could trust that a store would respect their privacy (Shaw, 2001). Obviously, trust has a vital influence on consumer activities and thereby on e-commerce success.

Ganesan (1994) builds the notion of trust leading to a causal function: trust is responsible for creating consumer activity. Jarvenpaa et al. (2000) argued that online retailers might increase consumer's trust and thereby increase the willingness of prospective customers to shop on the Internet. CommerceNet's report (1999) suggests that trust is the third of the 10 barriers and inhibitors to e-commerce. Similarly, various academic studies have shown that trust has a positive influence on purchase intentions (Jarvenpaa, Tractinsky & Vitale, 2000; Lim, Sia, Lee & Benbasat, 2001; Wetsch & Cunningham, 1999). Obviously, from a number of evidences, it is said that the lack of trust seems to be one of the key barriers to online shopping; hence examining the antecedents of consumer's trust may be beneficial to both consumers and online retailers.

Previous studies have identified a number of factors that can potentially influence consumer's trust in online companies, as well as new methods for increasing

consumer's trust. Each of those factors plays a different role to consumer's trust. For example, according to Koufaris and Hampton-Sosa (2005), website appeal is a significant predictor of initial trust in the company as well as intention to use the Web site in the future. In their other study (Koufaris & Hampton-Sosa, 2004), they found that perceived reputation of the company and perceived willingness of the company to customize its products and services were significant antecedents to initial trust in the company. They also found that perceived usefulness and ease of use of the website as well as perceived security control of the site were also significant antecedents of initial trust in the company (Koufaris & Hampton-Sosa, 2004). Obviously, these factors are identified having impact on consumer's trust in an online company, which either impede or impulse their intention to purchase from that company.

However, far different from offline commerce environment, there is no salesperson in the online environment. Instead, the customer interacts with the website, which serves as a replacement, in effect, for the salesperson. The lack of salespersons makes the website the most important representative of the company (Koufaris & Hampton-Sosa, 2002). Web-based companies must rely on their websites to represent them and to show their customers that they are trustworthy and reliable before they can prove that with their products or services. Therefore, it is essential that companies built the website with a high quality, which is usable and functional to earn the trust of their customers in order to retain them and persuade them to buy products or services (Koufaris & Hampton-Sosa, 2004). According to an expectancy-value approach, perceptions about the website quality of e-shopping are termed: perceived quality of

information, system and service (Parasuraman et al., 1988). Although there has been several studies investigated the relationship between some factors of website and consumer's trust, such as website appeal, perceived usefulness, perceived ease of use, or security and privacy (Chen & Barnes, 2007; Kollock, 1999; Palmer, Bailey & Faraj, 2000; Resnick et al., 2000; Van Den Berg & Van Lieshout, 2001), however there are few researches have examined the relationship between website quality perceptions and consumer's trust in online company.

In addition, according to Jarvenpaa et al. (2000), for the online companies, one of the most important long-term issues is "How do you know whom to trust? In a virtual world, the issue of trust gets magnified" (The Economist, 1997). Thus, in their study, they examined the effect of perceived company size and perceived company reputation on the level of trust for that online company by customers (Jarvenpaa et al., 2000). The results indicated that reputation has a large positive association with trust and size has a smaller positive association that may depend on the type of company (the effect was significant for travel sites but not for bookstores). Based on this empirical study, some other researchers has re-examined this relationship, and a new result was found. According to Koufaris and Hampton-Sosa (2004), the subjects had very few cues to help them form a perception regarding the store's size. That's why then they decide to eliminate the items for size and removed this variable from supposed model. In other words, they concluded that perceived company size has no effect on consumer's trust in that company. Moreover, Chen and Barnes (2007) asked undergraduate and postgraduate students in Taiwan to visit an unfamiliar Taiwanese e-bookshop website

for the first time, and search for a particular product. The result show that perceived company reputation has a positive effect on consumer's initial trust, while there is no relationship between perceived company size and consumer trust. Due to this inconsistence between different studies and the important role of perceived reputation as well as perceived size for companies in building trust, to attract customers and retain them, this study would re-examine these relationships.

In brief, through extensive literature review, the critical role of consumer's trust in stimulating purchases over the Internet has been validated. Many researches have found out the antecedents of consumer's trust, but there are no study which has investigated the relationship between website quality perceptions (including system quality, information quality, and service quality) and consumer's trust in online company. Several studies have examined the relationship between perceptions about the company (including perceived size and perceived reputation) and consumer's trust, but the findings are inconsistent. Thus, the objectives of this study are concluded as follows:

1. To examine the effect of consumer online trust on their purchase intention.

2. To examine the influence of perceptions about the company on consumer's trust in an online company. Specifically, it is the influence of perceived company size and perceived company reputation.

3. To examine the influence of perceptions about the website quality on consumer's trust in an online company. Specifically, this study examines the relationship between each factor of website quality, including system quality, information quality, and service quality, and consumer's trust in an online company.

The findings from this study are expected to provide useful insights into the consumer's trust, the antecedents of consumer's trust as well as customer's behavioral intention to purchase for companies that do business on the Internet. It also has practical implications for the ways in which online companies increase consumer's trust and thereby increase the willingness of prospective customers to shop in this new environment.

Chapter 2 Literature Review

2.1. Consumer's Trust

2.1.1. Trust

The word "trust" is defined in the Oxford English Dictionary as: (1) to rely on or have conviction about the quality or attributes of a person or an object, (2) to accept or approve of something without investigation or evidence, (3) an expectation about something, (4) attribute of reliable value; honesty credibility, loyalty (Yoon, 2002). Trust and trust relationship in the offline world have been a topic of research in many disciplines since the 1950s. Researches about trust have been found in the fields of psychology and sociology (Corritore et al., 2003). Trust, according to many researchers, has its value stated below: trust provides the means to decrease complexity in a complex world by reducing the number of options one has to consider under a given situation (Luhmann, 1979; Barber, 1983; Weigert, 1985). The functionality and contribution of trust can be apparently identified from the economic framework of social exchange (Kelley and Thibaut, 1978; Kelley, 1979). Within social exchange, business transactions are usually carried out without explicit contract or control mechanism against opportunistic behavior so that the parties involved in these activities are not able to attain complete legal protection and expose themselves in a complicated social environment with mass uncertainty. To insure better rewards from the economic activities, people make efforts to reduce this social complexity and avoid risk from being exploited (Wrightsman, 1972). Trust is basically seen as a common mechanism for reducing social complexity and perceived risk of transaction through increasing the

expectation of a positive outcome and perceived certainty regarding the expected behavior of trustee (Luhmann, 1979; Grabner-Kraeuter, 2002; Gefen, 2004), and it also enables people to live in risky and uncertain situations (Mayer et al., 1995). In a word, in the world of business, trust is the key to successful transactions and long-term relationships with customers (Corritore et al., 2003).

Trust has been examined in various contexts over the years (Lee & Turban, 2001). For example, related to industrial buyer-seller relationships (Donney & Cannon, 1997), distribution channels (Dwyer et al., 1997), and the use of marketing implications (Moorman et al., 1993). There is a growing body of literature that examines trust in different theoretical perspectives. The studies include three theories: personality theory; sociology and economics; and social psychology (Mayer et al., 1995). Trust also can be defined from different aspects, such as benevolence, competence, honesty, and predictability (McKnight and Cummings, 1998), credibility (Donney & Cannon, 1997). By and large, the factors of trust can be concluded into three main factors: ability, benevolence, and integrity (Mayer et al., 1995). These factors stated are able to include most of the factors that other researchers had mentioned before (Bhattacherjee, 2002).

2.1.2. Consumer's Trust in Online Company.

As mentioned earlier, trust can be defined as a mechanism to lower the complexity of the situation when people are facing different kinds of uncertainties (Corritore et al., 2003). In other words, when lacking trust, people need to consider every possible outcome before making decisions; therefore, which will make the situation more complex. Trust is not to control or to faultless predict others' behavior

but it is certainly a good mechanism to decrease complexity (Grabner-Krauter & Kaluscha, 2003).

Compared with traditional channels, the online and offline commerce differ in some key aspects. According to previous studies (Bart et al., 2005; Gefen and Straub, 2003; Jarvenpaa et al., 2000; Roy et al., 2001; Wang and Emurian, 2005; Yoon, 2002), the main differences are listed as follow: (1) The parties involved may interact across different times and locations: rules and regulations may vary across these zones; (2) Less data control during and following its transfer; (3) Partners may be more likely to not know each other in an online environment, compared to an offline environment; (4) Lower barriers to entry and exit: online vendors may be considered "fly-by-night" as there are few assurances that they will stay in business for some time; (5) The absence of the physical element: in offline environment, the sellers must hardly invest in physical buildings, facilities and personnel, and consumer's trust is certainly affected by those factors. However, in the online environment, those factors are not as visible; instead customers just interact with the screen and get the information only. In addition, the physical evaluation of products is also hindered in an online setting; (6) The decreased human/social element, resulting in lower social presence: electronic transactions are more impersonal, anonymous and automated than person-to-person offline transactions. Due to those differences, online purchase involves higher degree of uncertainty and risk (Grabner-Krauter & Kaluscha, 2003). Generally speaking, when purchasing through online stores, customers are not able to check the product's quality nor can they guarantee the safety of their personal information such as credit card

information. Krauter and Kaluscha (2003) pointed out that risks are caused by implicit uncertainties: system-dependent uncertainty and transaction-specific uncertainty. System-dependent uncertainty arises because if using open technological systems for the exchange of information, in order that words can be interpreted as exogenous or environmental uncertainty; transaction-specific uncertainty can be explained by the parties who are involved in the transaction taken place on internet. All of the uncertainties arise because customers cannot predict the motivation or the behavior of the transaction party (Lee & Turban, 2001).

Customers' trust toward online shops can be established in three ways (Urban et al., 2000): (1) trust on internet or certain website, (2) trust on information disclosed, (3) trust on service or products' delivery. In one report, it was postulated that people pass through three stages of trust (Cheskin Study, 1999): (1) for first-time users, it's important to decrease chaos situation in order to built trust; (2) customers will build much trust on online stores whenever their personal information is secured; (3) it is important to enhance intrinsic trust of web visitors.

There are six essential factors needed to build online trust, and these factors can form a so-called the "trust pyramid" (Dayal et al., 1999). The three factors at the bottom, state if the art security, merchant legitimacy and fulfillment are the basic parts to establish online trust. Besides the previous factors, in order to differentiate ones website from others, there are three more factors left, which are tone, customer control and consumer collaboration. These six elements therefore form the "trust pyramid", shown in the following figure.

