

**RETAILING ON INTERNET: A STUDY OF THE FACTORS THAT INFLUENCE  
THE CUSTOMER'S BUYING INTENTION AMONG STUDENTS IN A PUBLIC  
INSTITUTION OF HIGHER LEARNING**

**by**

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## **DEDICATION**

### **Dedicated to**

My wife Dian Messalina, My children Alan Lasena, Sally Hikmatul  
Shalihah and Sonya Febriyanti for their love and support

## **ACKNOWLEDGMENT**

This research project would not have been without assistance of people, whom I would like to thank:

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## **ABSTRAK**

Perniagaan talian langsung melalui Internet sedang mendapatkan perhatian pelajar masa ini. Peralihan dari kedai biasa kepada kedai elektronik mungkin dilihat sebagai inovasi berkesinambungan dengan kaidah berbelanja dari rumah seperti katalog, televisyen dan penjualan melalui pos. Pada kajian ini kita ingin mengetahui, kenapa pelajar pada sebuah institusi pembelajaran tinggi menerima atau menolak berbelanja melalui internet? Dalam kajian ini, kita menguji faktor-faktor kebergunaan, kesenangan untuk penggunaan, kesesuaian, kerahsian peribadi, keselamatan, kepercayaan normatif, dan sikap yang mempengaruhi niat pelajar berbelanja melalui Internet. Pelajar yang dipilih adalah yang sedang menuntut di sebuah institusi pengajian tinggi di Pulau Penang, Malaysia. Berdasarkan “theory of reasoned action” (TRA) dan “model penerimaan teknologi” (TAM) mendapatkan bahawa teori ini memusatkan kajian pada dua kepercayaan yaitu kebergunaan dan kesenangan untuk penggunaan. Teori ini telah diterapkan pada kajian pengguna dari teknologi yang berbeza, dan sudah muncul kajian mereka untuk meningkat kekuatan ramalan. Di sini, suatu usaha dalam konteks menjelaskan niat pelajar untuk pertukaran talian langsung. Di samping kebergunaan dan kesenangan untuk penggunaan, faktor-faktor yang lain seperti: kesesuaian, keleluasaan peribadi, keselamatan, kepercayaan normatif dan kekesan-diri digunakan pada model TAM ini. Suatu pengujian model dengan mengumpulkan 226 data dari pelajar. Penemuan memberikan sokongan kepada tujuh hipotesis daripada sembilan. Secara terperinci, kesesuaian, kebergunaan, kesenangan untuk penggunaan, keselamatan telah didapati sebagai peramal penting untuk sikap berbelanja melalui talian langsung, tetapi bukan oleh keleluasaan peribadi. Didapati niat untuk mengguna belanja talian langsung jelas dipengaruhi oleh sikap, kepercayaan-normatif, dan kekesanan-diri tetapi bukan oleh kebergunaan.

## **ABSTRACTS**

On-line commerce through Internet is obtaining attention from students today. Shift from physical store (brick and mortar) towards electronic store may be seen as continued innovation brought by home shopping method such as: catalog, TV and direct mail. The aim of this research is to study why do students in an institution of higher learning accept or refuse the Internet shopping. Several factors such as usefulness, ease of use, compatibility, privacy, security, normative-beliefs and attitude that influence student's buying intention were analyzed. Students who were selected are studying in a public institution of higher learning in Penang, Malaysia. Based on theory of reasoned action (TRA), the technology acceptance model (TAM) concluded that there are two salient beliefs, which are ease of use and usefulness. This theory has been applied on the study to adopt technology user different and has been emerged as a model in investigation to increase predictive power. Such theory was used in this study to explain students' buying intention on-line. Besides the ease of use and usefulness, others factors such as: compatibility, privacy, security, normative beliefs and self-efficacy are utilized at this TAM. A test model of theory was analyzed from 226 students. The results support seven hypotheses from nine. Although, compatibility, usefulness, ease of use and security have been found to become important predictors toward attitude on-line shopping, but privacy factor was not. Furthermore, intention to use on-line shopping was strongly influenced by attitude, normative beliefs, and self-efficacy but usefulness was not.



# **Chapter 1**

## **INTRODUCTION**

### **1.1 Introduction**

Today Internet is not only a networking media, but also as transaction medium for consumers at global market in the world, and becomes dominant retailers in the future. The most necessary element of e-retail offers a direct interactive channel as well as no time definition, people and place. To shop on Internet becomes an alternative for consumers since it is more comfortable than conventional shopping which usually attributed with anxious, crowded, traffic jam, limited time, parking space etc.

Vijayasarasathy (2003) stated that growth online shopping were developed by Amazon, e-Bay, Travelocas, Dell Computer, etc, this some of the evidence successful on-line business model. At same time, it was reported that e-business was failures as by showing evident that the consumers were not satisfied with Internet performance, (Brown, Pope & Voges, 2003). E-retailing is not subject to limited time, space, and customer reach, improving customers' experience by offering many product information, experts' advice, service, and quicker products delivery. However, online shopping provides us with both opportunities and challenges (Hasan, Alias & Mustaffa, 2000), for example, Cisco System, Dell Computer are the companies that have been successful in the e-retailer, beside that, there are many challenges also, particularly, in store area, designing, order accomplishment, payment method, and protection of customers information.

