FACTORS AFFECTING THE ADOPTION OF ONLINE BANKING SERVICE: A CASE STUDY IN KUCHING, SARAWAK

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FACTORS AFFECTING THE ADOPTION OF ONLINE BANKING SERVICE: A CASE STUDY IN KUCHING, SARAWAK

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A dissertation submitted in partial fulfillment of the requirements for the degree of Corporate Master in Business Administration

Faculty of Economics and Business
UNIVERSITI MALAYSIA SARAWAK
2012
The project entitled 'Factors Affecting the Adoption of Online Banking Service: A Case Study in Kuching, Sarawak' was prepared by Michelle Jenai anak Nelson Mujah Girie and submitted to the Faculty Of Economics and Business in partial fulfilment of the requirements for the Corporate Master in Business Administration.
ACKNOWLEDGEMENTS

Most of all, I would like to thank God for giving me the courage, serenity and perseverance in completing this study. Without His blessing, it is impossible for me to complete this project successfully.

I would like to convey my deepest thanks to all respondents for their kindest, invaluable contributions and information given which could I used in this study.

Besides, I want to dedicate my sincerely appreciation to my supervisor, Dr. Chu Ei Yet for his great endeavour, perseverance, valuable assistance and guidance throughout completing this study.

I also would like to take this opportunity to thanks my family for all of their support, understanding and encouragement in finishing this study.

In addition, I would like to acknowledge the precious support and effort of staffs and lecturer of Faculty Economic and Business and Centre for Graduate Studies.

Lastly, to all people that have been involved in distributing and collection the questionnaire; and throughout this study, I wish to devote my gratitude for your kindest and cooperation.

Thank you very much!
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ABSTRACT

FACTORS AFFECTING THE ADOPTION OF ONLINE BANKING SERVICE: A CASE STUDY IN KUCHING, SARAWAK

MICHELLE JENAI ANAK NELSON MUJAH

This study aims to identify the factors that encourage consumers in Kuching, Sarawak to adopt online banking services. It is a study to identify important elements affecting customers’ intention to adopt online banking. An extended Technology Acceptance Model (TAM) namely perceived ease of use and perceived usefulness, perceived trust and security, government support used to identify the relationship towards the intention to use online banking. Four hypothetical situations were proposed in this study. Meanwhile, the dependent variable is the elements of the adoption of online banking (customers’ intention to use online banking). There were 250 respondents involved in this study which were randomly selected in Kuching, which were conducted via emails and based on personally administered questionnaires from various backgrounds of people. Participation of respondents was purely voluntary. The instrument used for this study was a survey questionnaire. The questionnaire was reliable at alpha coefficient value for each variables was \( r = 0.50 \). Descriptive statistic that was used to analyze the demographic data in this study is the frequency (n) and percentage (%). Meanwhile, the inferential statistic used in this study was Pearson Coefficient Correlation ‘r’. The overall findings show that all of the factors that had been analyzed above were positively affecting the customers’ intention to adopt online banking services. Perceived usefulness and perceived trust and security were strongly correlated with the adoption of online banking. Meanwhile, perceived ease of use and government support was moderately influencing the customers’ intention to adopt online banking. The result of this finding might be useful for the practitioners especially the banks that provide online services. This might provide banking industry some insights into factors that will likely effect consumers acceptance of online banking technology and the highlights areas of consideration in the adoption of these new technologies. Relative advantage and compatibility jump to the top of the list of characteristics of online banking technology to highlight for consumers.
ABSTRAK

