A study on attitude and intention towards Internet banking with reference to Malaysian consumers in klang valley region

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Abstract

The development of online banking technology revolution in recent years, and speed of this development is extremely rapid. Online banking technology also spreads widely and influences deeply not only economic activities of business, households and governments but also various areas of people's daily life. With the liberalization and internalization of financial markets, in terms of the entrance of the World Trade Organization, banks in Malaysia face pressures in service quality and administrative efficiency. Predicting customers' intention towards Internet banking is an important issue. Internet banking is a new type of information system that uses the innovative resources of the Internet to enable customers to effect financial activities in virtual space. The adoption rate of Internet Banking was estimated by analogy to adoption pattern. This study explores the factors contributing to the adoption of Internet banking in Malaysia. The technology acceptance model was used to study attitude and intention towards Internet banking. Perceived easy of use, Perceived usefulness and perceived enjoyment are the three factors which influence the attitude and intention towards using Internet banking. The model we developed proposed that online banking acceptance can be modeled with the variables derived from the TAM (PU and PEOU) and perceived enjoyment (PE). Perceived enjoyment is considered as the major factor for attitude and intention. Implications for banking practitioners as well as directions for future research are discussed.

Introduction

Today's banking takes place increasingly online, financial institutions deliver their services via various electronic channels and the importance of a traditional branch network has declined. The tremendous advances in technology and the aggressive infusion of information technology had brought in a paradigm shift in banking operations (Gerrard, P. and Cunningham, J.B. (2004)). Technology has become an increasingly vital element in the

competitive landscape of the financial service industry. The recent developments have created a totally new service concept and service environment. Technology has changed the very nature of selling and buying financial services. One of the most fundamental changes in the banking industry has been the consumer movement from traditional branch banking to more stand-alone banking. In other words, a move towards using electronic delivery channels such as the Internet, telephone and mobile phones in private banking Lu, J., Yu, C.S., Liu, C. and Yao, J.E. (2003), Internet banking is a new type of information system that uses the innovative resources of the Internet to enable customers to effect financial activities in virtual space (Shih and Fang, 2004). Internet banking in this study is defined as an Internet portal, through which customers can use different kinds of banking services ranging from bill payment to making investments. Therefore banks' Web sites that offer only information on their pages without possibility to do any transactions are not qualified as Internet banking services.

The banking industry in Malaysia is facing unprecedented competition from non-traditional banking institutions, which now offer banking and financial services over the Internet Lu, J., Yu, C.S., Liu, C. and Yao, J.E. (2003),. The deregulation of the banking industry coupled with the emergence of new technologies, are enabling new competitors to enter the financial services market quickly and efficiently.

The emergence of the Internet has had a significant impact on the diffusion of electronic banking. With the help of the Internet, banking is no longer bound to time or geography. Consumers all over the world have relatively easy access to their accounts 24 hours per day, seven days a week. Therefore, Internet banking provides many benefits to both banks and their customers (Karjaluoto, Mattila and Pento, 2002). One advantage of

banks going online is the potential savings in the cost of maintaining a traditional branch network Shih and Fang, 2004). Turban et al. (2000) indicated that Internet banking is extremely beneficial to customers because of the savings in costs, time and space it offers, its quick response to complaints, and its delivery of improved services, all of which benefits make for easier banking.

Research Problem

However, acceptance of this new technology has not been equal in all parts of the world (Karjaluoto, Mattila and Pento, 2002). Although Internet banking may help banks to reduce costs, there are important considerations, such as, the extent to which retail bank customers use new forms of banking, that is, the factors that influence intention toward using another form of banking and adoption differences between different forms of banking. These considerations are very important to the practitioners who plan and promote new forms of banking in the current competitive market. Internet banking that has revolutionized the banking industry worldwide has turned out to be the nucleus issue of various studies all over the world. However there has constantly been a literature gap on the issue in Malaysia.

Research Objective

- To find out the factors that influence on the formation of attitude towards Internet banking.

- To know if there is any difference between demographic variable and attitude towards Internet banking in Malaysia.

- To know if there is any relationship between attitudes towards Internet banking and intention to use Internet banking.

Review of Literature

Internet Consumers

Online consumers differ from the general population in one important respect: they own or have access to a computer (Berkowitz, Kerin, Hartley, and Rudelius, 2000). New markets, new technologies and new products have all arisen together, creating opportunities for those new types of consumer behavior, which cannot be analyzed profitably by the old marketing disciplines.

Internet shoppers are more convenience-seekers, innovative, impulsive, variety-seekers, and less risk-averse than Internet non-shoppers are. Internet shoppers are also less brand and price conscious than Internet non-shoppers are. Internet shoppers have a more positive attitude toward advertising and direct marketing than non-shoppers do.

However, not all Internet/Web users use the technology the same way, nor are they all likely to be online buyers. This means Web users are not the same in their Web use behavior. SRI International (Berkowitz, Kerin, Hartley, and Rudelius, 2000) identifies ten distinct Internet/Web user profiles, called iVALS, which illustrate how diverse Internet/Web users can be, and based on two dimensions: how heavily and enthusiastically they use the Internet; and the reason for usage.