### **1.2 E-business in Malaysia**

Malaysia's retail such as malls shopping, monetary and security sector are changing quickly in its link with information technology. The main impact for

innovation World Web Wide has made retail business become most new distribution channel Teck (2002). Basyir (2000) noted that growth of e-retail in Malaysia is still early stage but growing its at potential rate. There are challenges faced by e-retail's Malaysia such as small population owner credit card, small amount of Internet user and regulation issue that has not obtained enough attention from legislators. These are become some consideration for developing e-retail (Madieha, 2000).

Salim (2000) mentioned that Malaysia built an agenda that are going to be an electronic country in the near future. Teck (2002) noted, the growth of business e-retail is still in beginning stage in this country (Malaysia). The data proved that the Internet users in Malaysia are estimated at 4.06 million, 17 % of the total population in 2001, the percentage of world class is 40 %. Fok (2002) also noted a worldwide study of e-commerce issued by Tayloor Nelson Sofres (TNS) in 1999 Malaysia is ranked 17 among online shopper in the 27 countries across Europe, Asia Pacific and North America. Fatimah (2000) stated that in the Asian region, Malaysia ranks seventh in terms of the number of Internet host after Singapore, Israel, Hong Kong, Korea, Taiwan, and Japan. Finally, Ramayah, Aafaqi and Jantan (2003) mentioned like most Asian countries, Malaysia is working hard to build with developed world's economies and Internet, as business tool has become main issues.

Teck (2002) noted that Malaysia still behind in all aspect of Internet, particularly when compared to developed countries such as USA, UK, Germany. Like also Asian countries, Malaysia is struggling to reach world class for increasing the users amount. This country still struggle to develop infrastructure, knowledge, Internet access for citizen, and the most important is to promote usage of Internet among citizen to increase Malaysia's competitiveness. Anil (2000) mentioned that in Malaysia, the multi media Development Corporation has been working on a national

Electronic Commerce Masterplan that designed to facilitate a conducive environment for the development of electronic-commerce in Malaysia. The four key factors for Masterplan are to build trust in on-line transaction, prepare regulatory framework, develop a critical mass of Internet users and introduce an e-payment system. Pin, Jantan and Nasirin (2000) noted also that electronic-commerce was first developed in Malaysia since several years ago by Port Klang Community System (PKCS) that linked banks, custom department, freight forwarders, port authorities, shipping agencies and terminal operators. Teck (2002) noted that in Malaysia the Internet population would reach 6.7 million by the end of 2005. As the Internet users become more familiar and comfortable to shop online and the retailers can expect big business opportunities as high potential business channel.

### **1.3 Problem Statement**

Internet in Malaysia is still considered as a new medium toll between the retailers and the students as consumers, and also retaining students as consumer on e-retail is the most issue that is faced any e-retail store. To increase the understanding in this area, the question needs a correct answer. Is Malaysian student ready to embrace Internet shopping? In addition, this study want to know the reasons, why are the students in Malaysia, particularly in a public institution of higher learning accept or refuse internet shopping application? And what are dominant predictors that influence the student's intention to shop on Internet in Penang, Malaysia?

### **1.3 Research Objectives**

The main objective of this study is to explore the student's buying intention to shop online. In addition, the objective of this study is to present a model research into

expanding TAM model and were collected data from among students of USM, Penang Malaysia include both, shopper and non-shopper on Internet. Internet shopping has been successfully developed in some developed countries such: USA, Germany, UK. How is in Malaysia, particularly regarding e-retailing. Therefore, it is interesting to investigate, how do Malaysian students can respond e-retail as medium transaction. Otherhand, this study target is to test what are the factors that influence student's buying intention on Internet retailing.

#### **1.4 Research Questions**

This study is to examine the relationship between usefulness, ease of use, compatibility, privacy, security with student's attitude and self-efficacy, normative-beliefs, attitude with students' buying intention. This study want to answer these questions bellow.

1. What are the factors that influences student's buying intention to shop online?
2. What are there relationships between factors such as: usefulness, ease of use, compatibility, privacy, security with students' attitude towards online shopping?
3. What are there relationships between factors such as: usefulness, normative beliefs, self-efficacy and attitude with students' buying intention?

#### **1.5 Significant of the Study**

This study applied the theoretical framework empirically. The result of this research created three primary contributions. Firstly, the study focused on the application on the Technology Acceptance Model (TAM) (Davis, 1989; Vijayasarasthy, 2003) for students to shop online. Secondly, the study proposed 7 factors such as: usefulness, ease of use, compatibility, privacy, security, normative-

beliefs and self-efficacy, in the framework, would contribute students' intention towards to shop online. Thirdly, results of this study are expected that it can give input to local e-retail to be more understanding the attitude their consumers they might compete with local and also foreign e-retail.

In addition, this study can help local e-retail to adjust their e-retailing strategies, by learning of this research results. Consequently, the expectation of this study is to provide relevant results to the e-retail company to engage the students to shop online. E-retailer can be more attractive to encourage students do shopping on Internet. By testing the relevance other beliefs in the context of using the Internet for shopping, it can be obtained more understanding, why students in a public institution of higher learning accept or refuse e-retail as medium shopping can be gained.

