DETERMINANTS OF TRUST TOWARD ONLINE PURCHASE INTENTION AMONG POST-GRADUATE STUDENTS IN UNIVERSITI SAINS MALAYSIA

By

IRWANSYAH

(P-EM0030/06)

Research report submitted in partial fulfillment

of the requirements for the degree of

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ABSTRAK

Belian melalui internet atau belian secara talian (online purchasing) menjadi begitu popular dalam kalangan pelajar dewasa ini, terutamanya mereka yang terlalu sibuk bekerja atau yang mempunyai banyak tugasan yang perlu diselesaikan. Objektif kajian ini adalah untuk mengenal pasti penentu kepercayaan (determinants of trust) dan tujuan pembelian secara talian. Kajian ini dijalankan di Universiti Sains Malaysia, Pulau Pinang. Seramai 122 orang responden yang terdiri daripada pelajar siswazah terlibat dalam kajian ini. Dapatan daripada soal selidik yang diedarkan, menunjukkan bahawa kepercayaan pelajar terhadap tapak web (website) tertentu banyak dipengaruhi oleh privasi dan jaminan. Di samping itu, didapati bahawa kepercayaan pelajar terhadap tapak web adalah signifikan terhadap tujuan pembelian. Walau bagaimanapun, jenis produk yang tertera dalam tapak web didapati tidak memberikan kesan yang signifikan terhadap hubungan di antara kepercayaan pelajar dan tujuan pembelian. Sebagai kesimpulan, diharapkan bahawa dapatan kajian ini akan membantu para pengendali (practitioners) jualan secara talian memahami kehendak para pelanggan serta merumus semula strategi pemasaran mereka dalam usaha menarik lebih ramai pelajar menggunakan kemudahan jualan secara talian.

Nota

1) Ayat 1 & 2 - Saya gabungkan, kerana dalam b. Melayu, ayat tidak boleh dimulai dengan " Terutamanya (Especially)'

2) Pada ayat 5, saya cadangkan sebaiknya dimasukkan perkataan responden. Oleh itu, ayat bahasa Inggerisnya juga perlu dimasukkan perkataan respondent.

3) Dalam teks bahasa Inggeris, ada 2 penggunaan – purchase online (baris 1 & baris akhir) dan online purchase (baris 4). Pada pendapat saya, yang tepat ialah online purchase

ABSTRACT

The emerging of online purchasing has become familiar among students nowadays. Especially, for the students who are busy working or doing their assignments. The objective of this study is to identify the determinants of trust and purchase intention in online purchasing. A survey was conducted in Universiti Sains Malaysia, Pulau Pinang. One hundred and twenty two post graduates students have participated in this study by responding to a set of questionnaires given to them. The results demonstrate that the students' trust on specific websites is influenced by privacy and assurance. In addition, students' trust on the websites is found to be significantly towards purchasing intention. Furthermore, the product type which are available on the websites do not significantly effect the relationship trust and purchasing intention. Finally, it is hoped that the findings of this study will help practitioners to understand their customers, needs and to reformulate the marketing strategy in order to attract students as consumers to purchase online.

Chapter 1

INTRODUCTION

1.0 Introduction

This chapter introduces a study about the determinants of trust and purchase intention in online purchase among post graduate students in Universiti Sains Malaysia, Pulau Pinang. The areas covered in this chapter are the study background, the problem statement, the research objectives, the research questions, definition of key terms, the significance of study, and the organization of chapters.

1.1 Study Background

Nowadays, the advancement of information technology cannot be separated from our life as human beings. The implementation of information technology can be found in social life, economy, business and politics as it could ease the activities. On the personal side, the Information Technology (IT) gives people the power to access to any information that they have never encountered before. For example, Internet users right now can get access to medical consultation through websites to get advice or suggestion from experts regarding their health problem without having to go to hospital (i.e. www.americanheart.org). On the business side, IT enables companies to build a strong relationship with customers (e.g. e-CRM, Toll free and customer service) without face to face interaction. Furthermore, the infrastructures of information technology such as computer, mobile phone, PDA, Internet, are the tools that one used by people to support their daily activities.

The emergence of Internet since few decades ago has enabled firms to undergo some changes and improvement in their businesses. For example, firms can use Internet as a medium to distribute and update information about marketing programs, conducting transactions, delivering certain products or services, interacting to customers (Butler & Joe, 1998), and build up relationship in virtual communities (Kotha, 1998). As a result, it will reduce the operational cost and save time.