Differentiators

Consumer
Collaboration

Tone | Customer
Control

Fulfillment

Basic
building
blocks

State of the art
security | Merchant
Legitimacy
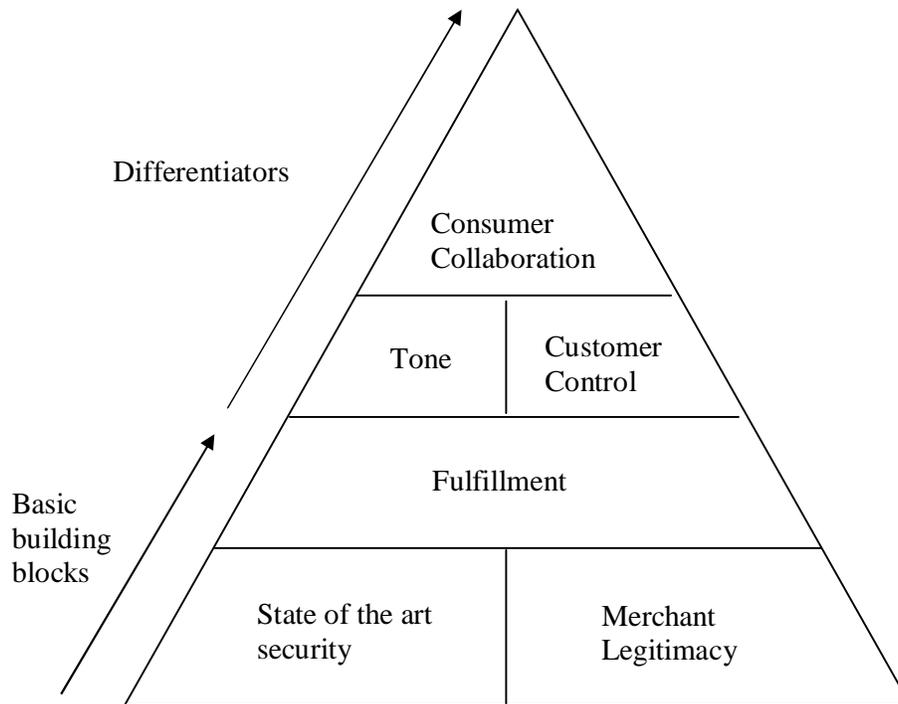
Figure 1. The "Trust Pyramid"

Source: Dayal et al., 1999.

Previous studies showed that online customers display low levels of trust for web-based merchants, and that is an important reason why many web users do not shop from specific websites (Culnan & Armstrong, 1999; Princeton Survey Research Association, 2002). There are a variety of possible reasons for the low trust online. The lack of face-to-face interaction, the virtual nature of web stores, and often the fact that there is no physical store, all make it difficult to establish customer's trust (Koufaris & Hampton-Sosa, 2005).

Even though trust is so important, it has been very difficult to study. One reason is that it is very difficult to define and measure (Mayer et al., 1995). The definition of trust has been viewed at different level (Gefen et al., 2003) and varied from study to

study. This study looks at trust between customers and web retailers in consumer-based e-commerce. Following Pavlou's work, trust in B2C e-commerce is defined as the belief that allows consumers to willingly become vulnerable to web retailers after having taken the retailers' characteristics into consideration (Pavlou, 2006). As in previous studies (Bhattacherjee, 2002; Mayer, Davis & Schoorman, 1995; McKnight, Choudhury & Kacmar, 2002a; Suh & Han, 2003), online trust is regarded as a salient belief that includes integrity, benevolence, and ability.

However, one of the definitions that have prevailed was by Mayer et al. (1995). They defined trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the agility to monitor or control that other party". Hence, vulnerability is not just risk-taking, but the willingness to take the risk (Ambrose & Johnson, 1998). The more we trust, the more willing we may be to take the risk of engagement/interaction. For example, consumers will be more willing to purchase products from a vendor if they can trust that vendor's word can be relied upon and the vendor will not take advantage of the consumer's vulnerabilities (Geyskens et al., 1996). In an online shopping context, consumers are vulnerable and likely to expose themselves to loss if they (Kim & Benbasat, 2003): (i) provide their email address (making themselves vulnerable to receiving spam email or other annoyances); (ii): provide their shipping information (making themselves vulnerable to privacy invasion); (iii): provide their credit card numbers(making themselves vulnerable to credit card fraud); or (iv) complete online purchase transactions (making themselves vulnerable to

quality and service inadequacies)). This definition is general enough to encompass trust in all types of operations and transactions. The "actions" of the other party can be the timely delivery of the product, the delivery of the right product previously agreed upon, or even the use of personal information gathered during the transaction (Koufaris & Hampton-Sosa, 2002). Based on this definition, Mayer et al. proposed a model of dyadic trust in organizational relationships that includes characteristics of both the trustor and trustee that influence the formation of trust. The three characteristics included in the model to represent the perceived trustworthiness of the trustee are ability, benevolence, and integrity (Mayer, Davis & Schoorman, 1995). The logic of this model is that if the trustor perceives a trustee's (e.g., a vendor's) ability, benevolence, and integrity to be sufficient, the trustor will develop trust (an intention to accept vulnerability) towards the trustee. If the level of trust in a vendor surpasses a threshold of perceived risk, then the trustor will engage in a risky relationship with the vendor (Luhmann, 1988). In other words, a high degree of trust not only stimulates and meets consumers' high expectations of satisfying transactions, but also eliminates uncertainty, perceived risks, and interdependences in most online transactions (McKnight & Chervany, 2001; Pavlou, 2003). In addition, the higher the degree of consumers' trust, the higher the degree of purchase intentions of consumers, and the easier it is for companies to retain consumers (Jarvenpaa & Tractinsky, 1999; Gefen & Straub, 2004).

The importance of trust is elevated in the highly uncertain e-commerce environment (Pavlou, 2003). Due to the inherent nature of Internet shopping, consumers will always experience some levels of risk. Consumers find it difficult to assess whether

the retailer will deliver on its commitments or protect the privacy of personal information (Mcnight et al, 2002b). Moreover, the unpredictability of the Internet infrastructure increases consumers' fear that hackers or the third party will threaten their financial secrets or disclose personal information (Hoffman, Novak & Peralte, 1999; Pavlou, 2003). There were new reports about hackers breaking into company databases and stealing credit card numbers and the general ignorance about the strength of encryption have also contributed to increase customer's perceptions of risk. For example, online consumers are required to share personal details (such as mailing address, telephone number), financial information (such as credit card numbers). Moreover, customers may suffer from the risk of products or services not matching the description on the website, and the risk of damage during the delivery process, etc. There seems little assurance that customers will receive the products or services comparable to the ones they ordered according to the description and image on the computer screen. Customers also do not know how the retailer will deal with the personal information collected during the shopping process (Sonja & Ewald, 2003). If based on the customer resource life cycle purchase stages, Kim and Benbasat (2003) summarized trust related issues in Internet stores in the Table 1.

Table 1. Trust Related Issues Based on the Customer Resource Life Cycle Purchase

Stages

Purchase stages	Customer resource life cycle	Potential Issues that undermine consumer trust
Pre-purchase	1. Establish requirement	
	2. Specify requirement	a) Advice provided by a store or agent may not be correct
	3.Select source	a) A virtual store may not exist
		b) After sales support may not be good
		c) A store is not capable of delivering products on time
		d) Product quality may be low
		e) Prices may not be reasonable
During purchase	4. Order	a) Information transmission may not be secure
		b) A store may request unnecessary information about customers
		c) Personal information may not be protected
		d) A store may not keep its promised delivery date
		e) A customer may not get a proof of order
		f) A customer may not have ways to resolve issues once he or she places an order
	5. Authorize and pay	a) Credit card shopping may not be safe
		b) Customer payment may be effective as soon as he or she places an order
	6. Acquire	a) A store may not deliver the product

	7. Test and accept	a) A store may not accept returns
		b) Returns may be difficult
Post purchase	8. Integrate into and manage inventory	
	9. Monitor use and behavior	
	10. Upgrade if needed	
	11. Maintain	a) A store may not provide maintenance or service
	12. Transfer or dispose	
	13. Account for	

Source: Kim & Benbasat (2003)

All above concerns increase customers' perceived risk of online transactions (Pavlou, 2003). In those uncertain situations, when consumers have to act, trust comes into play as a solution for the specific problems of risk (Luhmann, 1988). Trust becomes the crucial strategy for dealing with an uncertain and uncontrollable future because trust helps consumers overcome perceptions of risk (Mayer et al., 1995; Pavlou, 2003) and provides expectations of successful transactions.

Previous studies have identified a number of factors that can potentially influence consumer's trust in online companies, such as perceived technology (including perceived usefulness, perceived ease of use, and perceived enjoyment of technology), perceived security and privacy, marketing orientation, third party certification, web site appeal, and company competency (including perceived company size, perceived good reputation, perceived willingness to customize, and perceived

interaction) (Chen & Barnes, 2007; Corbitt, Thanasankit & Han Yi, 2003; Kollock, 1999; Palmer, Bailey & Faraij, 2000; Resnick et al., 2000; Van Den Berg & Van Lieshout, 2001), and so on.

Obviously, there are many discussions for the antecedents of online trust and they are not quite the same, the following table is a summary of the antecedents discussed in some studies.

Table 2. Trust Antecedents from Literature Review

Author	Antecedents
Morgan & Hunt, 1994	Communication, shared value, opportunistic behavior
Donney & Cannon, 1997	Perceived reputation, perceived size, perceived willingness to customize
Hoffman, 2000	Privacy
Gefen, 2000	Disposition to trust, familiarity
Lee et al., 2000	Comprehensive information, shared value, communication, specificity
Cheung & Lee, 2000	Perceived security control, perceived privacy control, perceived integrity, perceived competence, third party recognition, legal framework, propensity to trust
Lee & Turban, 2001	Technical competence, medium understanding, effectiveness of security infrastructure, effectiveness of third party certification, individual trust propensity

Pavlou & Chellappa, 2001	Privacy, security, reputation, previous experiences' satisfaction
Bhattacherjee, 2002	Familiarity
McKnight et al., 2002	Perceived site quality, perceived vendor reputation, structural assurance of the web
Suh & Han, 2002	Perceived usefulness
Yoon, 2002	Transaction security, website properties, navigation functionality, personal variables
Corbitt, Thanasankit & Han Yi, 2003	Perceived market orientation, perceived site quality (usefulness, timeliness, and advanced technology), perceived technical trustworthiness, perceived risk, user's web experience.
Koufaris & Hampton-Sosa, 2004	Perceived reputation, perceived size, perceived willingness to customize, perceived usefulness, perceived ease of use, perceived security control, trust propensity

Some researchers have proposed new methods for increasing consumer's trust, for instance agents and virtual reality technologies, economic-incentive mechanisms, governmental involvement, and videoconferencing (Ba, Whinston & Zhang, 1999; Cassell & Bickmore, 2000; Olson & Olson, 2000; Papadopoulou et al., 2001; Schoder & Yin, 2000). Each of those factors plays the different role to consumer trust. For example, according to Koufaris and Hampton-Sosa (2005), website appeal is a significant predictor of initial trust in the company as well as intention to use the

website in the future. In their other study, they found that perceived reputation of the company and perceived willingness of the company to customize its products and services were significant antecedents to initial trust in the company. They also found that perceived usefulness and ease of use of the website as well as perceived security control of the site were also significant antecedents of initial trust in the company (Koufaris and Hampton-Sosa, 2004). Obviously, these factors are identified having impact on consumer's trust in an online company, which either impede or impulse their intention to purchase from that company.