## **1.7 Organization of the Chapters**

This study is categorized into five chapters, in chapter 1 introduction, e-business in Malaysia, problem statement, research objectives, research questions, and significant of the study. Chapter 2 covers, introduction, e-retail as new medium transaction, the review of the literature, focus on theoretical framework and hypotheses used in this study and finally, summary of the literature review. Chapter 3 outlines the introduction, questionnaire design, variables influencing intention to shop, sample, data collection, and data analysis. Chapter 4 presents the result, statistical analysis, hypothesis testing and summary of the results. Lastly, chapter 5 presents the discussion of the results, limitation of the study, suggestion for future research and conclusion.

## **Chapter 2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter will be discussed on literatures, framework and hypotheses. The Review of the literature, elaborates e-retail as new medium transaction followed by theory were based on Technology Acceptance Model (TAM) developed by Davis, Bagozzi and Washaw (1989) and by Vijayasarathy (2003), Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) and Theory of Planned Behavior (TPB) by Ajzen (1991). The next, it focuses on salient-beliefs of usefulness, ease of use, compatibility, security, privacy, normative-beliefs and self-efficacy that are proposed in this study as independent variables that influence student's intention to shop, followed by the theoretical framework and hypotheses. Lastly, summary of literature review will be presented.

#### **2.2 E-Retailing as Shopping Medium**

Internet was first found by American Defense Department Network through the Advanced Research Project Agency (ARPANET) at 1969. Early target ARPANET was to develop educated information for the army forces of US. Most creative technology that has reached a big impact at all of us is Internet innovation.

Yu and Abdulai (2000) mentioned that the most significant result of the rapid innovations in information and communication technology is e-commerce. What is e-commerce? E-commerce basically refers to trade that takes place over the Internet where a buyer visits a seller's web site, orders and makes the payment of the product over the internet and finally, goods are delivered physically to the consumers. Anil

(2000) also mentioned, electronic commerce is an important part of the growth of the Internet. E-commerce is the general term for Internet and non-Internet computer-to-computer processing of transaction, shifting from electronic data interchange (EDI) towards orders, payment systems, credit cards and consumer sales of goods and services. Crisp, Jarvenpaa and Todd (1997) mentioned that the consumers could search information about goods and services, ordering, receiving post sales services, and finally, retailers delivery to consumers who can as individual or group. Brown, Pope and Voges (2003) mentioned that the key feature of e-retailing, the consumers is facilitated by information with regard to product attributes, comparative pricing, availability and overall value added.

The Internet shopping provides a new interactive channel that is not limited by time and place. E-retailing are being developed to market over Internet, moreover can be established at low cost, the product and service offerings can be updated on demand. Consumers around the world have 24 hours a day access to these e-retailing. In the Internet, the development of e-retail implies that there are some changes in the distribution channel and organizational structure, which will lead to the redefinition of value of systems. Retailers have given contribution in delivering products to customers at the right time and place. Traditionally, product is delivered through distribution channel before the product and ownership are transferred to the buyer. In a new era many potential retailing come from the e-retailing, which motivate retailers to change the way to conduct transaction. It is also important to influence management practice.

According to Oinas (2002) Internet retailing seems to be growing in all place on the world, including developing countries. Due to the changes taking place in the

business in connection with the technological opportunities provided by the Internet which in the future it become the dominant shopping practically.

Hofacker (2001) mentioned that people might have known the word Internet the past several years before. The Internet is difficult to define but for simple definition The Internet is the sum total of devices interconnected using the Internet Protocol. It was created using computer software and since software can be programmed to do almost anything. Historically, Rowley (1996) viewed that the Internet was essentially an academic network, but business used is growing, so the Internet is no longer an elite network for communication between research centers, but also is accessible to small colleges, small businesses and libraries through the world. Finally, IBM also defined e-commerce as business to vendors, to customers, to employees, and to suppliers via Intranet, Extranets and Internet.

Vijayasarasathy (2003) noted that, according to United States Department of Commerce for year 2001, sales retailing was US\$ 3.50 trillion and part of e- retailing was US\$ 32.57 billion only. That is clear harmless, traditional retailing would be replaced by e-retailing. However, potential for medium at e-retail is newly, this is expected to complement, supplement, and even replace other retailing media. Hasan, Alias and Mustafa (2000) also noted that various countries throughout the world would experience the potential growth of e-retail. The finding from the Boston Consulting Group (BCG) mentioned that e-commerce reached \$ 33.1 billion in 1999. Brown Pope and Voges (2003) noted also both B2B and B2C worldwide Internet commerce would reach \$6.8 trillion in 2004. Oz (2002) noted, in last few years we have witnessed significant growth in retailing over the Internet. According to the research and consulting firm Forrester Research, retails sales on the Internet will reach nearly \$ 185 billion by 2004. Many companies were established particularly for



e-retail and some brick-and-mortar retailers augmented their operations by offering them into the web, while others move from physical store toward the e-retail. Use of the Internet for retail shopping has expanded in recent years and has found influence online shopping for many type of consumers (Brown, Pope & Voges 2003).