Internet banking adoption

One advantage of banks going online is the potential savings in the cost of maintaining a traditional branch network (Shih and Fang, 2004). Turban et al. (2000) indicated that Internet banking is extremely beneficial to customers because of the savings in costs, time and space it offers, its quick response to complaints, and its delivery of improved services, all of which benefits make for easier banking. Online banking acceptance has gained special attention in academic studies during the past five years as, for instance,

banking journals have devoted special issues on the topic. The Technology Acceptance Model, TAM (Davis, Bagozzi, & Warshaw, 1989), has become the bona fide model of IT acceptance, forecasting the extent to which a new IT is used. The basic premise in TAM is that two behavioral outcome beliefs about a new IT, namely its perceived usefulness (PU) and its perceived ease of use (PEOU), are significant predictors of its intended future use. Suh and Han (2002) conducted an investigation based on the technology acceptance model (TAM) to analyze customer acceptance of Internet banking. They claimed TAM as an appropriate model for explaining acceptance in the context of Internet banking. TAM is based on Fishbein and Ajzen's theory of reasoned action (TRA) (Davis et al., 1989) and is a general model that assumes that individual social behavior is motivated by behavioral attitudes. Sohail and Shanmugham (2003) examined the factors that influence the adoption of Internet banking and investigated whether Internet users and others differed in terms of these factors. Research into customer acceptance of Internet banking has thus improved understanding of what beliefs lead customers to use the facility and demonstrate how the beliefs influence Internet bank customer behavior (Shih and Fang, 2004).Suh and Han (2002) conducted an investigation based on the technology acceptance model (TAM) to analyze customer acceptance of Internet banking. They proposed a further aspect of belief, that of trust, to enhance understanding of that acceptance. They claimed TAM as an appropriate model for explaining acceptance in the context of Internet banking. TAM is based on Fishbein and Ajzen's theory of reasoned action (TRA) (Davis et al., 1989) and is a general model that assumes that individual social behavior is motivated by behavioral attitudes. For Fishbein (1967) and Fishbein and Ajzen (1975), TRA is one of the most widely studied models of attitude and behavior. (as detailed in section 2.6.1).Liao et al. (1999) used the

theory of planned behavior (TPB) and innovation diffusion to study intention toward using Internet banking in an international financial city. In those studies, Liao et al. postulated that the TPB only partly explained relationships, in that behavioral intention is a function of attitude and subjective norm. In a further step, an additional construct that of perceived behavioral control, is included in the TPB model to account for situations where individual cannot completely control their behavior (Ajzen, 1985, 1991; Ajzen and Madden, 1986).

Theoretical Model Explanation

Generally, a study of adoption of information technology takes one of three possible approaches, a diffusion approach, an adoption approach or a domestication approach (Vijayan, Perumal and Shanmugam, 2004). Diffusion researchers typically describe the aggregate acceptance process as a function of time that may be used to categorize users of different kinds (Mahajan, Muller and Bass, 1990). Others like, Rogers (1995) describe the *diffusion* process as consisting of four elements: an innovation or new technology, a social system, the communication channels of the social system and time. *Adoption* researchers, on the other hand, typically describe and explain the acceptance decision of individual users applying different social theories of decision-making. The theory is as follows:

Technology acceptance model

The Technology Acceptance Model (TAM) has formed the foundation of many studies of information systems (Bahmanziari, 2003; Pavlou, 2003). Technology Acceptance Model (TAM) originally proposed by Davis (1989). TAM proposed two measurable variables for technology acceptance, i.e. perceived usefulness and perceived ease of use. Perceived usefulness explains the user's perception to the extent that the system will improve the user's workplace performance; perceived ease of use explains the user's perception of the

amount of effort required to utilize the system or the extent to which a user believes that using a particular system will be effortless (Davis et al., 1989). Since its introduction by Davis (1989) and Davis et al. (1989), TAM has been widely employed by researchers to explain user acceptance of technology (Ng, 2003; Bahmanziari, Pearson & Crosby, 2003; Pavlou, 2003).

Although TAM was designed to predict user adoption of information technology applications in the organizational workplace (Riemenschneider, Hardgrave & Davis, 2002), researchers have modified the original model to explain electronic commerce acceptance (Dahlberg, Mallat & Oorni, 2003; Featherman & Pavlou, 2002). The enhanced models of TAM with specific variables for electronic commerce applications, hence serve as the basis of this review.TAM has been tested in many studies (Davis, 1989; Taylor and Todd, 1995), and it has been found that TAM's ability to explain attitude toward using an information system is better than other model's (TRA and TPB) (Mathieson, 1991). These studies have found that TAM consistently explains a significant amount of the variance (typically around 40 percent) in usage intentions and behaviour. The use of an information system has been understood in many studies as the user acceptance of the information system in question (Davis et al., 1989). In other words the use of information system acts as an indicator for information system's acceptance.