Also, several trust researchers have shown a direct relationship between trust and willingness to buy online from Internet vendors (Bhattacherjee, 2002; Gefen, 2002; McKnight, Cummings & Chervany, 1998). Dan J. Kim et al. (2008) investigated 468 undergraduate students, and the result showed that a consumer's trust has a positive effect on the purchasing intention. According to Koufaris and Hampton-Sosa (2002), customer's trust in a company can play an important role in determining the customer's actions regarding that company. Consistent with the Theory of Planned Behavior (Ajzen, 1991), customer's trust (a belief) influences customer intentions (Koufaris & Hampton-Sosa, 2002). Therefore, this study expects that increases in trust will directly and positively affect purchase intentions.

2.2. Purchase and Intention to Purchase

The ultimate variable of interest to a web-based vendor is consumers' behavior, specifically their willingness to transact with the vendor through the web. In light of the

difficulty of simulating actual behavior in an experimental setting, this study measures behavioral intentions instead.

Drawing on the Technology Acceptance Model (TAM) (Davis, 1989), Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), and Theory of Planned Behavior (TPB) (Ajzen, 1991), many e-commerce studies have shown that consumer intentions to engage in online transactions are a significant predictor of consumer's actual participation in e-commerce transactions (Pavlou & Fygenson, 2006; Sheppard et al., 1988; Venkatesh & Davis, 2000). McKnight et al. (2002) defined behavioral intentions in terms of consumer intentions to engage in three specific behaviors: (a) follow the advice of the web vendor, (b) share personal information with the vendor, and (c) purchase goods or services from the vendor. Each behavioral intentions construct captures an individual's projection or anticipation that she/he will behave in a specific way.

The relationship between intention and behavior is based on the assumption that human beings attempt to make rational decisions based on the information available to them. Thus, a person's behavioral intention to perform (or not to perform) a behavior is the immediate determinant of that person's actual behavior (Ajzen & Fishbein, 1980). Based on the intention-behavior relationship, we argue that behavioral intention, or more specifically intention to purchase from a certain vendor through the website, is a predictor of a consumer's actual behavior or purchase decision. (Kim, Ferrin & Raghav Rao, 2008).

2.3. Perceptions about the Company.

Whatever the business environment or the business type is, trust is always considered as a critical issue. As mentioned, in the online environment, gaining consumer's trust is much more difficult than traditional business. So, how can an Internet site evoke trust in the eyes of the consumers? Size and reputation have been most frequently named as factors evoking buyers trust towards seller organizations in traditional industrial buyer-seller relationships (Doney & Cannon, 1997). So, do perceived size and perceived reputation effect consumer's trust in an Internet store? Some Internet merchants certainly seem to think so. Previous studies showed that the factors belong to company's competency can influence consumers' online trust. Among them two of the most important factors that consumers may concern firstly are perceived company size and perceived company reputation (Jarvenpaa et al., 2000; Chen & Barnes, 2007; Koufaris & Hampton-Sosa, 2004). These belong to long-term issue and require hard investment of resources, a great deal of attention and efforts from vendors. Therefore, this study took those two factors as two antecedents of consumer's trust in online companies.

2.3.1. Perceived Size

Perceived size is defined as how large customers perceive a company to be. Perceived size can increase trust in the company, as research in offline commerce has shown (Doney & Cannon, 1997). And the literature suggests that a store's size assists consumers in forming their impressions regarding the store's trustworthiness. In traditional marketing channels, a buyer (i.e., trustor) uses size as a signal that a seller

(i.e., trustee) can be trusted. (Doney & Cannon, 1997). According to Jarvenpaa, Tractinsky, and Vitale (2000), the perception of large organizational size implies that other buyers trust the organization and conduct business successfully with it. This experience of others is taken as a reason to trust that an organization will deliver on its promises (Doney & Cannon, 1997). Customers often assume that a large company has capabilities necessary to provide them with the services and support their desire, thereby increasing their trust in the company (Chow & Holden, 1997). Also, large size may indicate to customers that the company is better able and more willing to compensate them in the case of product failure, especially since it has invested more on its reputation in the market (Jarvenpaa, Tractinsky & Vitale, 2000). In addition, large sellers should be able to control their suppliers, again increasing the perception of product or service reliability and credibility. Finally, large sellers have more resources invested in their business and hence are perceived by a trustor to have more to lose than smaller firms by acting in an untrustworthy way (Jarvenpaa, Tractinsky & Vitale, 2000).

The relationship between perceived company size and consumer's trust in web-based commerce has been examined in one empirical study. Jarvenpaa, Tractinsky, and Vitale (2000) investigated 184 undergraduate and MBA students in Australia, and according to the study's findings, store size had a positive relationship with consumer's trust when the online store was an air travel service but it had no relationship with trust when the store was an online bookstore. According to Koufaris and Hampton-Sosa (2004), the reason for this difference may be the inherent low risk in book buying as oppose to travel buying. Also, in their study, based on a questionnaire survey of 212

subjects, they found that the subjects had very few cues to help them form a perception regarding the store's size (Koufaris & Hampton-Sosa, 2004) whereas past research on online trust manipulated the perception of store's size by providing them with sales figures and number of products available (Jarvenpaa, Tractinsky & Vitale, 2000). That's why then they decided to eliminate the items for size and removed this variable from supposed model.

Since only one study empirically tested the effect of perceived size on trust and it used a general definition of trust regardless of its temporal nature, we feel that it is essential to examine the relationship between perceived size and consumer's trust. Given the prior evidence on the positive relationship between size and trust in offline commerce as well as the limited evidence in the single study in online commerce, it is expected the same to be true for trust online.

2.3.2. Perceived Reputation

Reputation, like size, is conceptualized as the consumer's perception of a store's reputation, where "reputation" is defined as the extent to which buyers believe a selling organization is honest and concerned about its customers (Doney & Cannon, 1997). A favorable reputation enhances credibility of the vendor. However, the marketing literature argues that reputation is a valuable asset that requires a long-term investment of resources, efforts, and attention to customer relationships. Building a positive reputation is a difficult, expensive, and time-consuming process that requires a great deal of consistent relationship-enhancing behavior on the part of the vendor towards its customers. It is process that can easily become undermined, and any positive efforts

outweighed, by a few missteps by the firm, in which it is perceived to be acting in an unfair, dishonest, or otherwise disreputable manner. As a result, people generally believe that firms that have established a positive reputation will be reluctant to squander those efforts or risk their reputation-building investments by pursuing opportunistic, short-term gains at the expense of their customers (Dasgupta, 1988; Telser, 1980). In short, a company that acts in a manner consistent with creating a positive reputation, especially when it has been established, has incentive to continue to do so, and as a consequence, people will consider reputation to be a reliable variable upon which to assess trust in the company.

However, the cost of untrustworthy behavior are perceived to be higher for firms that already have a good reputation, particularly if the network of buyers is small or there is a high chance of communication or interaction among the buyers (Chiles & McMackin, 1996). In the industrial buyer context, the seller's reputation has been positively related to the buyer's trust in the seller (Aderson & Weitz, 1989; Ganesan, 1994). In the Internet marketing context, Quelch and Klein (1996) argued that Internet consumers will favor sites that represent a company with which the consumer is already familiar from traditional channels. Lohse and Spiller (1998) speculated that the reputation of the physical store will influence the perceptions of an online site. Obviously, consumer's trust can also increase significantly when the company is perceived to have a good reputation (Doney & Cannon, 1997; Jarvenpaa, Tractinsky & Vitale, 2000).

The positive relationship between reputation and initial trust has been shown in the online environment in one other study. McKnight et al. (2002) manipulated the perceived reputation of a fictitious legal advice website by telling some of their subjects that an ad for the site mentioned that the law firm running the website was rated among the top 50 in the nation. They found that perceived reputation had a significant positive effect on both trusting beliefs in the company as well as trusting intentions toward the company for new customers (McKnight, Choudhury & Kacmar, 2002). However, the study used a fictitious legal services website, and we believe that it is important to examine this relationship for other types of website as well. So, it is expected that the relationship between perceived reputation and consumer trust in an online company will also be positive in other cases. In the other study, Koufaris and Hampton-Sosa (2004) investigated 212 undergraduate and graduate students of a major Northeastern U.S. university through online questionnaire. These subjects browsed a website they had never visited before and searched for a particular product. The result showed that one of the two most important antecedents of initial trust was perceived reputation of the company by the new customers (Koufaris & Hampton-Sosa, 2004). Chen and Barnes (2007) investigated 103 undergraduate and postgraduate students in Taiwan. Participants were asked to visit an unfamiliar Taiwanese e-bookshop website for the first time, and search for a particular product. They found that regarding the company competency category, perceived good reputation was one of the principal determinants influencing online initial trust in a company. Potential online consumers believed that if a company has a good reputation in the marketplace, then a website is more trustworthy,

even if it lacks tangible and physical signs (Koufaris & Hampton-Sosa, 2004). However, Jarvenpaa et al. (2000) are considered as pioneers who took an empirical study to examine the relationship between consumer attitude to an Internet store and intention to purchase. They hypothesized that trust is positively related to the store's perceived reputation. Participants performed four shopping tasks: two involving buying books and two involving making travel plans, using designated web merchants (some with bricks-and-mortar entities, some completely virtual). Participants completed an experiential survey evaluating their impressions of the web merchants' reputation, size, and trustworthiness, as well as their attitudes towards the store, willingness to buy, risk perception, and shopping enjoyment. Not surprising, they found that a consumer's trust in an e-store is positively related to the store's perceived reputation. In a follow-up study that included a cross-cultural comparison using participants in three different countries, Jarvenpaa, Tractinsky, Saarinen, and Vitale (1999) confirmed the above results.

2.4. Perceptions about the Website Quality

Aladwani and Palvia (2002) defined perceived website quality as the users' needs, reflecting overall excellence of the website. In the context of B2C e-commerce, the website features of online company can be categorized into three marketing stages: presales, online sales, and after-sales (Liu & Arnett, 2000). The presales stage includes the online retailer's efforts to attract customers by providing product and price-related information to reduce customers' search cost. Customer electronic purchasing activities occur during the online sales stage, in which orders are placed and payments are made

electronically. The after-sales stage comprises customer service, delivery, and problem solutions.

Most studies have either adopted a technical-oriented or customer-oriented perspective in attempting to identify the key features of B2C e-commerce. An IS-oriented view assumes that the determinants of customer acceptance are based on system features such as website usability, accurate information, and transaction security (Janda et al., 2002; Palmer, 2002; Park & Kim, 2003). The service marketing-oriented view argues that to attract customers to purchase and retain customers, online retailers need to have clear knowledge of what customers expect for service quality (Long & McMellon, 2004). Moreover, Jarvenpaa & Todd (1997) identified that the success of virtual stores is determined by both a technology-centered view (i.e. were transactions done correctly?) and consumer-centered view (i.e. was the customer treated properly?). The technical components of online retailing are system quality and information quality, while customer support is a product of service quality. Similarly, DeLone & McLean (2003) introduced the e-commerce success model which includes system quality, information quality, and service quality as antecedents of website effectiveness.