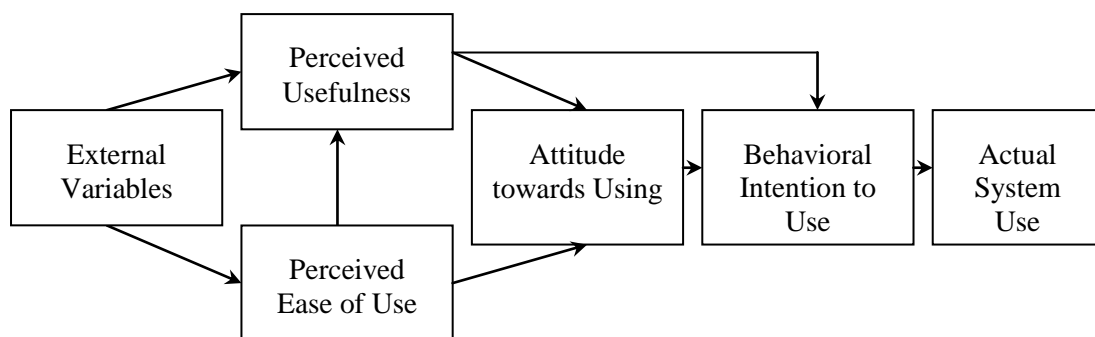
## **2.3 Review of the Literature**

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

Davis introduced TAM to explain acceptance of information technology (IT). It was relied on TRA (the Theory of Reasoned Action) and its content intention and behavior to use an information system, which depends on two salient beliefs, namely perceived usefulness and ease of use. A key purpose of TAM is to provide a basis for tracing the impact of external factors on internal beliefs, attitude and intention, more TAM consist that two particular beliefs, perceived usefulness and perceived ease of use are primary relevance for computer acceptance behaviors, (Davis, Bagozzi & Warshaw, 1989).

Usefulness and easy of use are expected that they can be influence individual's attitude at using that system. They also explain difference intention to use that system. TAM also figures in a harmony link between easy of use and usefulness, proposed individual's perception how easy or difficult to use that system will influence their perception about usefulness of that system (Vijayasathy, 2003). David, Rodney and Allison (1989) found three main insight concerning the determinant of managerial computer use which are: firstly, people's computer use can be predicted reasonably well from their intention, secondly, perceived usefulness is a major determinant of people's intention to use computer, thirdly, perceived ease of use as a significant secondary determinant of people's intention to use computer.

Fishbein and Ajzen (1975) the Theory of Reasoned Action (TRA) and Davis (1989) the Technology Acceptance Model (TAM) provided theoretical context to measure beliefs, forecast future behavior. TAM model accommodate the Theory of Reasoned Action (TRA) (Fishbein & Ajzen 1975) to show acceptance information technology. TAM express that two beliefs of specific behavior, ease of use and usefulness, determine the individual intention and behavior to use a technology, where attitudes toward use directly influence the intention for the actual usage. Adam, Nelson and Todd (1992) also noted that perceived ease of use has a direct effect on both perceived usefulness and technology usage. In addition to that, Individual may use a technology if they think it is beneficial, convenient and socially important although they do enjoy for using the technology (Saga & Zmud, 1994).



*Figure 2.1.* Technology acceptance model (adopted from Davis, Bagozzi & Warshaw, 1989)

Vijayasaratthy (2003) furthermore mentioned a set of variables in TAM possible for explaining technology adoption at work, where usage at the time of technology in most cases, compulsory its user, otherwise was compelled. In good arrangement, felt usefulness and easy of use are good for possible dominant predictor. With relevant testing some of others beliefs in this context as Internet shopping, a broader understanding about why consumers accept or refuse this electronic medium for the internet shopping.

Data which was collected from students, Davis, Bagozzi and Warshaw (1989) supported and examined for the their TAM model. A key invention of their study was predictive power of usefulness that explained absolute majority difference in intention to use that system.

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

Construction of attitude and behavior found by Theory Action Reasoned (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). TRA expressed that attitude can be used to forecast behavior intention and behavior. Behavior controlled by behavior intention, what by itself was attitude towards subjective norms and behavior with reference to behavior of itself.

The Theory of Reasoned Action (TRA) expressed two independent concept of the determinant of intention. First, personal factor by including attitude towards behavior and relate to degree of people who have favorable or unfavorable behavior in question. Second, to predict the intention, which link to subjective norm, a social factor, it is related to the perceived social pressure to execute behavior or not. Attitude and subjective norm are important for considering them together determine behavioral intention. (Ajzen & Madden, 1985).

Jarvenpaa and Todd (1997) proposed an Integrated Model of Internet shopping behavior, which include a set of beliefs that influence attitude and intention toward Internet shopping behavior. In addition, Jarvenpaa Todd (1997) argued that these factors conform to TRA, which suggested that attitude and intention toward behavior are determined by the beliefs about the effect of the behavior (Ajzen & Fishbein, 1980). Bagozzi (1986) pointed out that the theory of reasoned action and suggested an alternative, particular focus in the content of attitude process