Electronic commerce (e-commerce) is a new method of commerce in transaction business. It is conducted and accelerated by information technology, in particular the Internet. Electronic commerce is an unique platform of business channel of distribution because it could break down the business barriers such as time, geography, language, currency, and culture into its own entities (Haag, Cummings & Phillips, 2007). This medium also allows firms to provide product information and sales products or services directly to the customers using Internet network. All those benefits are considered by firms to use e-commerce as an important factor in doing businesses for the next time (Limayem, Khalifa & Frini, 2000)

According to a survey by Actinic's 2006 in United Kingdom, out of 146 companies with websites only 60 companies practices e-commerce, 90% of these companies with websites were profitable and companies with e-commerce practice can minimize their operational cost to 40% lesser than predicted (http://www.actinic.co.uk/Actinic_Ecommerce_Report_2006.pdf). Meanwhile in Malaysia, International Data Corporation (IDC) reported that the amount of transaction Business to Business (B2B) e-commerce indicated 77% growth or US$ 13.6 billion in 2006 from the previous year. Business to Customer (B2C) e-commerce transaction increased from US$ 1.9 billion in 2005 to US$ 2.8 billion in 2006. (http://www.idc.com.my/PressFiles/).

The numbers indicated that many consumers have Internet access and has become familiar with online shopping.

According to a study by the Internet World Statistics, the future for online shopping in Malaysia is looks bright and promising. As shown in table 1.1, the total number of Internet users in Malaysia are continuously increasing from year to year.

Table 1.1
Internet Users in Malaysia

Year	Users	Population	Penetration (% population)
2000	3,700,000	24,645,600	15.0 %
2005	10,040,000	26,500,699	37.9 %
2006	11,016,000	28,294,120	38.9 %
2007	13,528,200	28,294,120	47.8 %

Another survey from the International Data Corporation Malaysia reported that the number of Internet users who used to purchase online has increased from 4.6 million in 2005 to 6 million in 2006. Unfortunately, the researcher could not find detailed information about Internet buyers which would indicate the data of student's portion in doing online purchasing. This data is important to find out the relevance of internet buyer and number of students purchasing online that will contribute useful information to this study.

The advantages and disadvantages of the online shopping have been studied by many researchers. Wu and Chang (2005) mentioned that customers can easily access to information, find the best price and save time. Xiaoni, Prybutok, and Strutton (2007) stated that online

shopping is free of parking and enables the checking of stock availability at anytime. Although the number of Internet users purchasing online increases day by day, many of them are still worried to make online transaction. According to Paul, Wong, Lai, Keok, and Tan (2004), some of the Malaysian tertiary education students do not have the motivation to shop online due to the lack of trust and payment method available on websites. Sharmaa, Singhb, and Agrawal (2007) found that most of the Internet users in India are still hesitant to participate in online shopping because of lack of trust.

Therefore the companies should look for ways to overcome the consumers' fear to make online transaction. It is important for the companies to have a good understanding their customers and their marketplace before engaging themselves in online businesses. As a result, companies are able to develop more effective strategies that are suitable for consumers' expectations.

With the development of the Web, the Internet became fully capable of supporting transaction businesses between consumers and website vendors. Transaction businesses are only to happen if two or more parties have at least two things of value, agreed-upon condition, time and place of agreement (Kotler & Keller, 2006). In this scenario, trust can be considered by both parties as an important factor in transaction businesses because without trust, the process of transaction will fail (Papadopaulo, 2006). It also gives an impact to some factors in buying online such as security and privacy (Hong, 2004).

Most scholars agree that electronic commerce can only be successful if customers trust the websites and virtual products they see on them. Hong (2004) found that word of mouth (WOM) communication is an important source for the Internet users to ensure that products or services are available on the sites. Koufaris and Sosa (2002) stated that positive experience with

specific websites will lead the Internet users to be more trustworthy and influence them to purchase online. In addition, the level of trust in return will affect the purchasing intention and purchasing behavior (Flavian & Guinaliu, 2006).

Furthermore, building consumer trust in e-commerce environment and trust that exists in physical world are different. In the offline store, trust is based on personal relationship and interaction between the consumer and the merchant. However, in online store the retailers' website replaces a sales person's functions, which represent companies and introduce products as well. It is a promise (trust) that needs to restore affinity between businesses and consumers in this electronic environment with no close proximity of distance, difference in culture, language, legislation and jurisdiction (Goldstein & O'Connor, 2001).

1.2   Problem Statement

In the higher learning institutions, students are divided into two groups consisting of undergraduate students and post-graduate students. This study only focuses on post-graduate students who represent the general consumers who are involved in online purchasing due to the following reasons: First, post graduate students are those who are studying at university after the completion of their first degree program. Usually, they are of working people who could their finance their own studies except for those who have scholarship. Second, most of them hold credit cards as requirement tools in online purchasing to support their life and working activities (Ramayah & Suki, 2005). Third, as working students, they do face problem to manage time available between working time, family and study (Ramayah & Suki, 2005).