As demonstrated in the literature on marketing, consumer's trust in salespeople and the company they work for is influence by the salesperson's characteristics, such as expertise, helpfulness, similarity of business values, and likeability (Diamantopoulos & Winklhofer, 2001; Liu & Leach, 2001; Nicholson, Compeau & Sethi, 2001). But there is no salesperson online. Instead the customer interacts with the website, which serves as a replacement, in effect, for the salesperson. The lack of salespersons in the online

world makes the website the most important representative of the company (Koufaris & Hampton-Sosa, 2002). Web-based companies must rely on their websites to represent them and to show their customers that they are trustworthy and reliable before they can prove that with their products or services. Therefore, it is essential that companies built the website with a high quality, which is usable and functional to earn the trust of their customers in order to retain them and persuade them to buy products or services (Koufaris & Hampton-Sosa, 2004). Also, it is showed that the quality of the website affects the user view of the site because it is the portal through which the transactions are conducted. Consumers usually expect websites to support their shopping on the Web. For example, they may require accurate or available information on target products or services, a reliable website for assessing products or services, and good service (Hung-Pin Shih, 2004).

According to an expectancy-value approach, those perceptions of e-shopping are termed: perceived quality of information, system and service, and these three constructs are the determinants of the success of websites (Liu & Arnett, 2000). Thus, this study postulates that perceived quality of information, system and service can positively or negatively e-shopping behavior.

Many studies have explored the relationship between website quality and user acceptance in the web context. Most of them showed that web quality had a positive impact on user beliefs of perceived usefulness and perceived ease of use. However, in a study, Corbitt et al. (2003) showed that perceived site quality is positively related to trust. However, they just referred to a common sense of site quality, and assessed it

basing on different dimensions, including usefulness, timeliness, advanced technology. This study expects that there is that kind of relationship between website quality (following different dimensions of website quality, including system quality, information quality, and service quality) and consumer trust in online company. However, there are few studies have examined this relationship. According to Professor Shu-Chun Ho and Professor Po-Chiang Tsai from Department of Information Management, Shu-Te University, website quality has positive effect on consumer' trust in the online company. Hence, this positive relationship is expected to examine in this study.

2.4.1. System Quality

System quality is manifest in a website system's overall performance and can be measured by customer perceived degrees of user friendliness in shopping at an online retailer. Moreover, system quality in terms of web-based IS identifies the desired characteristics for an online retailer (Hsiu-Fen Lin, 2007). System quality refers to the processing characteristics of an IS (Hung-Pin Shih, 2004). According to a survey conducted by the European Electronic Messaging Association, more than 79% of respondents said that design quality, especially security is the top concern of EC customers. However, security is not only one aspect of designing the system quality. Anderson and Bezuidenhoudt (1996) stressed that reliability is also needed, especially in consumer electronic markets. A reliable system should have quick error recovery and ensure correct operation (Bailey & Pearson, 1983). According to Tony Ahn, Seewon Ryu, and Ingoo Han (2007), system quality depends on the users' needs, as defined

during the system's analysis and development. It is important factor in user satisfaction with a web purchase: appearance, technical adequacy, delay, navigation, security, and privacy are important factors. As web technologies have improved, more sophisticated and user-familiar solutions have been added, including audio-visual support, user customization, and virtual reality. According to Delone and McLean (2003) as well as Nelson et al. (2005), system reliability, convenience of access, response time, and system flexibility are examples of qualities valued by users. E-commerce researchers have long recognized that a website's usability can significantly influence users' search strategies and performance. System quality is especially important in the context of B2C e-commerce because the high level of system quality may provide users with more convenience, privacy, and faster responses (Tony Ahn, Seewon Ryu, and Ingoo Han, 2007).

2.4.2. Information Quality

Hung-Pin Shih (2004) considered information quality to be the output quality of IS, and then used it to represent information characteristics such as being up-to-date, accurate, useful, complete. For Wang et al. (1998) information quality is divided into four categories with four sub-dimensions. The first category, intrinsic information quality, corresponds to the accuracy, objectivity, believability and reputation of the information. The second category, accessibility information quality, corresponds to the accessibility, the security and the ease of operations of information. The third category, contextual information quality, is constituted out of the relevance, the value added, the timeliness, the completeness and the amount of information. Finally, the fourth category,

representational information quality, consists of the interpretability, the ease of understanding, and the concise and consistent representation of information. According to Nelson et al. (2005), information quality refers to the quality of the information provided by the online firms. Its measure includes dimensions such as information accuracy, completeness, currency, and information presentation format. The nature of online shopping, without the cues provided by face-to-face contact, may require accuracy, completeness and currency of information to facilitate information sharing and exchange. Moreover, information presentation must also effectively facilitate interpretation and understanding, thus aiding the completion of a task. E-commerce researchers are increasingly recognizing the importance of user-based information contents in evaluating a websites' effectiveness (Negash et al., 2003; Cao et al., 2005). The type, level of detail, and variety of information are usually determined at the system design and development phase while the timeliness, accuracy, and reliability result from the system operations. Srinivasan (1985) chose "report content and form" as a measurement of user perceived effectiveness of the system, content included accuracy, relevance, adequacy, and understandability of report contents, while form included quality of format, timeliness of reports, mode of presentation, and sequencing of information. In the web environment, the information is related not only to the report but also to user interpretation of it. The most frequently used measures are content and content quality (Ranganathan & Ganapathy, 2002). Web technologies today provide user-customized or multi-media contents which are interactive and easy to understand.

Previous studies frequently used information quality to measure IS performance (Mahmood, 1987; Miller & Doyle, 1987; Srinivasan, 1985). Information quality is included in an assessment of the effect of Web use, especially on searching products/services in e-shopping. During e-shopping transactions, both consumers and firms communicate and coordinate by exchanging and sharing information via the Internet. Thus, perceived information quality is assessed using computer perceptions of the quality of information on the web. Perkowitz and Etzioni (1999) linked information quality with usefulness by arguing that the information is useful only if the user considers the information on the website to be accurate, informative, and up-to-date. Lin and Lu (2000) also argued that information quality is a valuable predictor of the perceived ease of use and usefulness.

Information quality is likely to help customers compare products, make informed purchases, and enhance transaction security (Liu & Arnett, 2000; Park & Kim, 2003). This study expected that improved information quality (i.e. Informativeness and security) would lead to high levels of customer trust.

2.4.3. Service Quality

In the online shopping environment, service quality can be defined as overall customer evaluations and judgments regarding the quality of online service delivery (Santos, 2003). Moreover, Zeithaml et al. (2002) defined e-service quality as the extent to which a website facilitates efficient and effective shopping, purchasing, and product delivery.

Service quality for a web-based company depends on its provision of multiple communication mechanisms for accepting use complaints and their timely resolution; it also involves assisting users in being effective, suggesting complementary products or service, and jointly solving problems. Parasuraman et al. (1988) conceptualized service quality as the relative perceptual distance between customer expectations and evaluations of service experiences. They developed a 45-item instrument, namely SERVQUAL, to measure service quality in terms of tangibles (physical facilities and the appearance of personnel), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customers and provide prompt service), assurance (employee knowledge base which induces customer trust and confidence), and empathy (caring and individualized attention provided to customers by the service provider), to assess customer expectations and perceptions of quality of service from both service and retailing organizations. The above SERVQUAL scale recently has been widely used to measure information system service quality, and employed to measure e-commerce system service quality (Myers, Kappelman & Prybutok, 1997; Pitt, Watson & Kavan, 1995). Related studies on e-service quality have tested the SERVQUAL scale and used it to measure service in various contexts, including web-based service (Kuo, 2003; Nagash et al., 2003), internet retail (Kaynama and Black, 2000; Barnes & Vidgen, 2001), and electronic banking (Zhu et al., 2002). Tony Ahn et al. (2007) based on SERVQUAL scale, items from Aladwani and Palvia (2002), Barnes and Vidgen (2001), conducted a process and proposed a new scales to

measure service quality, including responsiveness, credibility, assurance, empathy, follow-up service, and competence.

However, there is still a need to consider other values of service from the consumer's viewpoint. Service quality is likely to be more important for online retailing, because it should provide all the services in the purchasing process (finding, ordering, and delivering the products). Researches over the past two decades have demonstrated that service quality influences consumption decisions, but only recently these findings have been applied to e-commerce (Yang & Jun, 2002; Wolfinbarger & Gilly, 2003). For example, service quality measures have been applied to assess the quality of virtual community websites (Kuo, 2003), satisfaction with e-commerce channels (Devaraj et al., 2002), and determinants of website success (Liu & Arnett, 2000). Because when consumers initially access websites to search for products or services, service quality perceptions of websites may encourage or discourage them to make a purchase via the web (Hung-Pin Shih, 2004). Furthermore, DeLone and McLean (2003) also argued that service quality is a significant dimension of information system success in the e-commerce environment, where customer service is crucial. Hence, service quality is increasingly recognized as playing an important role in influencing the purchase intentions of online customers. Although a few studies have explored service quality as success factors of websites, but there are few researches have tested the relationship between service quality and consumer's trust in online company.

Chapter 3 Research Design and Methodology

3.1. Research Framework

The purpose of this study is to examine the influence of consumer perceptions on consumer's trust in the online company, and then on their purchase intention. Specifically, this study explores the relationship between perceptions about the company (including perceived size and perceived reputation), perceptions about the website quality (including system quality, information quality, and service quality) and consumer's trust in online company, as well as the relationship between consumer's trust in online company and their purchase intention. According to the literature review, this study builds a research framework as shown in Figure 2.
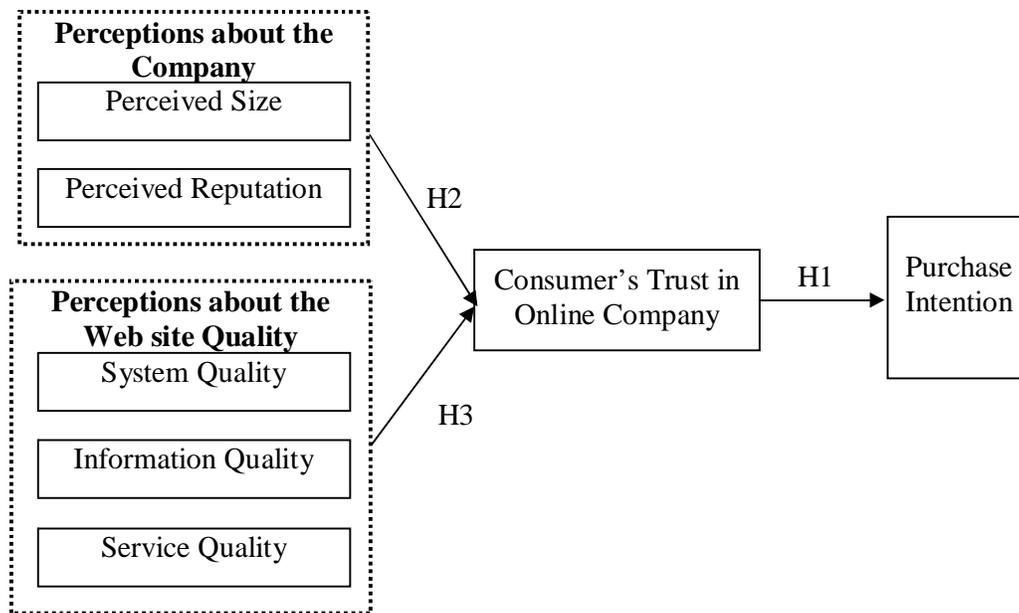
Figure 2. Research Framework

3.2. Research Hypotheses

As the research framework of this study has been established and based on study purposes as well as literature review, the hypotheses of this study were developed.