FAKTOR-FAKTOR YANG MEMPENGARUHI PENGGUNAAN SERVIS PERBANKKAN INTERNET: SATU KAJIAN KES DI KUCHING, SARAWAK

MICHELLE JENAI ANAK NELSON MUJAH

FACTORS AFFECTING THE ADOPTION OF ONLINE BANKING SERVICE: A CASE STUDY IN KUCHING, SARAWAK

1.0 INTRODUCTION

1.1 BACKGROUND OF STUDY

One of the e-commerce tools that are being adopted by the banking industry is online banking or e-banking. Online banking activities are presently taking place in the industry. Due to the advancement of information technology, the Internet has fundamentally changed the rules of the game in the past five years in almost every industry (Gunasekaran and Love, 1999). This is no less true in the banking world, where the Internet’s everywhere and open nature has forced banks and various consortia of banks to introduce and quickly upgrade their front-end Internet applications (Aladwani, 2001). Exploiting the new communication or transaction channels offered by the Internet, in the last five years the number of banks’ web sites has increased rapidly. At present More than 1,500 web sites of banks from all over the world are available online. The majority of banks with Internet presence are from the USA, while in Europe, the largest number of banking Web sites are in the UK, Germany, Spain, Italy and France (Tuchila, 2000).

As information technology becomes more and more sophisticated, banks in many parts of the world are adopting a multiple-channel strategy. This trend is also evident in developing countries, such as Malaysia (Hway-Boon and Yu, 2003), Romania (Gurau,
2002), Thailand (Rotchanakitumnuai and Speece, 2003) and Turkey (Akinci et al., 2004).
The right mix of banking channels depends not only on the channel characteristics, but also the preferences of the consumers within a particular market.

The technologies of electronic banking are already advanced, especially in the USA (Kolodinsky et al., 2004) However, electronic banking, or virtual banking in general, cannot entirely replace other traditional channels. In Turkey, a significant portion of the highly educated consumer segment is still loyal to branch banking (Akinci et al., 2004). In the UK, consumers prefer a mix of several channels rather than a single channel (Howcroft et al., 2002). In order to remain profitable in different market segments, the bank marketers need to find the right mixes of distribution channels. To this end, bank marketers have to understand why their customers like or dislike a particular channel. An understanding of the factors that have bearings on the adoption of different banking channels can help a bank adjust its marketing strategies.

**Online banking** (or **internet banking**) is a term used for performing transactions and payments over the Internet through a bank, credit union or building society's secure website. This allows customers to do their banking outside of bank hours and from anywhere where Internet access is available. In most cases, a web browser is utilized and any normal Internet connection is suitable. No special software or hardware is usually needed. (www.wikipedia.com).

Internet banking is one of the most popular services utilized by Malaysian surfers (AC Nielsen Online, 2001). As end of December 2005, the total number of user was
estimated at 10.4 million people which is 67% using it only for banking purposes. The types of services offered by banks are such as:

- Checking balance and statements online;
- Fund transfers;
- Bill payment;
- Manage savings and current account;
- Card service;
- Order cheque and books request;
- Fixed deposit placement; and
- Requesting the bank statement.

Source: http://www.bankinginfo.com.my

As Malaysia is moving towards an industrialization nation with knowledge-economy, the PC and online way of life is growing in its community. Public awareness of e-banking among users has been increased and thus people are ready to migrate to technology application (Wai, 2008). Nowadays, people can use mobile devices to assess Internet by using WAP, GPRS or 3G features. But the likelihood of performing the e-banking transaction via mobile devices is unknown. With the population of 25.58 million in Malaysia, it is important for the bankers to understand the current usage trend of e-banking system.
1.2 Technology Acceptance Model (TAM)

In view of all this, the banking system has been attempting to gather more and more information on aspects that induce people to do their banking over the Internet (Gerrard and Cunningham, 2003; Sathye, 1999). The adoption of e-banking by consumers is being extensively investigated by several authors (Sayar and Wolfe, 2007; Eriksson, Kerem and Nilsson, 2005; Jaruwachirathanakul and Fink, 2005; Gerrard and Cunningham, 2003; Wang et al., 2003; Mukherjee and Nath, 2003). Among the different models that have been proposed, the technology acceptance model (TAM) (Davis, 1989; Davis et al., 1989) adapted from the theory of reasoned action (TRA) (Ajzen and Fishbein, 1980), appears to be the most widely accepted one. According to the TAM, adoption behavior is determined by the intention to use a particular system, which in turn is determined by the perceived usefulness and perceived ease of use of the system.