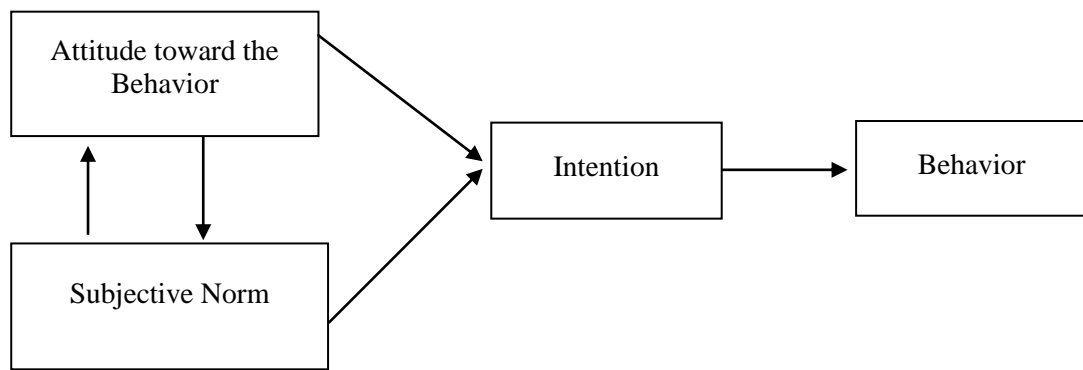


Figure 2.2. Theory of reasoned action (adopted from Ajzen & Madden, 1985)

### 2.3.3 Theory of Planned Behavior (TPB)

As explained in original theory of reasoned action, a center factor in theory of planned behavior is determined by individual intention to execute the behavior. The intention is proposed to explain factors that influence behavior. That is to indicate, how people will try, about many efforts to plan in using, in executing behavior (Ajzen, 1991). Ajzen and Maden (1985) found that perception of control, like attitude towards the behavior and subjective norm, can have an important impact on an individual's behavioral motivation.

Perceived behavior control the importance of behavior control is self-evident and refers to people's perception of the ease or difficulty performs the interest behavior (Ajzen & Maden, 1985). According to the theory of planned behavior that the behavior is a joint function with intentions and perceived control behavioral. The two perceptions and intention conduct behavior can make important contribution to behavior prediction. Ajzen (1991) mentioned that the central factor in the TBP is the person's intention to perform a behavior. Intentions are assumed to capture the motivational variables that influence a behavior. They are indications of how hard

people are willing to perform the behavior. In addition, the stronger the intention to engage in a behavior, the more likely must be its performance.

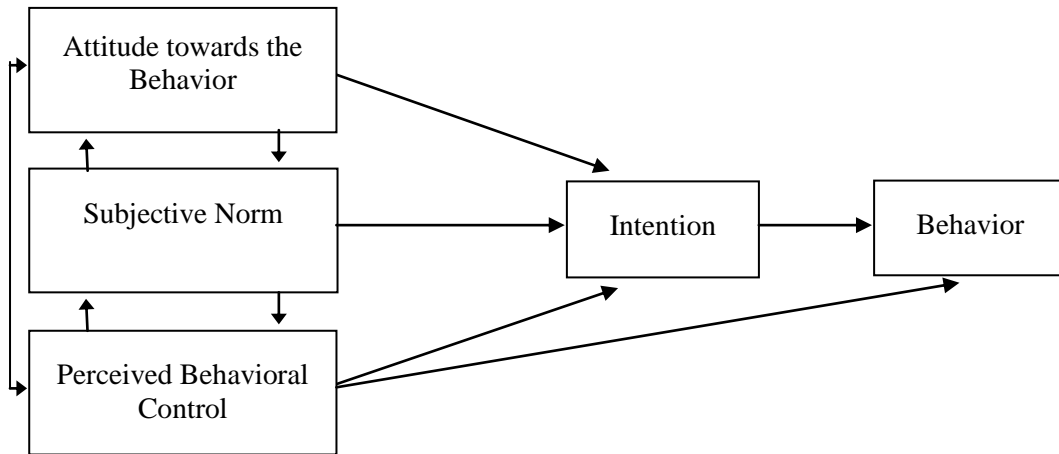


Figure 2.3. Theory of planned behavior

Many researchers in Malaysia used the TAM model for their studies. Basyir (2000) adopted this model to study the various factors associated with acceptance of Internet shopping behavior. Teck (2002) used TAM model for research about the impact perceived web security, perceived privacy, perceived usefulness, and perceived ease of use on the based online transaction intent. Aulvin (2000) modified the TAM model to study the individual differences such as prior web experience, shopping orientation and demographic factors that will influence the individuals' intention to shop on the web. Fok (2001) adopted TAM to study on self-efficacy and its determinant as factors that are affecting perceived ease of use, perceived usefulness, and the use of the Internet. Choong (2003) used TAM to assess owners/managers intention to adopt Web-based Supply Chain Management in SMI organizations. More recently Ramayah, Aafaqi and Jantan (2003) used TAM to predict students acceptance of a course website toward e-learning in Malaysia. Finally, Ramayah, Dahlan, Teck and Aafaqi (2003) used TAM to predict perceived web security that influence web-based online transaction intent.

#### *2.3.4 Salient Beliefs of Usefulness and Ease of Use*

Teck (2002) noted that usefulness refer to the utility of the online transaction on the World Wide Web. It attempts to measure the degree to which individuals perceive the benefits and advantages of performing web-based online transaction. Ramayah, Aafaqi and Jantan (2003) found perceived usefulness and perceived ease of use have significant impacts student's acceptance and usage of course online among higher education institution student and when perceived ease of use and perceived usefulness are combined together was found that perceived usefulness acts as partial mediator. Davis (1989) found that the relative strength of the usefulness to usage relationship compared to the ease of use to usage relationship, in other hand, usefulness was significantly more strongly associated to usage than was ease of use. Chin and Todd (1995) found also that there was no empirical support or substantive rationale for the separation of the usefulness constructs into two dimensions (usefulness and effectiveness factors).