Customer trust in a company can play a significant role in determining the customer's actions regarding that company. Consistent with the Theory of Planned Behavior (Ajzen, 1991), customer trust (a belief) influences customer intentions. Previous studies have shown that the level of trust is one of the most important reasons why customer do or do not shop online. In other words, the higher the degree of consumers' trust, the higher the degree of purchase intentions of consumers (Jarvenpaa et al., 2000; Jarvenpaa & Tractinsky, 1999; Gefen & Straub, 2004; Heijden, Verhagen & Creemers, 2000; Chen & Barnes, 2007). Therefore, this study derives the following hypothesis:

H1: Consumer's trust in online company is positively related to consumer's purchase intention.

Having such important role, many researchers have studied trust as well as investigated the antecedents of consumer's trust. Results from Jarvenpaa et al. (2000) empirical study showed that perceptions about the store (including perceived size and perceived reputation) have a positive effect on consumer's trust. On the other hand, store size had a positive relationship with consumer's trust when the online store was an air travel service but it had no relationship with trust when the store was an online bookstore (Jarvenpaa et al., 2000). Given the prior evidence on the positive relationship between size and trust in offline commerce as well as the limited evidence in several

studies in online commerce (Koufaris & Hampton-Sosa, 2004; (Jarvenpaa et al., 2000; McKnight, Choudhury, and Kacmar, 2002), this study develops the following hypotheses.

H2: Consumer's perceptions about the company are positively related to consumer's trust in online company.

Specifically,

H2a: Perceived size is positively related to consumer's trust in online company.

H2b: Perceived reputation is positively related to consumer's trust in online company.

Besides perceptions about the company, one another group of antecedents is considered in this study; that is the perceptions about the Website quality (including system quality, information quality, and service quality). Many previous studies have examined the impact of web site quality, for instance, on user acceptance of e-shopping, perceived usefulness, perceived ease of use, or on customer satisfaction, but no empirical study has investigated the relationship between web site quality perceptions and consumer's trust in online company. Thus, this study proposes these following hypotheses:

H3: Consumer's perceptions about the web site quality are positively related to consumer's trust in online company.

Specifically,

H3a: System quality is positively related to consumer's trust in online company.

H3b: Information quality is positively related to consumer's trust in online company.

H3c: Service quality is positively related to consumer's trust in online company.

3.3. Operational Measurement for the Research Constructs

There are four variables concerned in this study: perceptions about the company, perceptions about the website, consumer's trust in online company, and purchase intention. This sector will discuss the operational measurement approaches to those constructs.

3.3.1. Perceptions about the Company

Two factors are used in this study to measure perceptions about the company, which are "perceived reputation", and "perceived size". By adopting measurement scales from other researches (Doney & Cannon, 1997; Jarvenpaa et al., 2000) which response well to the objectives of this study, this study summarizes the items of measurement as those shown in the Table 3; all of the item measure will be using Likert 7-point scale: Strongly disagree, disagree, slightly disagree, undecided, slightly agree, agree, and strongly agree.

Table 3. Items of Perceptions about the Company

Variable	Content of Item
Perceived Size	• This company is a very large company • This company is one of the industry's biggest supplier on the Web • This company is a small player in the market

Perceived Reputation	• This company is well known
	• This company has a good reputation
	• This company has a reputation for being honest
	• This company is known to be concerned about customers

Source: Doney & Cannon, 1997; Jarvenpaa et al, 2000.

3.3.2. Perceptions about the Website Quality

System quality, information quality, and service quality are used to measure the construct of perceptions about the web site quality. By adopting former a research's measurement (Tony Ahn, Seewon Ryu, and Ingoo Han, 2007) as references which responses well to the objectives of this research, this study summarizes the items and measurements as those in the Table 4; all of the item measure will be using Likert 7-point scale: Strongly disagree, disagree, slightly disagree, undecided, slightly agree, agree, and strongly agree.

Table 4. Items of Perceptions about the Web site Quality

Variable	Content of Item
System Quality	• This company's website has an appropriate style of design for site type
	• This company's website has easy navigation to information
	• This company's website has fast response and transaction processing
	• This company's website keeps personal information secure from exposure
	• This company's website can use when I want to use

	• This company's website has good functionality relevant to site type
	• This company's website keeps error-free transactions
	• This company's website creates an audio-visual experience
Information Quality	• This company's website have sufficient contents where I expect to find information
	• This company's website provides complete information
	• This company's website provides site-specific information
	• This company's website provides accurate information
	• This company's website provides timely information
	• This company's website provides reliable information
	• This company's website communicates information in an appropriate format
Service Quality	• This company's website anticipates and responds promptly to user needs and request
	• This company's website can be depended on to provide whatever is promised
	• This company's website instills confidence in users, reducing their uncertainty
	• This company's website understands and adapts to the user's specific needs
	• This company's website provides follow-up service to users
	• This company's website gives a professional and competence image

Source: Tony Ahn et al., 2007.

3.3.3. Consumer's Trust in Online Company

This study adopts measurement scale from other researches (Doney & Cannon, 1997; Jarvenpaa, Tractinsky & Vitale, 2000), which respond well to the objectives. This study summarizes the items of measurement as those shown in the Table 5. All of the items measure will be using Likert 7-point scale: Strongly disagree, disagree, slightly disagree, undecided, slightly agree, agree, and strongly agree.

Table 5. Items of Consumer's Trust in Online Company

Variable	Content of Item
Consumer's Trust in Online Company	• This Company is trustworthy
	• I trust this company keeps my best interests in mind
	• This Company will keep promises it makes to me
	• I believe in the information that this vendor provides me
	• This Company wants to be known as one who keeps promises and commitments

Source: Doney & Cannon, 1997; Jarvenpaa et al, 2000.

3.3.4. Purchase Intention

By adopting measurement scale from other research (Jarvenpaa, Tractinsky & Vitale, 2000) which respond well to the objectives, this study summarizes the items of measurement as those shown in the Table 6. All of the item measure will be using Likert 7-point scale: Strongly disagree, disagree, slightly disagree, undecided, slightly agree, agree, and strongly agree.

Table 6. Items of Purchase Intention

Variable	Content of Item
Purchase Intention	- I would return to this company's website - I would consider purchasing from this company in the next 3 months - I would consider purchasing from this company in the next year - For this particular purchase, I would buy from this company

Source: Jarvenpaa et al, 2000.

3.4. Sampling Process

To investigate consumer's trust in an online company, Taiwanese and Vietnamese participants were asked to visit online store that they are familiar with, and then search for a particular product. The survey adopted a sample frame of undergraduate and postgraduate students in Shu-Te University in Kaoshiung, Taiwan. The student sample shares similar characteristics, educational level, and consumption behavior. Adopting students as survey sample is typically considered more applicable to online consumers (Njite & Parsa, 2005). Research variables were gathered through questionnaires. For the convenience of filling-in and understanding of contents, this questionnaire is written in Vietnamese, Chinese as well as English. The questionnaires were delivered directly and through e-mail to students. Data collection lasted one week.

In part one of the survey, participants were asked to visit online store for the purpose of examining their trust on that store. Next respondents were required to search

for a particular product, gather certain details, but no actual purchase. After searching activities, participants were required to fill-out the remaining questions in part 1, indicating responses to questions on a seven-point Likert scale from 1- strongly disagree to 7 – strongly agree. This part of the questionnaire contained items measuring antecedents of consumer's trust in online company (perceived size, perceived reputation, system quality, information quality, and service quality), consumer's trust in online company, and purchase intention.

After finishing part 1, participants were required to fill-in personal information in part 2 in order to understand their gender, age, internet surfing experience as well as online shopping experience.

A total of 330 questionnaires were delivered to Taiwanese and Vietnamese students in Shute University (270 directly and 60 through e-mail), 309 questionnaires were returned. After eliminating poor quality responses signified by inattention to the reverse question and visually identifiable response patterns, we were left 292 effective samples.

3.5. Research Methodology

To test the hypotheses of this study, software SPSS 13.0 package is used for analyzing instrument. The statistical analysis methods adopted are as follows:

1. Descriptive Statistics

The detail description of the respondents' personal data, such as gender, age, nationality, Internet surfing experience, and so on will be analyzed. Every construct of

the data will be analyzed in percentage, frequency distribution in order to know the sample distribution.

2. Factor Analysis

Factor analysis is a technique used to identify factors that statistically explain the variation and co-variation among measures. Factor loading of an item must be greater than 0.5. Eigenvalue needs to be greater than 1; the difference between two eigenvalue needs to be greater than 0.3.

3. Reliability Analysis

Reliability applies to a measure when similar results are obtained over time and across situation. Broadly defined, reliability is the degree to which measures are free from error and therefore yield consistent results. Usually reliability is measured by Cronbach's α; if it is greater than 0.7, then it means that there exists high degree of reliability, if less than 0.35, then it means that the reliability is relatively low, and this coefficient needs to be deleted.

4. Regression Analysis

The purpose of regression analysis is to create a linear equation, in order to analyze the relationship between dependent variables and independent variable. The hypotheses in this study can also be tested by this method.

Chapter 4 Data Analysis and Result

4.1. Descriptive Analysis of Sample Demographics

The demographics of Taiwanese and Vietnamese students in Shu-Te University include five major demographics: (1) Nationality, (2) Gender, (3) Age, (4) Experience in Internet Surfing, and (5) Shopping Online Experience

As shown in Table 7, our samples include 20.9% of Vietnamese and 79.1% of Taiwanese. There is a marked difference in the numbers of Vietnamese and Taiwanese respondents.

Of the 292 respondents, there is 60.3% of female and 39.7% of male. Moreover, the percentage of the respondents for age between 18-20, 21-23, 24-26, and older than 26 are 33.2%, 33.2%, 23.0%, 10.6%, and 10.6%, respectively, so most of the respondents in this study are at young age, under 23 years old (more than 60%)

Also from the descriptive statistics of these samples, we can see that most of our respondents have Internet surfing experiences for above six years (58.6%) whereas the percentage of those having 3-6 years, 1-3 years, and under 1 year of Internet surfing experience are 26.7%, 13.0%, and 1.7%, respectively. This is consistent with the fact that Internet has been popular since late 90's, about 10 years from now, and it is believed that the more familiar with using the Internet, the better the chance for people to purchase through online stores or companies. That's why we can see that in the Table 7 the majority of our respondents (70.5%) have purchase experience through Internet.

Table 7. Characteristics of Sample Demographics

Measure	Item	Frequency	Percentage (%)
Nationality	Vietnamese	61	20.9
	Taiwanese	231	79.1
Gender	Male	116	39.7
	Female	176	60.3
Age	18-20	97	33.2
	21-23	97	33.2
	24-26	67	23.0
	Over 26	31	10.6
Experience in Internet Surfing	Under 1 year	5	1.7
	1-3 year	38	13.0
	3-6 year	78	26.7
	Over 6 year	171	58.6
Shopping Online Experience	Never shopped	86	29.5
	Have shopped	206	70.5

4.2. Reliability Analysis of the Major Variables

To test the reliability of the items measuring the constructs, to ensure that the measurement scale we designed for our questionnaire are highly representative of each variable, the Cronbach's α is used. I measure the reliability of the measurement for the four constructs, including perceptions about the company (perceived size and perceived reputation), perceptions about the web site quality (system quality, information quality, service quality), consumer's trust in online company, and purchase intention. Constructs with Cronbach's α below 0.5 will be deleted.