Although previously researchers have investigated and replicated the TAM and agreed that it is valid in predicting the individual’s acceptance, the TAM’s fundamental constructs does not fully reflect the specific influences of technological and usage-context factors that may alter the users’ acceptance (Moon and Kim, 2001). Therefore, in the current study the researchers incorporated two new constructs (security and privacy and government support) to enhance the understanding of an individual’s acceptance behavior of online banking.

1.3 Overview of Internet Banking in Malaysia

At present, the Malaysian banking system comprises the Bank Negara Malaysia and 9 commercial banks and 4 foreigners control banks and financial institutions. The
East Asian financial crisis experienced by the Malaysian banking system from 1997 to 1999 has exposed the vulnerability and inefficiency of the banking system at allocating capital to business risks (Aziz, 2002) and the situation has substantially improved in 2000 and 2001. In Malaysia, consolidation of financial institutions was driven by heavy-handed government influences. The Central Bank, Bank Negara Malaysia mandated the merger of over 50 local financial institutions (commercial banks, merchant banks and financial companies) in 1999 and form 10 groups of “anchor banks”. This was consistent with the longer-term objective of creating a core of domestic banking institutions to meet the challenges to increase liberalization besides increase the flexibility of the local banks to bear up risks arising from the economic slowdown (BNM, 1998). By the end of year 2003, the number of local banks in Malaysia has streamlines into 10 and there are 9 anchor banks in Malaysia which is: Affin Bank, Alliance Bank, AmBank, CIMB Bank Berhad, EON Bank Berhad, Hong Leong Bank, Malayan Banking Berhad, Public Bank and RHB Bank. (Bank Negara Malaysia, 2006)

Like most of the Muslim countries, Malaysia has a dual banking system; that is, it has conventional banking system and Islamic banking system. There are two Islamic banks in Malaysia: the Bank Islam Malaysia and Bank Muamalat. The early decade of the 1990s saw the emergence of automated voice response (AVR) technology. Using the AVR technology, banks offered telebanking facilities for financial services. With further advancements in technology, banks were able to offer services through personal computers owned and operated by customers at their convenience by using proprietary intranet software. The users of these services were, however, mainly corporate customers rather than retail customers. Since June 2000, with the Malaysian Central Bank giving the
approval for commercial banks to offer e-banking services, all the anchor banks have created a web presence in various ways (Sohail et al., 2002).

According to the article in www.comScore.com, across markets in Southeast Asia, visitation to online banking sites increased strongly in the past year, growing by double digits percentages across all six countries measured. Malaysia, home to the largest total number of online banking users in the study, climbed 16% to 2.7 million visitors in January 2011.

ASLI (2002) reported that in response to increased competition, the larger banks in Malaysia had aggressively manipulated the internet. Local banks were given an 18-month head start over foreign banks to launch online banking, as the Malaysian authorities pushed domestic banks to invest in technology to compete with global players. Hong Kong and Shanghai Banking Corporation (HSBC) was the first foreign-controlled bank to launch a fully transactional online banking service in January 2002 when regulations permitted foreign banks to do so. Despite the authorities' encouragement to adopt technology in banking, traditional branch-based retail banking still remains the most common method.

Bank Negara Malaysia (BNM) or Central Bank of Malaysia decided to give the much-awaited approval for domestic banks to leap into the Cyber Wagon on 1st June 2000. Effectively from June 1st, local domestic banks were allowed to offer full range of products and services over the Internet (BNM, 2000). Malayan Banking Berhad (Maybank) became the first bank to offer Internet banking services, followed by Hong Leong Bank and the trend then followed by the others. Meanwhile, the locally
incorporated foreign owned banks were only allowed to operate Internet Banking after January 1st, 2002.