Furthermore, the ability of the Internet to reach the global market can not be separated from online businesses today. There are several types of Internet sites in online businesses. Such Internet websites include online newspapers, customer to customer sites, job sites, and online shopping sites (Parasuraman, Zeithaml & Malhotra, 2005). Those online businesses create the website which offers almost same benefits to customers such as a wide range of products, twenty four hours service, and products' information in order to attract consumers. In this case, it is difficult for customers to differentiate and trust those websites because they are confused over how to assess a good website for online purchasing.

For that reason, the website companies should have some dimensions for their websites as a positive signal so that the customers will feel confident to make online purchasing on their website. Privacy and security concerns are the number one reason why customers do not purchase over the web (Udo, 2001). They feel that when making transaction on a specific website, many companies websites will collect their information such as name, address, and credit card's number directly/indirectly (e.g. cookies) for marketing purposes and sometimes sell the information to third parties (e.g. spammers, telemarketers, direct mailers) without their permission. In this situation, the companies' websites should be able to provide guarantee for customers that their privacy is protected. In other words, the protection of transaction information is crucial for online customers. In terms of security, the emerging of hackers who hack the database of companies and steal credit card numbers has influenced the customers' perception to be engaged in online purchasing. Companies' websites should provide the consumers with guidelines on the security system on their websites such as authentication, encryption, and digital signature. This will minimize the customers' anxiety to be involved in online purchasing.

Besides the two dimensions mentioned, legitimacy and assurance are also considered as the next important dimensions in order to generate the value of websites. As for consumers who do not have personal experiences in the online store, the reputation of the company's website could be an indicator to determine their intention to purchase online. The consumers generally have no opportunity to see and try the product before he/she purchases it online. However, the consumers feel confident when they make transactions via reputable websites since reputation itself represents a promise from the company to its customers. In order to find the information about the reputation of the company's website, consumers usually will gather information from friends, parents, neighbours and colleagues who have purchased online (WOM). In short, a positive reputation affects the customers' trust which is supported by Dan, Ferin and Rao (2007).

Again, the assurance of the website represents how the company promises to customers on the quality of products/services, regulation, and legal resources that create a secured environment for making online transactions. In brief, the fourth dimensions which consist of security, privacy, legitimacy and assurance are important in the company's website because they affect consumers' trust. Trust is the strongest predictor of the online consumers' purchase intention. As a result, the company's website will generate higher profits from repeated purchase customers.

Therefore, to get a better understanding about the issue of trust in purchase online it should be associated with security, privacy, legitimacy and assurance.

1.3   Research Objectives

The study aims to investigate the determinants of trust and online purchasing intention among post graduate students in Universiti Sains Malaysia, Pulau Pinang. The objectives of this study are as follows:

1.   To investigate the influences of security on customer trust in online purchasing.

2.   To investigate the influences of legitimacy on customer trust in online purchasing

3.   To investigate the influences of privacy on customer trust in online purchasing

4.   To investigate the influences of assurance on customer trust in online purchasing

5.   To investigate the influence of trust on customers' intention in online purchasing

6.   To indicate whether product types have a moderating effect between trust and online customer's purchasing intention

1.4   Research Questions

Based on the statement of the problem, this study attempts to answer the following questions:

1.   Does security influence customer trust in online purchasing?

2.   Does legitimacy influence customer trust in online purchasing?

3.   Does privacy influence customer trust in online purchasing?

4.   Does assurance influence customer trust in online purchasing?

5.   Does trust influence customers' intention in online purchasing?

6.   Do product types have a moderating effect between trust and customer's online purchasing intention?

1.5   Definition of Key Terms

    1.5.1. *Security* is defined as the subjective probability with which consumers believe that their personal information (private and monetary) will not be viewed, stored, and manipulated during transit and storage by inappropriate parties in a manner consistent with their confident expectations (Flavian & Guinaliu, 2006)

    1.5.2. *Reputation* is defined as a valuable asset requiring a long-term investment of resources, effort, and attention to customers' relationships (Lu & Zhou, 2007)

    1.5.3. *Privacy* is defined as a protection of individually identifiable information on the Internet (Mukherjee & Nath, 2007)

    1.5.4. *Assurance* is defined as a perceived quality product or service by customer based on information provided on the website (Bonanni & Cyr, 2004)

    1.5.5 *Trust* is defined as the subjective probability by which consumers expect that a web retailer will perfom a given transaction in accordance with their confident expectations (Pavlou, 2002)

1.6   Significance of Study

This study creates four main contributions. Firstly, it provides good understanding on the impact of trust toward customer's intention to purchase online from post-graduate students in Universiti Sains Malaysia, Pulau Pinang, which in return will help organizations as web provider to build and maintain trust through their websites system. Secondly, it contributes to the understanding of Internet trust by examining some variables that might affect online trust. Thirdly, it investigates the product type as a moderator between trust and intention to purchase

online. Finally, the results of this study will increase our knowledge in marketing research especially for those who are interested to study web-based marketing.