Cronbach's α is to test whether the measures are free from error. Throughout the test we find out that all of the Cronbach's α are greater than 0.7, meaning that the constructs have high reliability. The result is shown in the Table 8.

Table 8. Reliability Test

Constructs	Factors	Items	Cronbach's α
Perceptions about the Company	Perceived Size	3	0.743
	Perceived Reputation	4	0.888
Perceptions about the Website Quality	System Quality	8	0.883
	Information Quality	7	0.883
	Service Quality	6	0.895
Consumer's Trust in Online Company		5	0.919
Purchase Intention		4	0.932

4.3. Factor Analysis

Factor analysis can be used to identify the structure of relationships among respondents (or items) by examining the correlations between the respondents (or items). With the factor analysis, we can identify the separate dimensions of the structure and then determine the extent to which each variable is explained by each dimension. Once these dimensions and the explanation of each variable are determined, we can do summarization and data reduction.

First, in order to assess construct validity and identify the unique dimensions of each construct, factor analysis with VARIMAX rotation was employed. Construct validity examines the extent to which a construct measures the variable of interest. In other words, it should demonstrate relatively high correlations between items of the same construct (convergent validity) and low correlations between items of constructs that are expected to differ (discriminant validity).

Table 9 shows the results of the VARIMAX rotation on the original 37 items constrained to seven factors.

Table 9. VARIMAX Rotated Component Analysis (Factor-Loading Matrix)

	Factor loadings						
	Perceived Size	Perceived Reputation	System Quality	Infor-mation Quality	Service Quality	Consumer's Trust in Online Company	Purchase Intention
PS1	0.768						
PS2	0.729						
PS3	0.810						
PR1		0.708					
PR2		0.839					
PR3		0.888					
PR4		0.855					
SYQ1			0.616				
SYQ2			0.559				
SYQ3			0.642				
SYQ4			0.723				
SYQ5			0.674				
SYQ6			0.328				
SYQ7			0.654				
SYQ8			0.599				
INQ1				0.769			
INQ2				0.719			
INQ3				0.757			
INQ4				0.607			
INQ5				0.615			
INQ6				0.638			
INQ7				0.390			
SVQ1					0.679		
SVQ2					0.743		
SVQ3					0.698		
SVQ4					0.709		
SVQ5					0.695		
SVQ6					0.686		
CT1						0.892	
CT2						0.866	
CT3						0.879	
CT4						0.884	
CT5						0.824	

	Purchase Intention
PUI1	0.853
PUI2	0.944
PUI3	0.958
PUI4	0.893

Hair et al. suggested that an item is significant if its factor loading is greater than 0.50. From the initial 37 items, two items (system quality 6 and information quality 7) were eliminated because of cross-loading on other constructs, and the result is shown in the Table 10.

Table 10. VARIMAX Rotated Component Analysis (Factor-Loading Matrix) after

Eliminating 2 Items (System Quality 6 and Information Quality 7)

	Factor loadings						
	Per-ceived Size	Perceived Reputation	System Quality	Infor-mation Quality	Service Quality	Consumer's Trust in Online Company	Purchase Intention
PS1	0.768						
PS2	0.729						
PS3	0.810						
PR1		0.708					
PR2		0.839					
PR3		0.888					
PR4		0.855					
SYQ1			0.603				
SYQ2			0.554				
SYQ3			0.630				
SYQ4			0.745				
SYQ5			0.700				
SYQ7			0.629				
SYQ8			0.576				
INQ1				0.776			
INQ2				0.726			
INQ3				0.762			
INQ4				0.612			
INQ5				0.624			
INQ6				0.646			
SVQ1					0.649		

SVQ2					0.760		
SVQ3					0.700		
SVQ4					0.709		
SVQ5					0.720		
SVQ6					0.676		
CT1						0.892	
CT2						0.866	
CT3						0.879	
CT4						0.884	
CT5						0.824	
PUI1							0.853
PUI2							0.944
PUI3							0.958
PUI4							0.893
Mean	5.509	5.566	5.294	5.508	5.011	5.221	5.483
SD	1.078	0.919	0.831	0.805	0.908	0.939	1.110

Also reported are the mean, and standard deviation (SD) for each scale.

After eliminating 2 items, Cronbach's α is checked again to ensure the reliability of the constructs. The result is shown in the Table 11.

Table 11. Reliability Test after Eliminating 2 Items

Constructs	Factors	Items	Cronbach's α
Perceptions about the Company	Perceived Size	3	0.743
	Perceived Reputation	4	0.888
Perceptions about the Website Quality	System Quality	8	0.877
	Information Quality	7	0.873
	Service Quality	6	0.895
Consumer's Trust in Online Company		5	0.919
Purchase Intention		4	0.932

Then, eigenvalue as well as cumulative percent of variance explanation are shown in the Table 12.

Table 12. Eigenvalue and Cumulative Percent of Variance Explanation

Variable	Factor	Eigenvalue	Percent of Variance (%)	Cumulative Percent of Variance (%)
Perceptions about the Company	1	3.102	44.314	44.314
	2	2.127	30.384	74.698
Perceptions about the Website Quality	1	4.245	22.342	22.342
	2	4.010	21.106	43.448
	3	3.708	19.517	62.965
Consumer's Trust in Online Company	1	3.778	75.556	75.556
Purchase Intention	1	3.335	83.364	83.364

From the Table 12, we can see that for the perceptions about the company variable, the cumulative percentages of variance explained by the factors were greater than 74.69% for two constructs (7 items are analyzed). For the perceptions about the web site quality variable, cumulative percentages of variance explained by the factors were greater than 62.96% for three constructs (19 items are analyzed). For the variables of consumer's trust in online company and purchase intention, cumulative percentages of variance explained by the factors were greater than 75.55 % for one construct (5 items are analyzed) and 83.36% for one construct (4 items are analyzed), respectively. All the Eigenvalues are greater than 1.

4.4. Regression Analysis

In this study, linear regression was adopted to examine the relationships between independent variables and dependent variables to test our research hypotheses. To identify whether the higher level of consumer's trust in online company will lead to

higher level of their purchase intention (H1) is one of the research purposes. In the meantime, to identify whether the higher level of perceptions about the company and perceptions about the web site quality will lead to higher consumer's trust in online company (H2, H2a, H2b, H3, H3a, H3b, and H3c) is also tested in this study.

4.4.1. Linear Regression Analysis for Consumer Purchase Intention

The results of linear regression analysis for consumer purchase intention are shown in the Table 13.

Table 13. Linear Regression Analysis for Testing H1

Construct	Standardized coefficients β	t value	R^2	Adj-R^2	F value
Consumer Trust in Online Company	0.815***	23.917	0.664	0.662	572.030***

Dependent variable: Purchase Intention
***$p<0.001$, **$p<0.01$, *$p<0.05$, $^+p < 0.1$

The final model shown in the Table 13 had a good fit (F = 572.030, p = 0.000). And at significant level 0.05, consumer's trust in online company (H1) has significant positive relationships with purchase intention. We also can see in the table that the adjusted R^2 value for the construct of consumer's trust in online company is 0.662, meaning that the explanation ability is good for our dependent variable, purchase intention.

4.4.2. Linear Regression Analysis for Consumer's Trust in an Online Company

The results of linear regression analysis for consumer's trust in online company are shown in the Table 14.

Table 14. Linear Regression Analysis for Testing H2a, H2b, H3a, H3b, H3c.

Constructs	Factors	St. coefficients β	t value	VIF	R^2	Adj-R^2	F value
Perceptions about the Company	Perceived Size	0.083*	2.544	1.590			
	Perceived Reputation	0.040[+]	0.885	3.013			
Perceptions about the Website Quality	System Quality	0.199***	4.426	3.045	0.810	0.807	243.982***
	Information Quality	0.167***	3.802	2.895			
	Service Quality	0.536***	13.054	2.540			

Dependent variable: Consumer's Trust in Online Company
***p<0.001, **p<0.01, *p<0.05, 0.05<[+]p < 0.1

The final model shown in the Table 14 had a good overall fit (F = 243.982, p = 0.000). And at significant level 0.05, perceived size, system quality, information quality, and service quality (H2a, H3a, H3b, and H3c) have significant positive relationships with consumer's trust in online company. Perceived reputation (H2b) doesn't show significant relationship with consumer's trust in online company. Therefore, we conclude that hypotheses H2a, H3a, H3b, and H3c are supported whereas hypothesis H2b is not supported. We also can see in the table that the adjusted R^2 value for two constructs, namely perceptions about the company and perceptions about the web site quality is 0.807, meaning that the explanation ability of the independent constructs is good for our dependent variable, consumer's trust in online company.

Due to H2b is not supported; it is eliminated from the model. Linear Regression is run again and the result is shown in the Table 15.

Table 15. Linear Regression Analysis for Testing H2a, H3a, H3b, H3c after

Eliminating H2b.

Constructs	Factors	St. coefficients β	t value	VIF	R^2	Adj-R^2	F value
Perceptions about the Company	Perceived Size	0.092**	2.992	1.424			
Perceptions about the Website Quality	System Quality	0.214***	5.104	2.638	0.810	0.807	305.011***
	Information Quality	0.178***	4.220	2.668			
	Service Quality	0.540***	13.228	2.511			

Dependent variable: Consumer's Trust in Online Company
***p<0.001, **p<0.01, *p<0.05, 0.05<$^+$p < 0.1

As shown in the Table 15, among all the four factors (including perceived size, system quality, information quality, and service quality), the most important one to explain consumer's trust in online company is the service quality (β = 0.540); the second will be system quality (β = 0.214); the following one is information quality (β = 0.178); and the last one is perceived size (β = 0.092).