Accordingly, Liao and Cheung (2002) presented empirical estimates to predict the marginal effects of the factors underlying perceived usefulness and willingness to use, and the substitutability between them. Their data demonstrated that the key quality attributes underlying perceived usefulness were expectations of accuracy, security, network speed, user friendliness, user involvement and convenience.

Beliefs > Attitude > Intention> Behaviour

Based on certain beliefs, a person forms an attitude about certain objects, on the basis of which one forms an intention as to how one should behave with respect to that object. The intention to behave is the sole determinant of actual behaviour (Vijayan, Perumal and Shanmugam, 2005). Davis adapted the TRA by developing two key beliefs that specially account for information system usage. The first of these beliefs is perceived usefulness, defined as the 'degree to which a person believes that using a particular system would enhance his/her job performance' (Davis, 1989). The second is perceived ease of use, defined as 'the degree to which a person believes that using a particular system would be free of effort' (Davis, 1989). A diagram of the model is presented in Figure 1.
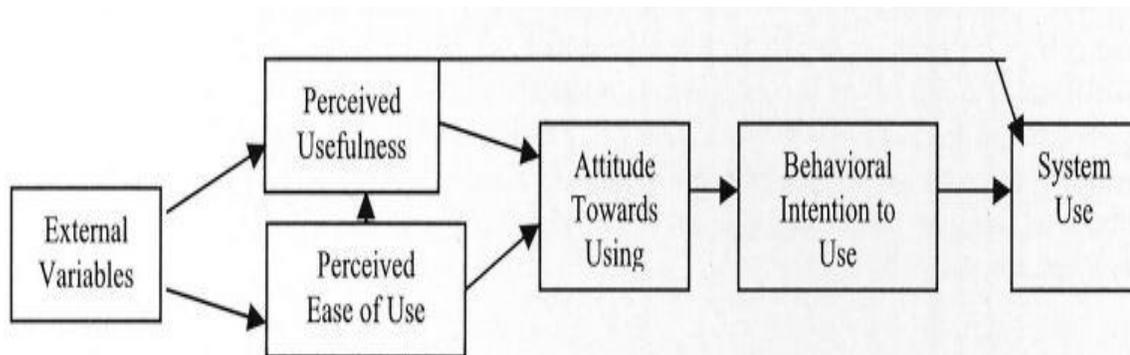

Figure 1: Technology Acceptance Model (Davis et al., 1989)

Applicability of TAM to study user acceptance of Internet Banking

TAM has been widely used as a framework for surveys where existing products are assessed. Davis and Venkatesh (2004) proved out that stable and behaviourally predictive measures of perceived usefulness of information systems can be made by using mock-ups. Traditionally, mock-ups are used in human-centred design to evaluate proposed designs with users for ease of use. Davis and Venkatesh (2004) suggest that mock-ups should increasingly be used to assess the usefulness of the proposed system at a pre-prototype phase of the project.The Technology Acceptance Model constitutes a solid framework to identify issues

that may affect user acceptance of technical solutions. As Davis and Venkatesh (2004) have proved, the model can be enhanced from the original purpose of studying user acceptance of existing products to study planned product concepts e.g. in the form of mock-ups. This indicates that TAM could also be used in connection with technology development projects and processes to assess the usefulness of proposed solutions. Applied in this way, the mode also supports the human-centred design approach. Legris et al. (2003) have made a review of published studies on the applications of TAM, and made a wider analysis of 22 studies. They identified three significant limits in TAM research: the narrow focus of the applications with the main emphasis on office automation, narrow user groups with many studies made with students as users, and measurements based on self-reported use rather than observing actual usage. By applying TAM in connection with field trials, user acceptance can be studied with real users and actual usage situations.

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Overview of Key studies using TAM

Model Tested By	Year	EOU	U	ttitude	ntention	ctual Use	Other Variables	Country and Technology Studied	Comments
Bruner and Kumar	005						• Enjoyment • Consumer Visual Orientation • Internet Device	United States Handheld Internet Device	Fun of using the device was an ore powerful determinant of attitude. High visual orientation found it easier to use devices to access the Internet than those who were low on visual orientation
Kleijnen, Wetzel and Ruyter	004						• Perceived Cost • Perceived System	wireless finance	

							Quality • Social Influence		
Pikkarainen et al	004						• Enjoyment • Information about online banking • Security & Privacy • Quality of connection	Finland Online Banking	Security and Privacy has weak relationship. PU has more influential than PEOU
Chan and Lu	004						• Subjective Norm • Image • Result Demonstrability • Perceived Risk • Computer Self-Efficacy	Hong Kong Internet Banking	CSC plays an indirect and significant role in influencing both intentions to use and use. Risk perception hinders adoption
Dabholkar and Bagozzi	002						• Fun • Consumer Traits • Situational Factors	United States Technology Based Self Service	High self-efficacy attenuated the relationship between PEOU and attitude. Moderating effect of situational factors was supported
Venkatesh and Davis	000						• Subjective Norm • Image • Job Relevance • Output Quality • Result Demonstrability • Experience • Voluntariness	United States Computer Usage	Subjective norms exerts a significant direct effect on usage intentions over and above PU and PEOU,
Taylor and Todd	995						• Subjective Norm • Perceived Behavioral Control • Experience	Canada Computer Usage	There is strong relationship between intention and behaviour for experienced users

Davis et al	989							nited States U	
								omputer C	
								usage	

Theoretical Framework and research Methodology.