1.7   Organization of chapters

This study will be divided into five chapters. Chapter one deals with the introduction, problem statement, research objectives, research questions, definition of key terms, significance of study, and organization of the chapters. Chapter two provides literature review which is related to the topic, theoretical framework and hypotheses. Chapter three describes the methodology, and chapter four explains the findings of the study. Chapter five consists of discussion and conclusion.

Chapter 2

LITERATURE REVIEW

2.0   Introduction

In this chapter, the researcher will discuss an overview of the Internet, theories and recent studies. The theoretical framework used in this study will be explained in this chapter too.

2.1   Internet and E-Commerce

The Internet has a range of capabilities that organizations use to exchange information internally or to communicate externally with other organizations. The most important Internet services from businesses include e-mail, UseNet groups, chatting, Telnet, and World Wide Web. These services provide several benefits to companies such as can be used to retrieve and offer information to other parties (Kenneth & Jane, 2004). The Internet has already changed the way in which many companies conduct their businesses and become more of a routine part of commerce today such as electronic commerce (e-commerce).

According to Awad (2007, p.7), "E-commerce is the ability to deliver products, services, information, or payments via networks like the Internet". Using e-commerce enables customers, suppliers and companies to form new powerful relationships that could break down business barriers in context of culture, currencies, and regulation (Haag et al, 2007).

The ability of e-commerce to reach global markets has been studied by businesses and researchers since (e.g. Monsuwe et al, 2004; Zwass, 1996). Phau and Poon (2000) stated that companies are more likely to use the Internet as an effective way to promote and deliver products

to consumers. They usually capture a lot of market shares in the competitive business. Amazon.com, Online Auction, Yahoo, Google, are few companies that have implemented e-commerce method in their businesses (Kotha, 1998).

2.2 Behaviour Intention

Behavior intention is the indication of how positive people are willing to try or how much effort they plan to extent in order to perform the behaviour. Therefore, behaviour intention is assumed to capture the motivational factors that influence a behaviour such as attitude, subjective norm and perceived behaviour control (Ajzen, 1991). In the context of online business, this behavior can be described as the desire of consumers to be engaged in electronic commerce with a web retailer which involves some activities such as purchasing product and sharing information (Pavlou, 2002). Similarly, behavior intention is a systematic process of consumer's intention to be engaged in online business starting from interacting with the company's website, sharing personal information and purchasing a product or a service online (Mc.Knight et al, 2002).

Some relevant theories from researchers regarding behavior intention will be briefly discussed. The theories are Theory of Reasoned Action (TRA), The Technology Acceptance Model (TAM), and Theory of Planned Behavior (TPB).

2.2.1 Theory of Reasoned Action (TRA)

Theory of Reasoned Action (TRA) had been introduced originally by Fishbein and Ajzen in 1975 and been revised again in 1980. TRA addresses that attitude can be used to forecast behaviour intention and actual behaviour. Individual behaviour is determined by behavior

intention (BI) and behaviour intention is determined by attitude and subjective norms. Attitude towards behaviour is defined as an individual's positive or negative feeling about performing the target behaviour. While subjective norm can be defined as an individual perception on people whether it's important to the individual to think that the behavior should be performed (Fishbein and Ajzen, 1975).
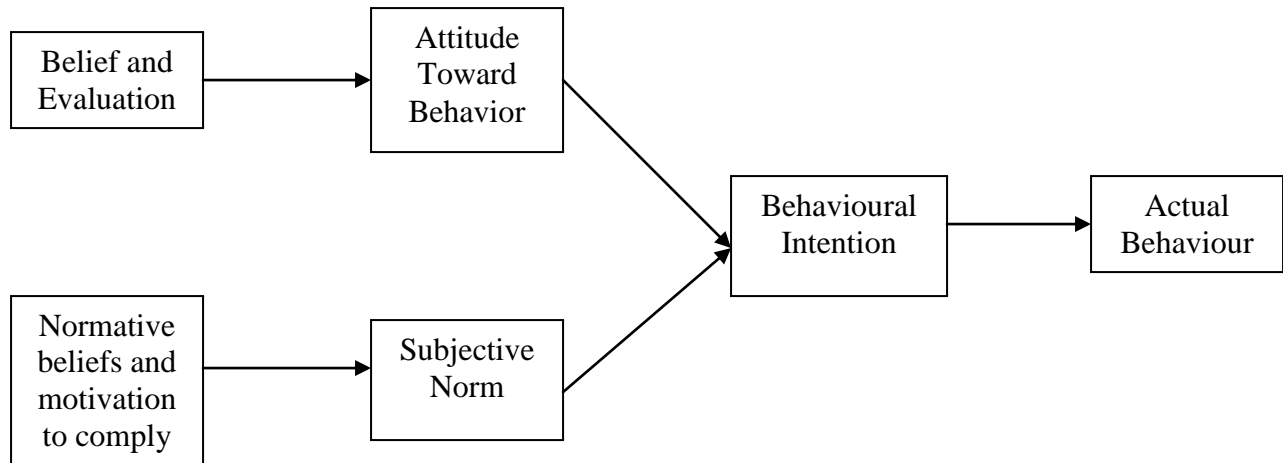
Figure 2.1   Theory of Reasoned Action (Adopted from Lu, Khee & Cheng, 2007)