#### *2.3.5 Salient Beliefs of Compatibility, Privacy and Security*

Chau and Hwa (2001) identified compatibility as an essential factor for innovation adoption also included in the decomposed model. The significant effect of compatibility on user technology acceptance decisions has been reported by many previous studies reported a strong relationship between compatibility and relative advantage, which is largely congruent with perceived usefulness in the context of TAM. Karyanni (2003) found also that compatibility was successful in distinguishing between Web shopper and non-shopper. Significant variables included three factors of compatibility are use of direct shopping, use of browsing activities at home and use of browsing activities at the office.

Compatibility was found to be a significant determinant of perceived usefulness but not perceive ease of use, and assumes as important role in general attitude towards using the new technology and compatibility considering technology practice to be crucial and relevant relation with other variable like culture time, technology and others (Chau & Hwa 2001).

Anil (2000) explained that Internet shopping activities often lead to several ways of processing personal data. To protect the privacy is important and these personal are used with care, required for legitimate purposes, not disclosed to the wrong persons and not processed without knowledge of the person concerned. Therefore, the processing of personal data should be to deal with certain conditions (Fatimah, 2000). Ramayah, Dahlan, Teck and Aafaqi (2003) described that the major barrier to adoption of e-retail belief on the security and privacy issues, in addition, the technology has to be improved, the users have to be convinced and guaranteed of their security and privacy for growing internet shopping.

Security is interpreted as protection of data or information to intend disclosure or coincidence to all unauthorized people or unauthorized modification or destruction. Security of web relates at store level of is which someone believe that World Wide Web secure to give sensitive information (David, Rodney & Allison 2001). Yu and Abdulai (2000) mentioned that the issue of the security is most constraint of e-retail. Even companies have sophisticated technologies hacker have been able to break personal information and this issue of security on e-retailing is not solving, it will continue to be constraint on Internet shopping.

Security concerns is one of the main reasons web users are not purchasing over the Internet. Consumer reluctant to the Internet commerce because of partly due to the barrier to shopping on Internet, high privacy and security concerns (Udo, 2001;

Grandinetti, 1996). Udo (2001) mentioned that, there is a close relationship between security and privacy. While privacy is related to what a company purposely decides to do with consumer data, security is concerned with any accidental comprises of consumer data to a third party (e.g. Hacker & identify thief). Salim (2000) mentioned that we have to realize that in that future, the hackers are not from inside the company but also it can be from outside or somewhere else where can not identify.

Consumers' privacy issues are not new and consumers have worried about how personal data are used by government and more recently by business. Internet users want to feel that their privacy are being protected. The government must also protect the privacy and security of consumers as one of the main roles it can contribute in growing Internet shopping (Yu & Abdulai, 2000).

Buying and selling now is confusing for many people in e-marketing telephone usage, fax to personal network etc. Today more Internet users, company and customer have to pay attention about security. There is requirement to ensure that information like credit card numbers, amount of debt are secure. When credit card used for transaction, many people are involved such as: owner, shop assistant, telemarketing operator and others can access to credit card information. Ramayah, Dahlan, Teck and Aafaqi (2003) explained that the potential internet transaction adopter may has perceive that they have no control about credit card risks on internet shopping.

According to Rowley (1996) the ability to keep monetary and ownership information for protecting Internet shopper, authenticate status and customer's identity is very complicated to make shopping on Internet effectively. Security has considered both customers and retailers. Pechtl (2003) also mentioned that media of Internet often criticism, especially there is not data security on Internet. Electronic



payment is very sensitive to cheat, because data when entered, like credit card numbers are used wrongly, no data protection, and weak of e-payment, that influence consumers' intention to shop on internet retailing. The security on Internet shopping is faced such as theft, destruction, interception, alteration, stalling or rerouting of data as well as forged messages (Vasiu, 2000).

Payment is conducted in credit card, but until now transaction like this, is difficult on Internet. Increasing the amount of companies to introduce well-guaranteed system of transaction credit card on Internet, format digital currency is also developed by companies like Digital Cash, Cybercash and of Netcash (Rowley, 1996).

Jones and Biasiotto (1999) also looked into major source for reluctant to do shopping on Internet related to security, as virus computer and cheating related to credit card, transmission information and inability on-line retailers in systematic way. Crowe (1999) mentioned that Internet users have special attention from e-retail company. Software company is producing new software and technology to assist consumer's credit card numbers save and warn them at web-location where may sell their secret to others. Commercial organization and government have invested a lot of money to establish secure methods of transferring data over Internet. Rubin (1995) viewed that Internet users wish to feel that privacy is protected. Person who is an expert in this field supports the government intervention, while business people is asking for better privacy arrangement. Providing information for customers about how their personal data is used choice by offering any possibilities to consumers' privacy are as main consideration.