For developing an in-depth understanding of consumers' attitudes toward Internet Banking and their intentions use, researcher have built up a framework based on previous research on consumer usage of new technologies and services.
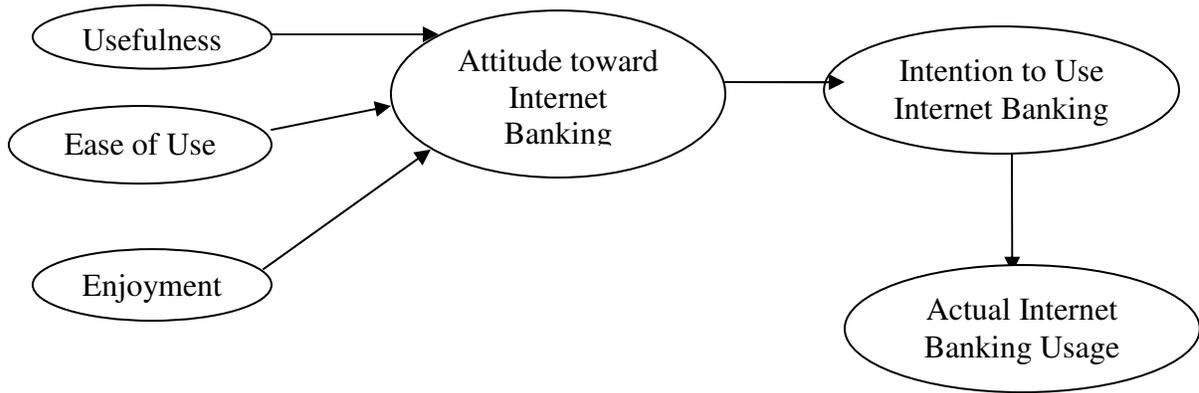
The core constructs of our framework are adapted from Technology Acceptance Model (TAM) by Davis (1989), an influential research model in the information systems field. Although this model is specifically tailored to understand the adoption of computer-based technologies on the job or in the workplace, it has proven to be suitable as a theoretical foundation for the adoption of e-commerce (Chen et al., 2002; Moon and Kim, 2001; Lederer et al., 2000).

The original Technology Acceptance Model was chosen as the starting point for our work because it provided a framework for connecting our field study findings of ease of use and usefulness. Usefulness was not included in our usability evaluation framework (ISO, 1998) where usability was defined as effectiveness, efficiency and satisfaction of specified users in specified contexts of use and carrying out specified tasks.

TAM is acclaimed for its parsimony and predictive power which make it easy to apply in different situations (Venkates, 2000; Mathieson, 1991). Although TAM has proven to be a viable model for examining consumer acceptance of new technologies and systems, it is necessary to extend this model by incorporating additional factors in our research framework. These exogenous variables improve the viability and predictive nature of TAM

(Monsuwé, Dellaert and Ruyter, 2004), and enable its application in the environment of mobile coupon redemption.

Figure 3. Proposed Model used from Davis 1989:

Demographic Factor

It has been widely recognised that demographic factors have a great impact on consumer attitudes and behaviour regarding online banking (Sathye, 1999; Karjaluoto et al., 2002). Researcher analysis if there is any significant difference between age, gender and income and towards Internet Banking Intention

Perceived usefulness (Seven point scale)

TAM posits that PU is a significant factor-affecting acceptance of an information system (Davis et al., 1989). Davis defined PU as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis, 1989).

In this case we can define PU as the degree to which a person believes that using Internet Banking will enhance his or her performance.

Perceived Ease of Use

According to TAM PEOU is a major factor that affects acceptance of information system (Davis et al., 1989). PEOU is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989). Hence an application perceived to be easier to use than another is more likely to be accepted by users. Ease of use is defined as the individual's perception that using the new technology will be free of effort (Davis, 1989, 1993).

At first perceived ease of use is based on external factors such as the user's attitude towards technology in general, experiences of using similar services and information from other people. In actual use and sustained use, perceived ease of use is increasingly affected by the user's own experiences of using the system in different contexts of use. Applying this to our research context, ease of use is the consumer's perception that using Internet Banking will involve a minimum of effort.. Perceived ease of use is the extent to which a consumer believes a system is easy to learn or to use.

<u>Perceived enjoyment</u>

Enjoyment refers to the extent to which the activity of using a computer is perceived to be enjoyable in its own right (Davis et al., 1992). This is contrasting to the PU, which can be seen as an extrinsic motivation whereas perceived enjoyment (PE) as an intrinsic motivation to use information systems. A number of studies on PE (Davis et al., 1992; Igbaria et al., 1995; Teo et al., 1999) have noticed that PE significantly affects intentions to use computers. Igbaria et al (1995) found that PE correlates positively with time of use but not with frequency of use or number of tasks. In contrast, Teo et al. (1999) noted that PE correlates positively with frequency of Internet usage and daily Internet usage. Definitions of

perceived fun and perceived playfulness are quite similar to the concept of PE. In this research they are all handled as the same.