Theory of Reasoned Action (TRA) was widely studied by many researchers from social psychology background. Lu, et al (2007) investigated that the key factors that affect the adoption of Internet services in the context of liner shipping services is the weak positive relationship between security protection and the intention of using Internet services. Limayem et al. (2000) found that attitude towards web-shopping had the strongest effect on the intentions to shop online. So, Wong & Schulli (2005) in their studies: mentioned that consumers' perception on perceive risk in Hong Kong tend to be high. It will lead to decreased attitude toward web shopping intention in Hong Kong.

Although, there are many researchers who had applied Theory of Reasoned Action in their studies but the main limitation in that theory is still need to be considered. The limitation of Theory Reasoned Action is that when consumers have desire to act on something, they feel free to act without limitation. Which means that this theory could only be applied if a person could decide on performing certain behaviour (Ajzen, 1991). In this study, customers will only take action to purchase online if they trust websites and believe that they are influenced by security, privacy, legitimacy, and assurance.

2.2.2   *Theory of Planned Behaviour (TPB)*

Theory of Planned Behaviour (TPB) is an extension of Theory of Reasoned Action (TRA). The Theory of Planned Behaviour (TPB) focuses on perceived behavioural control (PBC) as the third factor besides attitude and subjective norms. In addition, perceived behavioural control can be defined as people's perception on the easiness or difficulties performing the behavior. Attitude towards the behaviour is defined as the individual's positive or negative feelings about performing a behavior. Subjective norm is defined as an individual's perception on whether peoples' influences are subjected to the individuals thinking on how ones' behaviour should be performed. Behavioural control is defined as one's perception on the difficulty of performing a behavior (Ajzen, 1991).

According to the Theory of Planned Behaviour, an individual's behaviour can be explained by the combinations of three independent concepts, which are attitude, subjective norms and perceived behaviour control. The first concept, attitude, refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour. The second

concept, subjective norm, refers to perceived social pressure to perform or not to perform a behaviour. The last concept, perceived behaviour control refers to the perceived easiness or difficulties of performing the behaviour that reflects past experience (Ajzen, 1991, p.188).
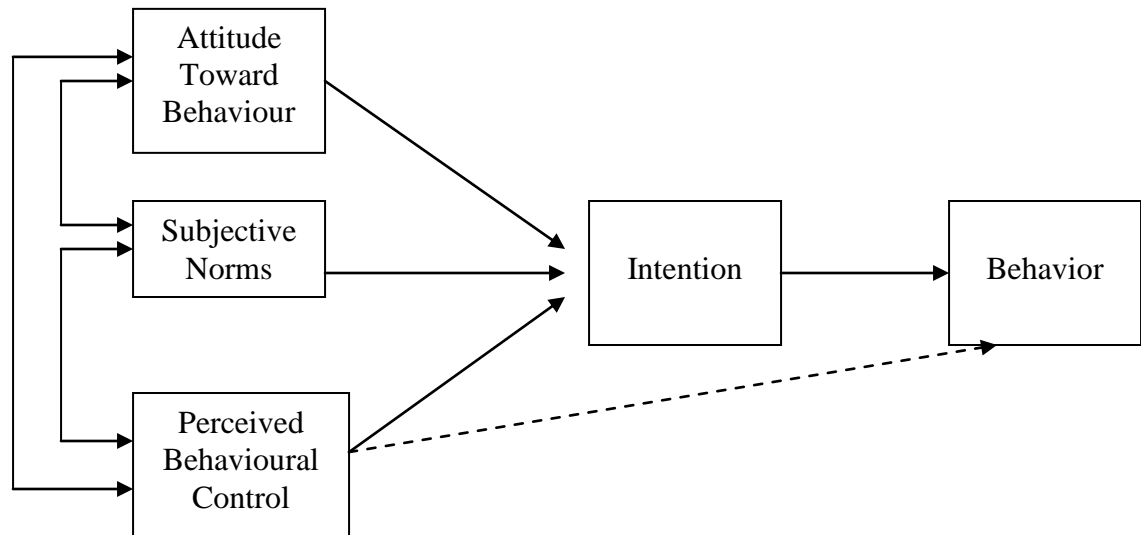
Figure 2.2   Theory of Planned Behavior (Ajzen, 1991)

In the Theory of Planned Behaviour, the relationship between intention and behavior is based on the assumption that the customers will try to make rational decisions based on the information provided by website vendors to them. Nevertheless, the information will be analyzed by the customers to perform the actual behavior which is intention of purchasing. Purchasing intention is an indicator to customers to decide on purchasing.