The results also can be seen in the Figure 3 below. It illustrates the estimated coefficients and their significance in the structural model. Our revised model does not include perceived reputation because hypothesis H2b is not supported.
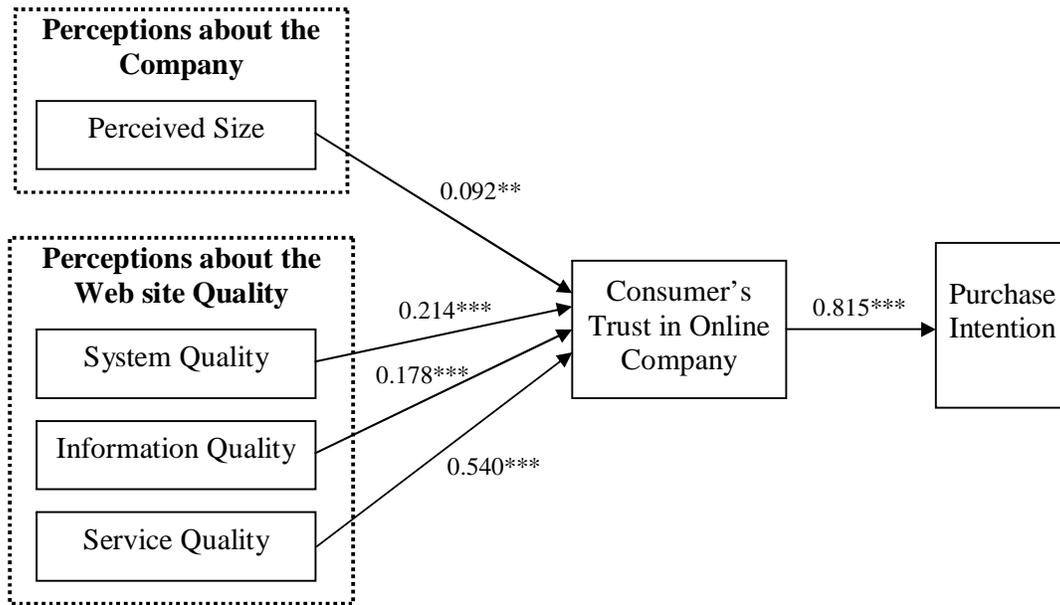
Figure 3. Path Coefficients for Research Model

(Path Significance ***p<0.001, *p<0.05)

4.5. ANOVA Test

ANOVA test is used to analyze whether different segment of the samples will have different reaction on the variables. Because when our samples are required to visit an online shopping site, then their frequency of visiting that site is different, their purchase experience from that site is different too. Specifically, based on samples' frequency of visiting the site, we separated them into five segments, 1 time/month, 2-3 times/month, 1 time/week, 2-3 times/week, and more than 4 times/week. Based on samples' purchase experience from specific site, then we separated them into three segments, never buy, sometimes buy, and usually buy. We then used ANOVA test for investigating the effect of samples' visit frequency as well as purchase experience on

perceived size, perceived reputation, system quality, information quality, and service quality. The result showed in the Table 16.

Table 16. ANOVA Test

Factors	Samples' frequency of visiting the site		Samples' purchase experience from the site	
	F	p-value	F	p-value
Perceived Size	8.082	.000	7.492	.001
Perceived Reputation	4.184	.003	8.095	.000
System Quality	2.405	.050	4.241	.015
Information Quality	8.600	.000	4.036	.019
Service Quality	5.072	.001	9.439	.000
Consumer's Trust in Online Company	6.564	.000	7.167	.001
Purchase Intention	7.601	.000	15.151	.000

Sample's frequency of visiting the site: 1 time/month, 2-3 times/month, 1 time/week, 2-3 times/week, and more than 4 times/week.
Sample's purchase experience from the site: bought, sometimes buy, and usually buy.

From the result shown above, at significant level of 0.05, we can see that when samples show differences in frequency of visiting the site as well as differences in purchase experience from the visited site, then they tend to have different reaction to the variables, including perceived size, perceived reputation, system quality, information quality, service quality, consumer's trust in online company, and purchase intention.

4.6. t-test

As ANOVA test, t test is used to analyze whether different segment of the samples will have different reaction on the variable. Because our samples include different nationality, Vietnamese and Taiwanese; therefore t test is used to investigate the effect of nationality on perceived size, perceived reputation, system quality, information quality, and service quality. The result is shown in the Table 17.

Table 17. t-test for Different Nationality

Factors	Nationality	Mean	Standard Deviation	t-value	p-value
Perceived Size	Vietnamese	5.2896	1.41090	-1.449	0.152
	Taiwanese	5.5671	.96719		
Perceived Reputation	Vietnamese	5.4795	.97286	-0.791	0.431
	Taiwanese	5.5887	.90483		
System Quality	Vietnamese	5.4567	.63878	2.058	0.042
	Taiwanese	5.2511	.87133		
Information Quality	Vietnamese	5.5301	.94698	0.212	0.832
	Taiwanese	5.5022	.76526		
Service Quality	Vietnamese	5.1011	.94098	0.845	0.401
	Taiwanese	4.9877	.89939		
Consumer's Trust in Online Company	Vietnamese	5.3934	1.05260	1.484	0.142
	Taiwanese	5.1749	.90404		
Purchase Intention	Vietnamese	5.4836	1.17604	0.006	0.996
	Taiwanese	5.4827	1.09481		

From the result shown above, at significant level of 0.05, we can see that even samples have different nationality (Vietnamese or Taiwanese), they tend not to have different reaction to the variables, including perceived size, perceived reputation, information quality, service quality, consumer's trust in online company, and purchase intention. They just tend to have different reaction to the only one variable, system quality (p-value = 0.042).

Chapter 5 Conclusion and Suggestion

5.1. Research Conclusions

The purpose of this study is to examine the influence of consumer perceptions about the company (including perceived size and perceived reputation) as well as perceptions about the website quality (including system quality, information quality, and service quality) on consumer's trust in the online company, and then the effect of consumer's trust on their purchase intention. The results of all hypotheses are listed below in the Table 14.

Table 18. Research Hypotheses and Results

Research Hypotheses	Results
H1: Consumer's trust in online company is positively related to consumer's purchase intention.	Supported
H2: Consumer's perceptions about the company are positively related to consumer's trust in online company.	
H2a: Perceived size is positively related to consumer's trust in online company.	Supported
H2b: Perceived reputation is positively related to consumer's trust in online company.	Rejected
H3: Consumer's perceptions about the web site quality are positively related to consumer's trust in online company.	
H3a: System quality is positively related to consumer's trust in online company.	Supported
H3b: Information quality is positively related to consumer's trust in online company.	Supported
H3c: Service quality is positively related to consumer's trust in online company.	Supported

This study looked into how the customer perceptions about the company as well as website quality can influence their trust in the company itself. But firstly, this study confirmed that customer's trust in the online company is an important determinant of customer intention to purchase. Previous researches have identified lack of trust as an important reason why customers do not participate in online commerce. It implied that consumers were likely to purchase products or services from online company or store when they felt that it was trustworthy and that they would move their loyalty to more enriching and reliable website.

Regarding the perceptions about the company, one surprising result was found. Our result demonstrated that perceived size was the principal determinant influencing consumer's trust in online company, while perceived reputation has no relationship with consumer's trust. This finding is inconsistent with previous studies. Hans van der Heijden et al. (2000) showed that whether the respondents trusted the company or not was not depend on their perceived size of the company, whereas perceived reputation does influence consumer's trust. Koufaris and Hampton-Sosa (2004) found a similar result that perceived reputation of the company by the new customers was one of the most important antecedents of trust. This study's finding showed that online customers believe in a company that if this company has a large size as well as a big player in the market. Then it is perceived to be more trustworthy, even it lacks of tangible and physical signs. However, even the company has a good reputation in the market, then respondents still did not regard company reputation as an essential sign of company capability or resources, especially when useful website interface, accurate and sufficient

information, secure transaction processes, good privacy protection and perfect service are provided.

Regarding the perceptions about the website quality, this study introduced a balanced approach to online company both as an end-user IS and a service provider. It also demonstrated that the online customer was regarded as both a computer user and an online shopper. Accordingly, this study has provided an integrative approach to categorize and evaluate website qualities from both technology and service point of views. As mentioned, the lack of salespersons in the online world makes the web site the most important representative of the company. Therefore, it is essential for companies to design website with high quality, are useable, and functional to earn the trust of their customer in order to retain them and persuade them to purchase. Our results confirmed this. In this study, we found integrative constructs as antecedents to consumer's trust. These constructs help individuals accomplish their tasks. Online companies can address these three through improved website design, web content management, and process integration. Thus, successful online companies must provide a high level of system, information, and service quality to earn customers' trust, and entice them to make a purchase. More specifically, in this study, website quality dimensions (including system quality, information quality, and service quality) are proven to have positive influence on customer's trust in online company. Practitioners can use these results as guidelines in website development, daily operations, and customer support processes in online business. The measures of website quality constructs can be a useful diagnostic tool for assessing the perceived quality of an

organization's e-commerce capability. It may be particularly powerful where used to provide a benchmark against competitors' websites and can also be applied longitudinally to evaluate the impact of development activities on online business.

This study's findings also supported the view point that an online company or store is not merely an IS, but is also a service provider that maintains full functionality of the customer purchasing process. They can earn customer's trust by enhancing user service also, for instance, through e-mail or bulletin board during customers' electronic purchasing activities where orders and charges are placed electronically. They can apply an incentive program to enhance consumer's purchase intention or at least their intention to revisit the web site. Service may be most important during the after-sales phase where timely delivery, follow-up service, and problem resolution are required.

In a word, this study provides some evidences as to how consumers might use their perceptions about the company as well as perceptions about web site quality to form trust beliefs about the owner company. Customer perceptions of the company, including perceived size and perceived reputation were defined, and they were found to affect consumer's trust in an empirical study. However, in this study, it was showed that only perceived size has positive effect on consumer's trust, but not perceived reputation. Customer perceptions of the web site quality, including system quality, information quality, and service quality were not examined before, and the results from this study showed that they positively affect customer's trust in an online company.

Moreover, it was said that trust is undoubtedly a major factor in commerce, both online and offline. New research is helping to explain how online customers form their

trust beliefs about the companies they visit online. The present study is only a small step in understanding online trust and consumer behavior on the web. We hope it will prompt new questions and further studies that will provide more guidelines for web-based companies seeking to increase the trust they instill in their customers in order to increase their customer base and sales.

5.2. Contributions and Implications

5.2.1. Contributions for Research

The goal of this study was to propose and test a model of consumer's trust in the relationship with their perceptions about the company and the website quality. The theoretical contributions of this study take several forms.

First, it empirically confirmed several relationships discussed in the previous literature. For instance, following Koufaris & Hampton-Sosa (2004), Chen and Barnes (2007), Jarvenpaa et al. (2000), perceived company reputation and perceived size can positively influence consumer's trust in online company. In this study, it is found that online companies that built a large size can earn customer's trust, and thereby positively affecting their purchase intention, which is consistent with previous studies. However, our results showed that, there is no relationship between perceived reputation and consumer's trust. This result is inconsistent with previous studies.

More importantly, the model of this study tested several other relationships that there has few researches examined previous in the literature. That is the relationships between perceptions about website quality (including system quality, information quality, and service quality) and consumer's trust in online company. Regarding to this

variable, firstly, this study theorizes the associations between website quality dimensions (system quality, information quality, and service quality) and consumer's trust in an online company. Second, in the context of B2C e-commerce, this study is an integration of IS and marketing views in order to investigate empirically the importance and implications of website quality dimensions, thus contributing to the applicability and generalization of website quality and internet marketing literature. Finally, the dual nature of online customers as website end-users and Internet shoppers means that both IS quality and service quality are essential for online companies. This study found that online companies consider online shopping not only as a web-based IS, but also as a vehicle that provides presales, online sales, and after-sales stages in a transaction process of finding, ordering, and shipping.

5.2.2. Managerial Implications

This study's findings have some implications for managers and developers of virtual stores as well as for businesses initiating or currently conducting B2C e-commerce.