Past Internet Behaviour

Bagozzi, Baumgartner and Yi (1992) extended the application of the theory of reasoned action to coupon usage along with a measure of past behaviour in the theoretical mode. They found that that the previous behaviour has sometimes a direct impact on intention and ultimately present behaviour. They suggested that consumers' prior experiences with Internet tend to serve as an informational input to the decision to use coupons (Bagozzi et al. 1992). Offline coupons redemption behaviour is associated with online coupon intention (Han, Yoon and Cameron, 2001).

Attitude towards Internet Banking

Attitude could be measure by five items with seven point Likert scale: Favourable-unfavourable, pleasant-unpleasant, attractive-unattractive, beneficial-not beneficial, and good – bad.

Intention to use Internet Banking

Intention could be measured with the statement: "I have an intention or plan to use Internet Banking when I go out to pay my bill online in the future. Participants could be measure on a seven-point scale from strongly disagree to strongly agree.

Probability that I will consider using Internet Banking is (Very low/Very high).

Security and privacy

The importance of security and privacy to the acceptance of online banking has been noted in many banking studies (Roboffand Charles, 1998; Sathye, 1999; Hamlet and Strube, 2000; Tan and Teo, 2000; Polatoglu and Ekin, 2001; Black et al., 2002; Giglio, 2002;

Howcroft et al., 2002). To be more precise, privacy and security were found to be significant obstacles to the adoption of online banking in Australia (Sathye, 1999). Roboff and Charles (1998) found that people have a weak understanding of online banking security risks although they are aware of the risks. Furthermore, they found that consumers often rely that their bank is more concerned about privacy issues and protect them. Finally they argue that although consumers' confidence in their bank was strong, their confidence in technology was weak (see also Howcroft et al., 2002).

Research Hypothesis

Applying these concepts of TAM for the research on Internet banking context we hypothesize:

H1: Internet Bank users with higher perceived easy of use have more positive attitude towards Internet Banking

H0: There is no association between perceived easy of use of Internet Banking and attitude towards Internet Banking.

H1: There is association between perceived easy of use of Internet Banking and attitude towards Internet Banking.

H2. Internet Banking Users who enjoy using the Internet banking services will have positive attitude towards Internet Banking.

H0: There is no association between Enjoyment of Internet Banking and attitude towards Internet Banking.

H1: There is association between Enjoyment of Internet Banking and attitude towards Internet Banking.

H3. Users who consider Internet banking as useful will have more positive attitude towards Internet Banking.

H0: There is no association between perceived usefulness of Internet Banking and attitude towards Internet Banking.

H1: There is association between perceived usefulness of Internet Banking and attitude towards Internet Banking.

H4. There is positive relationship between attitude towards Internet banking and intention towards Internet banking.

H0: There is no association between perceived easy of use of Internet Banking and Intention to use Internet Banking.

H1: There is association between perceived easy of use of Internet Banking and Intention to use Internet Banking.

H5. Male have more favorable attitude towards Internet banking than female.

H0: There is no significant difference between gender and attitude towards Internet Banking.

H1: There is significant difference between gender and attitude towards Internet Banking.

H6. Younger age group have more favorable attitude towards Internet banking than older age group.

H0: There is no significant difference between age and attitude towards Internet Banking.

H1: There is significant difference between age and attitude towards Internet Banking.

H7. Higher Income group have more favorable attitude towards Internet banking than Lower Income group.

H0: There is no significant difference between income group and attitude towards Internet Banking.

H1: There is significant difference between income group and attitude towards Internet Banking.

Research Methodology

This methodology included how to select subject, design instrumentation, and procedure and conduct data analysis. Limitations are also discussed. The purpose of the study is to study the customer acceptance towards Internet banking in Malaysia. A consumer survey was conducted towards meeting the objectives of the present study. To determine user intention to use Internet banking and actual use, a survey was conducted during 2007.

Subject

The target population for this study was individuals who live in Malaysia and of age group 18 – 60 years old. A sample size of 150 was collected using convenience sampling. A questionnaire was distributed in Malaysia to people who visit the big shopping complexes like Midvalley Mega Mall and Amcorp Mall. The gender breakdown was 65 percent male and 35 percent female.

Instrumentation

A self-administered questionnaire constituted the data collection instrument.

Items from previous studies were modified for adaptation to the Internet banking context. The measures of actual use, behavioral intention to use, attitude toward using,

perceived usefulness, perceived easy of use and enjoyment were adapted from various studies related to the TAM and TPB (Pikkarainen, Pikkarainen, Karnaluoto and Pahnila, 2004).