The Theory Planned Behaviour has been applied in many studies. Lu et.al. (2007) mentioned that Theory of Planned Behavior has provided useful framework to be used to examine an individual's behavior to use Internet services. Pavlou (2002) has found that attitude is positively associated with all the three intentions to transact online.

2.2.3 Technology Acceptance Model (TAM)

Davis, Bogozzi, and Warshaw (1989) introduced Technology Acceptance Model (TAM) for predicting information technology usage. As an extension of TRA, TAM expands the attitude with a set of two variables namely perceived ease of use and perceived usefulness. The salient believes in TAM used to determine the individual intention and behaviour acceptance of a new technology. Koufaris and Sosa (2002) stated that the salient believes that customers of perceived usefulness and perceived ease of use of the website can influence customer's trust on the online company. TAM is among the most influential and discussed theories in predicting and explaining end-user behavior acceptance of Internet related technologies (Shergill a& Chen, 2005).
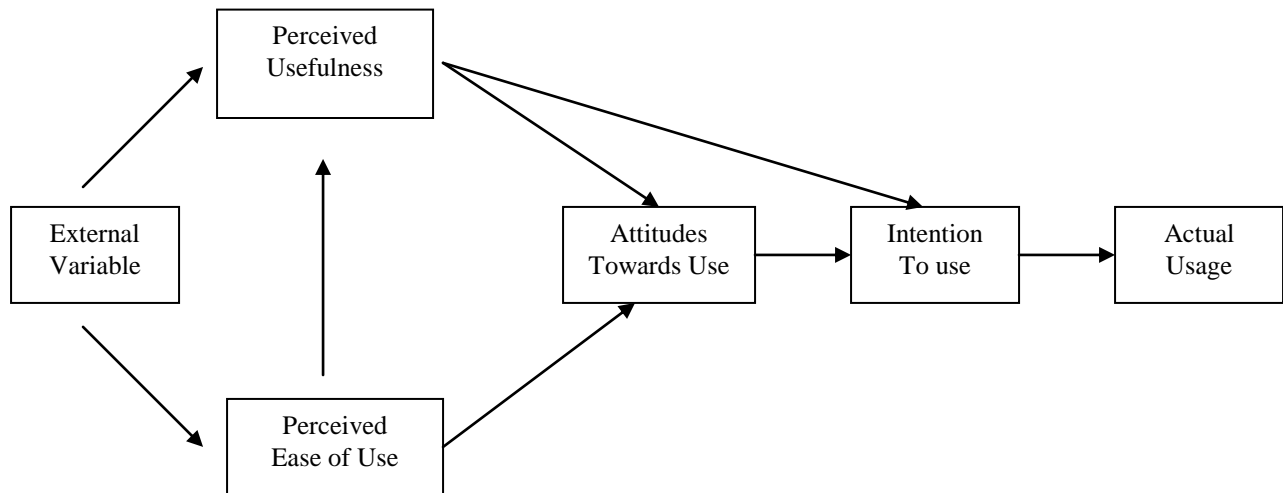

Figure 2.3   Technology Acceptance Model (TAM) (Davis et al, 1989)

Many researchers in Malaysia have conducted studies to examine the relationships perceived ease of use, perceived usefulness, attitude, and the use of Internet. Teck (2002) used

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TAM model to study the impact of perceived web security, perceived privacy, perceived usefulness, and perceived ease of use on the web based online transaction intention. Ramayah, Jantan and Aafaqi (2003) used TAM model to predict student acceptance of a course on website towards e-learning in Malaysia. Yuliharsi (2004) used TAM to investigate factors that influence customers' buying intention among students in public institution of higher learning. Ramayah and Ignatius (2005) used TAM model to examine the impact of perceived usefulness, perceived ease of use and perceived enjoyment on the intention to shop online.

2.3   Trust

Trust is an essential element in virtual business transaction between buyers and sellers where the absence of trust will influence the continuity of the transaction process. In the physical business, trust is a result of the relationship between consumer's experiences with the salesperson, and in virtual businesses the situation is slightly different where salesperson will be replaced by the company's website (Riegelsberger & Sasse, 2001). In addition, consumers who do not have experience in purchasing online can be seen as a problem in the transaction process on the website (i.e. accidentally ordering an unwanted item). As a result, they tend to avoid using online purchasing as the method to fulfill their needs (Riegelsberger & Sasse, 2001). In contrast, Koufaris and Sosa (2002) mentioned that consumers who have positive experience to find companies' websites that are easy to use and useful for their purposes will increase their level of trust the company's website.