First, online companies can apply the framework to earn trust from consumers, to retain them, to predict as well as persuade them to purchase products or services. The central point here is consumer's trust towards online companies. If consumers have more positive perception of trust, then they are more likely to accept and purchase from that company. The framework also provides insights on how to achieve this: a more positive perception of trust can be achieved by attempting to widen the company's size, building a website with good quality (including good system quality, information

quality, and good service quality) due to the lack of face-to-face interaction. Therefore this study's results especially have implication to managers about investing time and resources when designing and operating websites. If customers find an online company to be too difficult to find information, to navigate or use in transactions, they will move to competitor sites and may not go back any more. Moreover, online companies should also be aware of the offline features. The online consumers consider the website not merely as an information system but also as a virtual company that provides full service will be more likely to earn customer's trust as well as their loyalty.

Moreover, one of the main functions of any business is to keep customers in the hand and maintain a long as well as good relationship with them. Based on the results of this study, we suggest e-commerce managers how to improve customer relations and evaluating how well their websites could convey trust to online customers:

- Incorporating a value-added search mechanism, dynamic navigation, user-customized web page, and fast response ability.

- Providing sufficient, completed, and accurate information for customer, for instance, providing price comparison, user-customized information, and multi-media contents. Especially, generating customer information and providing value-added service on customer information to keep a customer focused business orientation.

- Adding question and answering facilities using a bulletin board system, customized navigation to purchasing, and e-mailing at each purchasing stage. Hence, the website can be the most responsive to customer requirements and allow customers to contribute their ideas to the business operation. More importantly, this must be well

communicated to customers to let them know that their participation is appreciated and could make a difference. Customer's judgment could be a good source and gathering customer feedback on web design helps to ensure a website is constructed the way it was design to be.

- Online companies, like traditional companies, need to adopt a customer-oriented strategy. Online companies should establish a service-oriented mechanism for transaction processes that provide satisfactory resolution of customer-related problems.

- Finally, many researchers have recognized the significance of utilizing and presenting a privacy protection policy as an effective means of reducing both transaction-specific and system-specific uncertainty (Elliot & Fowell, 2000; Liao & Cheung, 2001; Grabner-Krauter & Kaluscha, 2003). Online companies should devote significant attention to developing safety standards and systems which equipped with a variety of online safety measures, including secure browsers, to ensure account and transaction security, as these measures can enhance transactional trust. Then, gaining customer's purchase intention.

5.3. Research Limitations

The results of this study should be taken with caution. While they may provide some indication of the true nature of the relationship between perceptions about the company as well as perceptions about the website quality and consumer's trust in an online company, several limitations of the study militate against treating its finding as generalizability and conclusiveness.

First of all, the results are limited by the inherent limitations of a field study as opposed to an experimental one (Pedhazur & Schmelkin, 1991; Sekaran, 2003.). A field study, because it is correlation study, lacks the explanatory power of an experiment. Experiments are causal studies that have the advantage of a direct comparison between control and exposed groups. In a true experiment, one or more variables are manipulated and subjects are randomly assigned to the different levels of the variables. Researchers can compare groups and attribute differences to changes in the manipulated variables. In a field study, no variables are manipulated. As the result, the findings are limited in their explanatory power to simple correlation between variables. The variables in the present model show a relationship, its relative strength (using standardized residuals), and its direction (positive or negative). For example, a positive relationship between perceived size and consumer's trust indicates that as the perceived size of customers diminishes, so does trust in the company. However, the causality of these relationships cannot be established with a field study. Also, there are countless other factors in a field study that may explain the relationships that are not included in the model. Such factors are more easily controlled in a laboratory experiment, thereby providing the results with more internal validity. However, a field study has the advantage of greater external validity because the environment and the procedure are more similar to the real-world situation than a lab experiment would be. Also, the use of a questionnaire with no open-ended questions limits the amount of information obtained from the subjects. An alternative approach would have been to use the "thinking aloud protocol," which would have provided much richer information and possibly more

detailed explanations for the model (McKnight, Choudhury & Kacmar, 2002). In the end, there are significant trade-offs between the two methodologies. Researchers are encouraged to test the relationships in the model in a controlled true experiment and to consider the use of the "thinking aloud protocol". A possible replication of the present findings in such a study would provide significant indication of their validity.

Secondly, our research samples mostly are Taiwanese students (79.1%), while Vietnamese samples just make up 20.9%, therefore our research results mostly are suitable for Taiwanese online companies. The results may not provide enough evidences for expressing the behavior of non-Taiwanese and non-Taiwanese origin online companies due to cultural differences in online customer behaviors. Moreover our research's samples are undergraduate and postgraduate students, but obviously, these students are not the only potential e-commerce consumers. That is to say, our research results may not totally fitted for analyzing the whole society, or in other words they may not representative of the general population of online shoppers.

Finally, the study did not control for the possibility that the samples did not actually visit the website, search for products or services. They may answer the questions without reading and following the construction because of time-consuming requirement. Instead, they just think of a website they know or hear of (even they have never visited). As the result, the answer may not be remarked accurately.

5.4. Future Research Suggestions

There are several future research directions that will further an understanding of the perceived determinants and importance of the nature of B2C e-commerce.

First, future researches can use different methodologies, such as case studies, focus groups and interview to examine the relationship between perceptions about the company as well as perceptions about the web site quality and consumer's trust in online company; and then the relationship between consumer's trust and purchase intention in the context of B2C e-commerce context.

Second, this study picked students as the samples, but obviously this group is not the only potential e-commerce consumers. Therefore, the generalizability of this study's result should be further validated with the different types of samples in future researches.

Third, although the results showed that the perceived size, system quality, information quality, and service quality affect consumer's trust in online company in the B2C e-commerce context, it is important to realize that other factors may also play a crucial role in the evolution of customer expectations.

Fourth, although the scales used for measuring constructs of this study are similar to existing scales, further research might consider developing more elaborate measures to allow for a richer coverage of constructs' scales.

Fifth, previous studies found that culture plays a significant role in Internet user behavior (Liao & Cheung, 2001). Therefore, knowledge of how cultural factors affect the consumer's trust in the B2C e-commerce context will heighten the generalizability of B2C e-commerce research. An understanding of different cultural factors would allow this study to be applied to different cultures and thus provide cross-cultural comparisons.

Finally, as the growth of B2C e-commerce activities will continue, a longitudinal study is desirable in monitoring the performance of salient website quality dimensions particularly.

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Appendix 1: Research Questionnaire

PART 1
Instruction for participants:
Participants are asked to choose and visit an online shopping site for the purpose of examining your trust in online company. You must choose and visit a particular web site that you familiar with, regardless of which kind of product or service it sell. It can be a bookstore online, computer online store, air travel service site, beauty site, online retailing store, and so on. After choosing web site, you are required to answer following questions:

1. Name of the visited website: ………………………………………………
2. Name of the product you search for: ………………………………………
3. How often do you visit this website?
    ☐ 1 time/month   ☐ 2-3 times/month   ☐ 1 times/week
    ☐ 2-3 times/week   ☐ More than 4 times/week
4. Have you ever bought products or services from this web site?
    ☐ Never bought   ☐ Sometimes   ☐ Usually bought

Then, you are required to search for a particular product or service, gather certain details of that product or service. After searching activities, you are required to fill-out below questions. To answer those questions, circle with the most appropriate on the Sscale provided.

7-point Likert Scale:
1. Strongly disagree   4. Undecided   7. Strongly agree
2. Disagree   5. Slightly agree
3. Slightly disagree   6. Agree

Example: 1   2   ③   4   5   6   7

	Questions	Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
	Perceived Size							
1	This company is a very large company	1	2	3	4	5	6	7
2	This company is one of the industry's biggest supplier on the Web	1	2	3	4	5	6	7
3	This company is a small player in the market	1	2	3	4	5	6	7

	Perceived Reputation							
4	This company is well known	1	2	3	4	5	6	7
5	This company has a good reputation	1	2	3	4	5	6	7
6	This company has a reputation for being honest	1	2	3	4	5	6	7
7	This company is known to be concerned about customers	1	2	3	4	5	6	7
	System Quality							
8	This company's website has an appropriate style of design for site type	1	2	3	4	5	6	7
9	This company's website has easy navigation to information	1	2	3	4	5	6	7
10	This company's website has fast response and transaction processing	1	2	3	4	5	6	7
11	This company's website keeps personal information secure from exposure	1	2	3	4	5	6	7
12	This company's website can be used when I want to use	1	2	3	4	5	6	7
13	This company's website has good functionality relevant to site type	1	2	3	4	5	6	7
14	I believe that this company's website keeps error-free transactions	1	2	3	4	5	6	7
15	This company's website creates an audio-visual experience	1	2	3	4	5	6	7
	Information Quality							
16	This company's website has sufficient contents where I expect to find information	1	2	3	4	5	6	7
17	This company's website provides complete information	1	2	3	4	5	6	7
18	This company's website provides site-specific information	1	2	3	4	5	6	7
19	This company's website provides accurate information	1	2	3	4	5	6	7
20	This company's website provides timely information	1	2	3	4	5	6	7
21	This company's website provides reliable information	1	2	3	4	5	6	7
22	This company's website communicates information in an appropriate format	1	2	3	4	5	6	7
	Service Quality							
23	This company's web site anticipates and responds promptly to user needs and request	1	2	3	4	5	6	7
24	This company's website can be depended on to provide whatever is promised	1	2	3	4	5	6	7

25	This company's website instills confidence in users, reducing their uncertainty	1	2	3	4	5	6	7
26	This company's website understands and adapts to the user's specific needs	1	2	3	4	5	6	7
27	This company's website provides follow-up service to users	1	2	3	4	5	6	7
28	This company's website gives a professional and competence image	1	2	3	4	5	6	7
	Consumer's Trust in Online Company							
29	This Company is trustworthy	1	2	3	4	5	6	7
30	I trust this company keeps my best interests in mind	1	2	3	4	5	6	7
31	This Company will keep promises it makes to me	1	2	3	4	5	6	7
32	I believe in the information that this vendor provides me	1	2	3	4	5	6	7
33	This Company wants to be known as one who keeps promises and commitments	1	2	3	4	5	6	7
	Purchase Intention							
34	I would return to this company's website	1	2	3	4	5	6	7
35	I would consider purchasing from this company in the next 3 months	1	2	3	4	5	6	7
36	I would consider purchasing from this company in the next year	1	2	3	4	5	6	7
37	For this particular purchase, I would buy from this company	1	2	3	4	5	6	7

PART 2: Demographic

Some required demographic characteristics need to be completed:

1. Gender: ☐ Female   ☐ Male
2. Age: ☐ 18-20   ☐ 21-23   ☐ 24-26   ☐ Over 26
3. Experience in Internet surfing:
☐ Under 1 year   ☐ 1-3 year   ☐ 3-6 year   ☐ Over 6 year
4. Shopping Online: ☐ Never shopped   ☐ Have shopped

Autobiography

Personal Information

Name: Phung Kim Dung

Date of Birth: January 12, 1984

Place of Birth: Ha Tay Province, Viet Nam

Education

Master in Information System Management, Information Management School, Shu-Te University, Taiwan from September 5th, 2006 to June 14th, 2008.

Bachelor of Business Administration, University of Commerce, Ha Noi, Viet Nam from September 10th, 2002 to August 15th, 2006