Statistical Methods

Data analysis for this study was applied descriptive statistics (frequency, means, and standard deviations) to all the questions and cross-tabulation to gain an understanding of the nature of responses. Inferential statistics like t-test, Anova and correlation was used to understand the relationship between variables. Hypothesis 1,2,3,4 and was tested using correlation and Hypothesis 5,6 and 7 was tested using independent t-test and ANOVA.

Limitations

This study had its limitation in terms of methodology and application. The survey method is convenience sample therefore it may not be the true representation of the population. The sample size is also considered to be small.

Findings and discussions

The purpose of this study was to assess the customer attitude and intention towards Internet banking in Malaysia. This chapter will present the results of survey questionnaires, followed by demographic information using frequencies and percentages. The results were examined and analyzed by using SPSS software. Total 150 survey questionnaires were given to respondents in a shopping mall in Malaysia.

The gender breakdown was 65% are male and only 35 % are female. 44% of the respondents are working as professionals and majority of them come earn around RM. 2501 – RM. 3000 per month.

Internet Usage Behavior

It's very clear that more men use Internet than female. 24.5 percent of the female respondents don't use Internet at all. But only 9.3 percent of men don't use Internet. 14.6 percent of the respondents don't use Internet at all. 86 respondents who are under the age of 30 are familiar in using Internet. Only 65 percent who are above the age group of 31 and above are not familiar with Internet usage. Its clear from this analysis younger respondents are familiar in using internet than older respondents and more men are familiar with internet than female. From Table 3, it's very clear that men spend more time in Internet than female. The respondents are classified into high, medium and low Internet users based on their response. Respondent who uses less than 9 hours per week are classified as low internet users and respondents who uses 9-18 hours per week are classified as medium internet users and any respondents who uses more than 18 hours per week are classified as high internet users. Based on the classification, 36 percent of men are medium users of Internet.

Place of Internet Usage

It's very clear from the research that most of the respondents browse Internet at Internet café, home and at work. Most preferred place of browsing Internet is Internet café and at home. 28 percent of the respondents browse Internet from home and Internet Café

Internet Banking Usage

Only 46 out of 150 respondent uses Internet banking in Malaysia. 30.6 percent of the respondents use Internet banking. 71.6 percent of Internet banking users is male. There fore it's clear that more men use Internet banking than female. 69.4 percent of the respondents don't use Internet banking

Perceived Easy of Use and Attitude towards Internet Banking

To investigate the relationships between the PEOU, PU and Penj and attitude towards Internet banking researcher use correlation to test.

From the table 7 we can able to determine the overall mean for perceived easy of use of Internet banking. PEOU is measured using the six constructs mentioned in Table 6. The average PEOU is 3.883.

The overall attitude towards Internet banking is 4.02.

H1: Internet Bank users with higher perceived easy of use have more positive attitude towards Internet Banking

H0: There is no association between perceived easy of use of Internet Banking and attitude towards Internet Banking.

H1: There is association between perceived easy of use of Internet Banking and attitude towards Internet Banking.

A correlation test was conducted to determine if there is any significance association between PEOU and Attitude towards Internet Banking.

From the analysis, Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Since the p value is 0.000 which is lesser than 0.05 accepted level of significance, therefore we reject the null hypothesis and accept the alternative hypothesis and conclude there is significant association between PEOU and Attitude towards Internet Banking. Since the Pearson correlation is 0.886, which is closer to 1 so we can conclude that there is very strong positive correlation between PEOU and Attitude towards Internet banking.

Perceived Enjoyment and Attitude towards Internet Banking

Perceived enjoyment is measured using seven-point scale.

Overall Perceived Enjoyment towards Internet Banking is 4.0959. The Internet banking is perceived as fun by most of the respondents.

H2. Internet Banking Users who enjoy using the Internet banking services will have positive attitude towards Internet Banking.

H0: There is no significant association between Enjoyment of Internet Banking and attitude towards Internet Banking.

H1: There is significant association between Enjoyment of Internet Banking and attitude towards Internet Banking.

A correlation test was conducted to determine if there is any significant association between Perceived enjoyment and Attitude towards Internet Banking.

From the analysis it is observed that Pearson correlation coefficients, significance values and the number of cases with non-missing values. Since the p value is 0.000 which is lesser than 0.05 accepted level of significance, therefore we reject the null hypothesis and accept the alternative hypothesis and state there is significant association between Perceived enjoyment and Attitude towards Internet Banking. Since the Pearson correlation is 0.891 which is closer to 1 so we can conclude that there is very strong positive correlation between Perceived enjoyment and Attitude.

Perceived Usefulness and Attitude towards Internet Banking

TAM posits that PU is a significant factor-affecting acceptance of an information system (Davis et al., 1989). Davis defined PU, as "the degree to which a person believes that using a particular system would enhance his or her job performance".

The respondent perceived Internet banking as useful. The overall mean for perceived usefulness, which is 3.8836.

H3. Users who consider Internet banking as useful will have more positive attitude towards Internet Banking.

H0: There is no association between perceived usefulness of Internet Banking and attitude towards Internet Banking.

H1: There is association between perceived usefulness of Internet Banking and attitude towards Internet Banking.