The concept of trust has been investigated in many disciplines. It has been defined in a variety of ways in management and marketing literatures but there is no generally acceptable

definition. Dan, Donald and Rao (2007) defined consumers' trusts as the subjective beliefs that the selling party or entity will fulfill in transactional obligations as the consumers understand them. Trust is an expectation of others one chooses to trust without being opportunistic by taking advantage of the situation (Gefen, Karahanna & Straub, 2003). Similarly, trust also can be defined as willingness and expectation of both parties in an uncertain environment (Ba & Pavlou, 2002). While Pavlou and Chai (2002) said that trust is a salient behavioral belief that directly influences consumers' attitude, and indirectly affects intentions for online transactions with the web retailers. Thus, trust has been defined in many different ways: as a subjective belief, as an expectation, and as a behavioral belief to perform certain actions. Despite the many definitions of trust, it is widely agreed that trust is an important factor in business relationships. Trust is considered important because it is a good predictor of satisfaction and reduces uncertainty (Ba & Pavlou, 2002; Harridge, 2006; Dan et al, 2007). In conclusion, trust is defined as the outcome that is expected by both parties to perform a promise without any pre-requisite in uncertainty environment.

Furthermore, organizations that utilize the Internet in online businesses should not hope for results too soon and abandon their efforts to attract consumers purchasing online. Companies need a deeper understanding of how trust works in the online context in order to make this medium a successful element in their marketing. Harridge (2006) explained that trust may be built incrementally following experience online, and customers may build trust by starting with small purchasing and building up to bigger and more expensive ones as their trust in the medium or the organization increases. Hong (2004) mentioned that building e-brand trust requires a systematic relationship between a consumer and a particular web brand. It involves

interrelationship between complex components, not built on one or two components. For example, babycenter.com offers chat rooms, interests groups, and an online doctoring service to parents of babies (Xueming, 2002).

Without attempting all the energy to identify the components related to the formation of online trust, it is difficult to conduct an effective way to enhance consumer trust in e-commerce. Ratnasingham (1998) mentioned that the corporate image perceived by the consumer helps to make an execution of financial transaction, diminish the risk perceived by the individual and simultaneously increase the probability of purchase. Kai, Choon, Matthew, and Benbasat (2006) divided the high level of trust concept into two constructs: trusting beliefs and trusting intention. The concept of trusting beliefs means a potential online shopper believes that online store is benevolent, competent, honest, and predictable. Meanwhile, trusting intention means a potential online shopper is willing to expose himself or herself to the possibility of loss and willing to transact with the online store. Bonanny and Cyr (2004) mentioned that the high level of trust in e-commerce may not be the only condition to generate e-loyalty. Other variables such as satisfaction may also need to be considered.

2.4. Antecedents of Trust

2.4.1 Security

Conducting a business through e-commerce, without fully understanding the security risks involved, will have serious impact on organization itself. Lack of security and consumer's trust in electronic payments (e-payments) has been repeatedly reported as one of the most

important factors hindering the development of e-commerce (i.e. Centeno, 2002; Milloy, Fink & Morris, 2002).

There were many definitions proposed by researchers regarding perceived security on online purchasing. Flavian and Guinaliu (2006) mentioned that perceived security can be defined as the subjective probability in which consumers believe that their personal information (private and monetary) will not be viewed, stored, and manipulated during the transaction and storage by inappropriate parties in a manner consistent with their confident expectations. Ratnasingham (1998) defined e-commerce security as a protection of information resource and system against the threat of its risks in the integrity, confidentiality, authenticity, repudiation, availability and access control of the electronic transactions transmitted. More importantly, it is "the reliability of the direct parties" involved in electronic commerce. Salisbury, Pearson and Miller (2001) defined perceived Web security as the extent to which one believes that the World Wide Web is secured for transmitting sensitive information. In conclusion, perceived security is actually how customers feel about all personal information given to company's website are free of risk during and after transaction online.

In a practical business, a company's website implements the system security like encryption technology and biometric authentication to protect consumers' personal information when purchasing online (Miloy et al, 2002). As to protect consumer's personal information, the offline credit card system is safer than the one online. Customers are still concerned about using an impersonal (third parties i.e. PayPal) transaction medium for secured transaction (Swaminathan, Lepkowska & Rao, 1999).

In the B2B model, payments for products and services will not be made via credit card or financial cybermediaries. Instead, other businesses want to pay via electronic data interchange (EDI). They usually buy products in large volume and they need a lot of money (Haag et al, 2007). Three things need to happen before Internet-based EDI can take place successfully in online business. First, there has to be a common standard for the language, grammar and syntax necessary to allow organizations to exchange transactions. Second, there is a need for open system environment to allow peer-to-peer communications with any trading partner, and finally a secure technology for end-to-end data transmission (Ratnasingham, 1998).