### *2.3.6 Salient Beliefs Normative-Beliefs and Self-Efficacy*

Ajzen (1991) mentioned normative-beliefs include three kinds of salient beliefs are distinguished: behavioral belief which are assumed to influence attitudes toward behavior, normative beliefs which constitute the underlying determinants of subjective norms and control beliefs which provide the basis for perceptions of behavioral control. Ajzen and Fishbein (1972) found that, it was shown that manipulation which produced differences or changes in the perceived attitude were also found to be reflected in the measure of normative beliefs. Ajzen and Madden (1985) mentioned the strength normative-beliefs is multiplied by the individual's motivation to comply with referent. Budd (1985) found also personal normative-beliefs significantly contribute to the theory of reason's predictive power, a variable which mediates the relationship between attitudes, subjective norm and intention.

The Theory of Planned Behavior places the constructs of self-efficacy belief or perceived behavioral control within a more general framework of the relations among beliefs, attitude, intention and behavior (Ajzen, 1991). Self-efficacy is associated with beliefs and behaviors (Badura, 1986), it also has significant impact on decisions involving computer usage and adoption (Davis, 1989). Individuals who consider Internet is too complex and believe that they will never be able to master the Internet technology will prefer to avoid them and are less to use them. Gist (1989) also suggested that self-efficacy is an important motivational variable, which influences individual affect, effort persistence and motivation.

Fok (2001) mentioned that one the major factors affect consumers to adopt a new medium to shop is their beliefs of their ability to perform intention, with namely as self-efficacy. This factor is important because without strong beliefs to use

a new medium shopping the consumers tend to show a low usage of this new medium, in this case is Internet shopping.

## **2.4 Theoretical Framework and Hypotheses**

### *2.4.1 Theoretical Framework*

The objective of this study is to examine the factors that influence students' buying intention on the Internet (attitude towards to intention and intention to use). Reviewing Vijayasarathy (2003), the TAM model is extended by including the salient beliefs such as: usefulness, ease of use, compatibility, privacy, security and another normative-beliefs and self-efficacy.

From the literature review, it is concluded that usefulness, ease of use, compatibility, privacy, security, normative-beliefs, self-efficacy, are factors that influence the online transaction intent. These factors discussed here are used in this study to establish the conceptual framework. In order, encourage the on-line transaction intent; the factors mentioned above should be given an attention properly.

The title of this research is "Retailing on Internet: A Study of The Factors That Influence The Customer's Buying Intention Among Students in A Public Institution of Higher Learning" The research model was adopted from Vijayasarathy (2003), because there are two reasons. Firstly, this model is the newest adopted electronic shopping model for extends the TAM model (Vijayasarathy, 2003), secondly, in the model that there was integrated between three models such as: TAM, TRA, and TPB. It indicates that in addition to the two salient beliefs that comprise the core TAM (usefulness and ease of use), three other beliefs should be relevant to shop on internet (compatibility, privacy and security). Furthermore, normative-beliefs, a key variable of TRA, and self-efficacy, which is an important component of TPB, are combined to provide a more

complete set of factors that could show significant role in predicting student's intention to shop on line. The theoretical framework of this research is displays at figure 2.4 bellow.

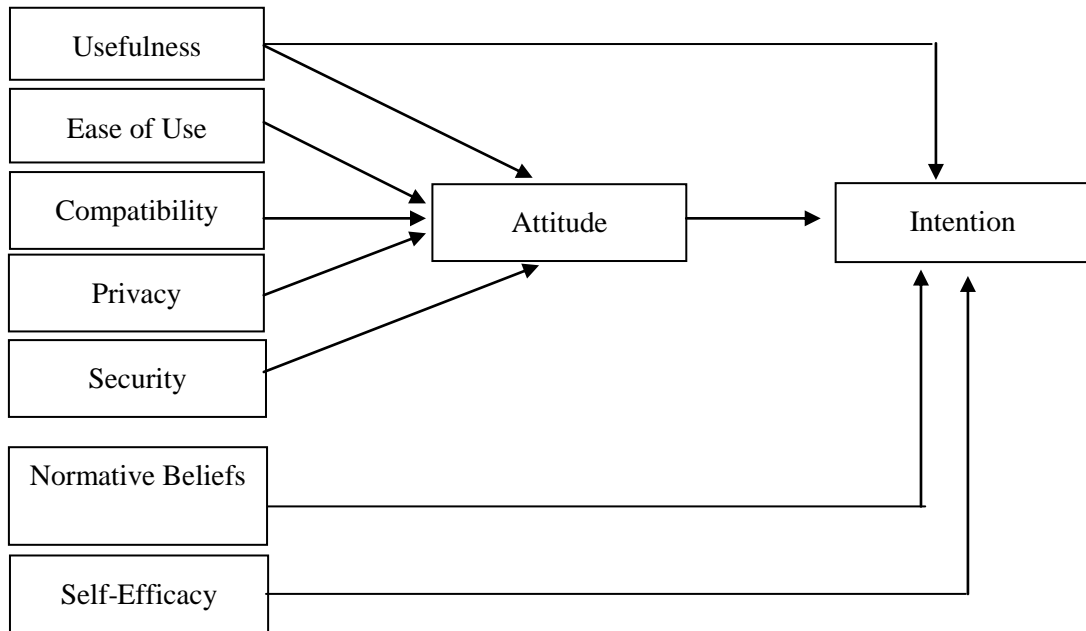


Figure 2.4. Theoretical framework

#### 2.4.2 Hypothesis

Students who believe that using this technology can lead to positive attitude. Here, we extend TAM again to specific behavior on-line transaction and propose the following hyphotesis was supported from previous research relationship between attitude and usefulness.