A correlation test was conducted to determine if there is any significant association between PU and Attitude towards Internet Banking.

From the analysis it is observed that Pearson correlation coefficients, significance values and the number of cases with non-missing values. Since the p value is 0.000 which is lesser than 0.05 accepted level of significance, therefore we reject the null hypothesis and accept the alternative hypothesis and state that there is significant association between PU and Attitude towards Internet Banking. Since the Pearson correlation is 0.854, which is closer to 1 so we can conclude that there is very strong positive correlation between PU and Attitude.

Attitude and Intention towards using Internet Banking

Its believed that higher attitude towards Internet will lead to higher intention towards Internet Banking. The Intention towards Internet Banking is measured using the following construct.

From the analysis, 37.4% of respondents don't have any intention to use Internet banking. 35.3% of the respondents show they are interested to use Internet banking. 26.7% are not sure of it.

H4. There is positive relationship between attitude towards Internet banking and intention towards Internet banking.

H0: There is no association between perceived easy of use of Internet Banking and Intention to use Internet Banking.
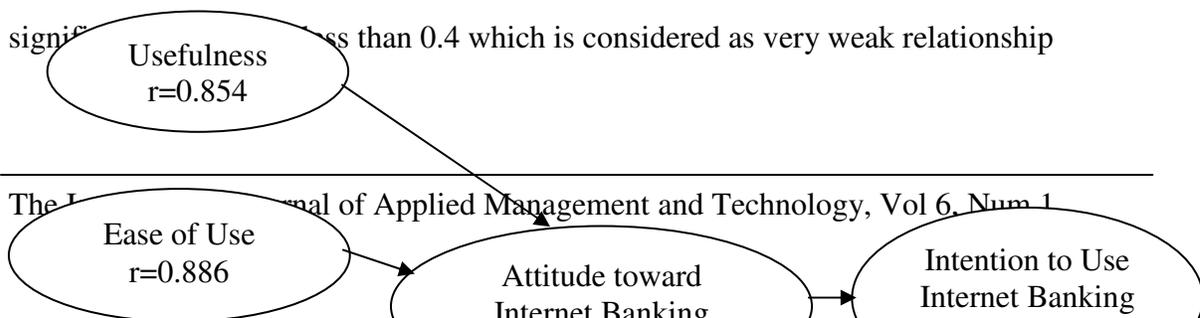
H1: There is association between perceived easy of use of Internet Banking and Intention to use Internet Banking.

A correlation test was conducted to determine if there is any significant association between Attitude and Intention towards Internet Banking.

From the analysis it is observed that Pearson correlation coefficients, significance values and the number of cases with non-missing values. Since the p value is 0.000 that is lesser than 0.05 accepted level of significance, therefore we reject the null hypothesis and accept the alternative hypothesis and state that there is significant association between Attitude and Intention towards Internet Banking. Since the Pearson correlation is 0.798, which is closer to 1 so we can conclude that there is very strong positive correlation between Attitude and Intention to use Internet Banking.

Model Analysis

The technology Acceptance model used by Davis determined IT us adoption, implementation and diffusion in terms of perceived ease of use and perceived usefulness. All they hypothesis was accepted in the model. Intention to use and the actual usage is not significantly less than 0.4 which is considered as very weak relationship

Figure 4.

Model Summary

From the coefficient table in the analysis, it's very clear that Perceived Enjoyment is consider as the most important variable to determine Internet Banking attitude. Since the t value is 5.133 which greater than 2 so we can conclude that PENJ is the major factor to determine the attitude of Internet Banking. The Table 16 shows that r square value is 0.82, which means PU, PEU and PENJ explains 82% of variance of Attitude. So we can conclude that there is very good model fit for Technology acceptance model for measuring Internet Banking Attitude.

Gender and Attitude towards Internet Banking

H5. Male have more favorable attitude towards Internet banking than female.

H0: There is no significant difference between gender and attitude towards Internet Banking.

H1: There is significant difference between gender and attitude towards Internet Banking.

The Independent-Samples T Test procedure is used using SPSS. The mean values for the two groups are observed in the analysis. Male found to have higher mean attitude of 4.37 and female have lower mean attitude of 3.40. To test if this difference in mean is significant, independent sample t test is conducted.

Since the significance value for the Levene test is low then equal variances not assumed. The calculate t value is 3.783 and p value is 0.000 which is lesser than accepted level of significance of 0.05 therefore we reject the null hypothesis and accept the alternative hypothesis and state that there is significant difference between gender & attitude towards Internet banking. Therefore we could conclude that Male have higher attitude towards Internet banking than female.

Age and Attitude towards Internet Banking

H6. Younger age group have more favorable attitude towards Internet banking than older age group.

H0: There is no significant difference between age and attitude towards Internet Banking.

H1: There is significant difference between age and attitude towards Internet Banking.

The calculated F value is 3.731 and its p value is 0.002 which is lesser than accepted level of significance of 0.05, therefore we reject the Null Hypothesis and accept the alternative hypothesis which is there is significant difference between age group and attitude towards Internet Banking. Using Dunett test we can confirm that younger people below the age group of 30 years old have higher attitude towards Internet than older people.