Since transactions made are not face-to-face and consumers have to trust companies' websites, their credit card numbers or information on their bank account safe from hackers. Companies' websites in the one side must have sophisticated security systems to prevent hackers from stealing both money and personal information (Black, 2005). A recent study examined how eBay handles matters involving privacy and security. This study found that e-Bay continues to invest in state-of-the-art security configurations, and is constantly upgrading hardware and software whenever a new feature enhancing security becomes available (Light, 2003).

2.4.2   Legitimacy

The lack of direct communication between business partners is a problem in e-business. It leads to minimum level of trust, lower reputation, higher risk and higher costs. According to Olivero and Lunt (2004), reputation is considered as a factor that makes companies act more responsibly with the intention of avoiding an unfavorable publicity company; and reputation is the guarantee of legitimacy (Bonani & Cyr, 2004). In a physical business, reputation can be

rented especially for the companies which do not have enough time to build stable and well known brand, so they use the reputation of another company for their purpose (Deelmann & Loos, 2002).

Dan et al, (2007) stated that reputation refers to the degree of esteem in which consumers hold a selling party. Lu and Zhou (2007) defined reputation as an important attribute of stores that consumers depend on to generate their trust in the online stores. Josang, Roslan and Boyd (2007) defined reputation as what is generally said or believed about a person's or thing's character or standing. It is will affect the attitude, risk perception, and the willingness to buy in an electronic store (Jarvenpaa, Tracktinsky & Vitale, 2000). Although trust is generally associated with the reputation of the company, it is not so in the context of e-commerce. Josang et al. (2007) viewed trust as a personal and subjective phenomenon that is based on various factors or evidence, and that some of those carry more weight than others. Meanwhile, reputation can be considered as a collective measure of trustworthiness (in the sense of reliability) based on the referrals or ratings from members in a community.

Since consumers do not have personal experience with a website, information from someone else that ever interacted with a website could be a positive experience which helps reduce users' perceptions of risk and insecurity in interacting with the website. It can help boost users' beliefs about the vendor's competence, benevolence, and integrity (McKnight et. al, 2002). Other scholars, viewed inexperienced e-shoppers are likely to transfer trust: they will give on-line shopping a first try with retail organizations they are familiar with, or those that have been recommended to them (Riegelsberger & Sasse, 2001). For example, eBay is the largest person-to-person online auction site, with more than 4 million auctions open at a time. eBay offers no

warranty for its auctions; it only serves as a listing service while the buyers and the sellers need to assume all the risks associated with transactions (Resnick, Zeckhouser, Friedman & Kuwabara, 2000)

2.4.3 Privacy

The advances of Information Communication and Technology (ICT), especially the Internet, have also created revolutionary methods for collecting and analyzing information. Information is gathered both directly and indirectly. Direct method gathering requires user action, this happens when a consumer enters information in order to participate in an online business. Indirect method gathering, takes place when some sellers pass the information on to spammers, telemarketers, and direct mailers (http://is2.Ise.ac.uk/asp/aspecis/). From the economic point of view, the last method will bring negative impact on web users. Hence, it will make consumers refuse to adopt purchasing online from the website vendor.

The importance of privacy literally is apparent in the meaning applied to online businesses. Haag et.al (2007) defined privacy as the right of someone to be left alone, to have control over his or her own personal possessions, and not to be observed without permission. Equally, Yousafzai, Fallister and Foxall (2003) described that "perceived privacy as the customers' perceptions regarding their abilities to monitor and control the information about themselves." Control over information in online environment is lesser than in traditional environment and this has a dominant influence on their willingness to be engaged in exchanging

relationships with web merchants. In such situation, willingness causes an immediate dilemma for online customers because on one side they have to provide the information for completing transaction process and on the other side they realized that the information cannot be in control.

Although privacy statements that appear in the company's website can be the indicator that all customers' information would not be given to other parties, but there is not any system or structure in place to stop company's website from selling customers' information to third parties (Milloy et al, 2002). In order to overcome that problem, online seal programs are used to build consumer confidence regarding privacy such as TRUSTe (www.truste.org), VERYSIGN, MasterCard, Visa, and BBBOn-Line (Milloy et al, 2002; Xueming, 2002).

Privacy and security play a central role in building trust in the Internet environment. Privacy that concerns Internet users are often associated with the gathering of personal information by website vendor, which means the way of website vendor collect and exploit the information (Udo, 2001). Security concerns the risk that consumers need to perceive the efforts of third parties to obtain critical information about the customers (e.g. access to credit card or bank account details), whereas privacy is related to the concern about the potential misuse of personal information by marketers (Xueming, 2002).

Changfeng (2006) mentioned that the reluctance of some consumers to purchase from websites largely stems from their doubts and concerns, which can be categorized into four such as: (a) the legitimacy and authenticity of a website, (b) product quality, (c) system security and information privacy, and (d) post purchase service. Hoffman, Novak and Peralta (1999) mentioned that there are two important reasons why customers do not buy online; first, lack of