*H1: There is a positive association between students' attitude towards on-line shopping and their beliefs about its usefulness.*

The variable ease of use is very relevant for respondent, which a few experience on Internet usage, can perform on-line shopping with using this technology to replace traditional shopping. For future Internet shopping will expand as well as increasing the amount Internet user and propose the following hyphotesis:

*H2: There is a positive association between students' attitude towards on-line shopping and their beliefs about its ease of use.*

Respondents who spend a amount of money and time on Internet, consider Internet like e-mail fit in their working and personal life. Furthermore, support compatibility is input in this model to explain technology acceptance. Therefore:

*H3: There is a positive association between students' attitude towards on-line shopping and their beliefs about its compatibility.*

As an innovation that is expanding quickly, Internet shopping has certain risks. Here, we consider connectivity risk between privacy and security. Expectation of this research that students have more positive perception about privacy level on the internet will be an influential attitude towards the usage of this medium to do shopping. We offer the following hypotheses:

*H4: There is a positive association between students' attitude towards on-line shopping and their beliefs on privacy afforded by on-line shopping.*

At globalization era, openness has resulted in global network, which is easy to be accessed and make Internet sensitive to security crash. Students' perception is related to the credit card usage in purchasing on-line can be expected to influence their attitude towards internet shopping and propose the following hypotesis:

*H5: There is a positive association between students' attitude towards on-line shopping and their beliefs about security of on-line shopping.*

TAM merges both indirect link (through the mediating variable of attitude) as well as a direct link between usefulness and intention. A student's cognitive appraisal of the outcome to engage the behavior (usefulness) can have direct relation on their behavioral intention and therefore the following hyphotesis:

*H6: There is a positive association between students' intention to use on-line shopping and their beliefs about its usefulness.*

TRA theorizes that intention for behavior is influenced by salient beliefs and the normative beliefs. Furthermore, student's intention to use on-line shopping is influenced by important people. In the framework of innovator-imitator, students try to fit-in opinion with important others people who may be earlier to use a technology innovation and for that propose the following hyphotesis:

*H7: There is a positive association between students' intention towards on-line shopping and their normative beliefs about it.*

This study expressed that there is relationship between student's confidential in their capabilities to conduct on-line shopping. The self-efficacy power explains in this model the intention predict technology adoption. Studies have indicated that there is a positive association between self-efficacy and Internet use. Therefore:

*H8: There is a positive association between students' intention to use on-line shopping and their self-efficacy about using it.*

Most intention theory, attitude as mediator between intention and beliefs. Individual's salient beliefs about result are expected that can influence their attitude toward behavioral will be affect at their intention to execute that behavior. There was evidence, for relationship between intention and attitude theoretically and empirically and propose the following hyphotesis:

*H9: There is a positive association between students' intention to use on-line shopping and their attitude toward it.*

## **2.5 Summary from the Literature Review**

Vijayasathy (2003) viewed the research into newest adopted electronic shopping model. In this effort, intention based on theory include the Theory of

Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Theory of Planned Behavior TPB (Ajzen, 1989) and Technology Acceptance Model (TAM) (Davis, 1989) can become valuable. The models that have been used to explain adoption of IT in many contexts, particularly, explaining the factors were very strong predictors. However, adoption and usage of on-line shopping, relevant with others factors besides ease of use and usefulness that have been proposed, there are other relevant factors including salient beliefs about compatibility, privacy, and security, normative beliefs and self-efficacy.

From our literature review, it can be concluded that usefulness, ease of use, compatibility, privacy, security are important factors that influence students to conduct internet shopping. These factors are studied here as extension of study which has done before like theory of TRA, TPB, and TAM used to specify conceptual framework. In order, assist e-retail to be successful on internet shopping business as mentioned above that factors have to give attention according to students' wants and needs.

## **Chapter 3**

### **METHODOLOGY**

#### **3.1 Introduction**

We mentioned before in chapter 2, some related journals to support the retailing on Internet and some other concepts have been cited and discussed. In this chapter 3, we will show how to design and make the study possible. Questionnaire design, variables influencing intention to shop, sample, data collection, data analyses will discuss separately.

#### **3.2 Questionnaire Design**

Questionnaire was used to collect data for analysis and the items in the questionnaires were adopted from Vijayasarathy (2003). The questionnaire elicited information about demographic, Internet usage, and the factors such as: usefulness, ease of use, compatibility, privacy, security, self-efficacy, normative beliefs, attitude, and online transaction intent. A three-page questionnaire was used as the research instrument. Multiple scale items, which were essentially adopted from Vijayasarathy (2003), were used to obtain respondents' salient beliefs, normative beliefs, self-efficacy, attitude and intention toward Internet shopping. Complete listings of the items are provided in Appendix A with questionnaire.

Zikmund (2000) described that the questionnaire is designed to the respondents can be kept secretly. Especially, the respondents are not asked to write their names on the questionnaire sheets. In this research Likert scale was used where the respondents could check the statements regarding their attitudes and intention on how strongly they were agree or disagree. An open-ended questionnaire, a structure questionnaire and focus group sessions were used to explore the different shopping