Income and Attitude towards Internet Banking

H7. Higher Income group have more favorable attitude towards Internet banking than Lower Income group.

H0: There is no significant difference between income group and attitude towards Internet Banking.

H1: There is significant difference between income group and attitude towards Internet Banking.

Since the F value is 1.610 and its p value is 0.118, which is greater than accepted level of significance, therefore we accept the null hypothesis. Therefore we can conclude that there is no significant difference between income group and attitude towards Internet banking.

It's very clear that 34.5 percent of the respondents hold an account in May bank Berhad. The next leading bank in which the respondents hold account is Bumiputra-Commerce, 15.9 percept of the respondents uses the bank.

Table 1

Overview results

o	Hypothesis	Result
1	Perceived easy of use → Attitude	Accepted
2	Perceived enjoyment → Attitude	Accepted
3	Perceived usefulness → Attitude	Accepted
	Attitude → Intention	Acce

4		pted
3	Male have more positive attitude than female	Acce pted
6	Younger age group have more favorable attitude towards internet banking than Older age group.	Acce pted
7	Higher Income group have more favorable attitude towards internet banking than lower income group	Not Accepted

Many of the hypotheses were confirmed the Tam model of Internet banking.

Conclusions and Recommendations

This study was developed to create a deeper understanding of consumer adoption of Internet banking in Malaysia. Technology acceptance model of Davis was used to study the consumer readiness to use Internet Banking. The technology acceptance model examined here is valuable in understanding and explaining how users' perception affects their motivation to use Internet Banking. The technology Acceptance model used by Davis determined IT adoption, implementation and diffusion in terms of perceived ease of use and perceived usefulness.

The results indicate that almost all the hypothesized relationships in the core model were confirmed. Similar to previous finding the results reinforced the role of perceived and ease of use as fundamental driver. The results from ease of use (R = 0.89) and usefulness (R = 0.85) on attitude, was almost the same. Liao, S., Shao, Y.P., Wang, H. and Chen, A. (2004) on their empirical study, believes that for any emerging IT/IS, perceived ease of use is an important determinant of users' intention of acceptance and usage behavior. The research

finding also goes according to this assumption. There is strong association between PEOU, PU, Perceived enjoyment and Attitude towards Internet Banking. The Perceived enjoyment is the major factor which determines the attitude towards Internet banking. There is strong relationship between attitude and intention to use and this is also supported by Bernadette (1996).

The study result shows that younger age group have higher attitude towards Internet banking than older age group. Other researchers also supported this. Liao, S., Shao, Y.P., Wang, H. and Chen, A. (2004), found that age has a direct effect on usefulness perceptions both the short term and long term. The technology acceptance literature suggests a strong relationship between age and the acceptance of new technologies (Harrison and Rainer, 1992). Older consumers are found to have problems with new technologies and, hence, are expected to have negative attitudes towards innovations. Liao, S., Shao, Y.P., Wang, H. and Chen, A. (2004), for instance, find that many older consumers have a more negative attitude to change. Male have higher attitude towards Internet banking than female. 71.6 percent of Internet banking users is male. This hypothesis is supported by our findings.

In conclusion, these results have implications for research and practice. There is little prior research that uses a TAM model based on diffusion of innovations theory to discuss the intention to use Internet banking in comparison to traditional well-known TRA.and TPB. Our results suggest that adding Perceived enjoyment as another variable to TAM of Davis explains the model better and also enjoyment is considered as the major factor for attitude towards internet banking. The results of the regression analysis conducted on the three

factors indicate that PE is found to be the most influential factors explaining the attitude towards Internet banking.

Managerial Implication of the Study

Several interesting managerial implications can be derived. From the commercial viewpoint, Internet banking has become more and more essential and is broadly accepted. Thus, how to build, maintain, and enhance customer relationships is an important issue in a fiercely competitive environment. Therefore, the results of this study indicate that it would be a valuable strategy for marketers to rethink how to educate potential customers and promote Internet banking using innovation characteristics. The major contribution of the research is perceived enjoyment is considered as the major factor for attitude formation along with usefulness and easy of use. The companies should focus on providing internet banking service that is enjoyable to use. It is also found that young age group and men have more positive attitude towards Internet banking. Therefore they can focus more to this group of people. By knowing the demographics that influence consumer intentions, managers can then use them in segmentation. Thus, the marketing implications of demographics in Internet banking might include, for example, the need to focus on consumers who are Young.

Recommendation and further research

It's recommended that the banking professional should create advertisement targeting to young people to use Internet banking. They should focus the enjoyment component of Internet banking to develop the positive attitude and intention to use. The study was not limited to respondents experienced with Internet banking; it was difficult to measure their

efficacy and the facilitating conditions. Therefore further research is needed to understand the group differences for the relationship of attitude and intention adoption between pre-behavior and post-behavior users. Furthermore, the nature of networks that influenced the evolution of banks may have an effect upon attitude, even on the adoption of Internet banking. This may provide a meaningful research area for the future.

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