Presently, only bank licensed under the Banking and Financial Institution Act 1989 (BAFIA) and Islamic Banking Act 1983 are allowed to offer Internet banking services in Malaysia. To date, there are 13 commercial banks (Including Islamic bank) out of 25 bank institutions in Malaysia offering Internet banking services--- (inclusive of 9 local banks and 4 foreign banks).

Table 1.1: Banks offering internet banking services in Malaysia

<table>
<thead>
<tr>
<th>No.</th>
<th>Local Banks</th>
<th>Foreign Banks</th>
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<tbody>
<tr>
<td>1.</td>
<td>Alliance bank Malaysia berhad</td>
<td>Citibank Berhad</td>
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<tr>
<td>2.</td>
<td>Am Bank (M) Berhad</td>
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<td>3.</td>
<td>Cimb Bank</td>
<td>OCBC Bank (Malaysia) Berhad</td>
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<td>4.</td>
<td>Bank Islam Malaysia Berhad</td>
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<td>5.</td>
<td>Hong Leong Bank</td>
<td></td>
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<td>6.</td>
<td>Malayan Banking Berhad</td>
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<tr>
<td>7.</td>
<td>Public Bank Berhad</td>
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<tr>
<td>8.</td>
<td>RHB Bank Berhad</td>
<td></td>
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<tr>
<td>9.</td>
<td>Southern Bank Berhad</td>
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</tbody>
</table>

Source: Bank Negara Malaysia website
1.4 Overview of Banks in Kuching, Sarawak

Kuching is the capital city of the East Malaysian state of Sarawak. Kuching is the most crowded city in the state of Sarawak where the population is 625,517 million (Statistic, 2006) and the fourth largest city in Malaysia. It is essential to do the research in this city because there are more than 10 banks located in Kuching, Sarawak. The 9 anchor banks are all located in the city and there are also a few of Islamic bank such as Bank Mualmalat Malaysia Berhad, Bank Islam Berhad and Al-Rajhi Banking and Investment Corporation (Malaysia) Berhad. Its largest segment, consumer and merchant banking, deposit services, mortgage and loans, unit trusts banc assurance products and credits cards are available. Due to the growing major lifestyle trend in Kuching, with a strong hype of broadband services and multimedia super corridor, these have changed the lifestyle of the consumers and doing transaction using online potential. In order to increase its efficiency, the usage of online banking application is crucial in order to make the financial transaction a lot faster and easier.

1.5 Problem Statement

In today’s banking environment, Malaysia’s banks especially in Kuching Sarawak are continuously looking to better use technology by attempting to move low-value away from branch counter services to ATM networks and to Internet and telephone banking. As a consequence, most of the commercial banks in Malaysia have launched websites to offer online services to banks’ customers. They are beginning to use the internet as a new distribution channel in the belief that the future of services lies in online banking.
As in Kuching, Sarawak, the hectic life that Kuching’s citizen faced, for example, the increasing in population, the increasing of the industrial development and the problem with the traffic jam that people faced everyday constraints their time to make the banking transactions directly at the counter especially during weekdays. The daily transactions to be done are the funds transfers, bills payments, checking balances and statements. There are many banks in Kuching, but sometime for some people who work far away from the city center finds it time consuming to make transactions at the counters.

One of the main reasons why consumers need to adapt to online banking is because of the flexibility of the system. Consumers can use the system upon their own needs regardless of the place and time which further saving cost and time for the consumers by using their laptop. Apart from that, due to the massive technology advancement, hand phones’ features have been changed with various functions such as 3g’s and WIFI that enables the consumers to online through their hand phones. By using these devices, consumers can do the online transactions easily according to their own needs. Lack of customers’ awareness of the advantages influences the intention to use online banking among the consumers. Therefore, banks in Kuching, Sarawak should try to let their customers know the advantages of using online banking when compared to the traditional banking. The perceived usefulness of online banking transaction will influence users to adopt the technology if they find it useful. This is supported by Pikkarainen et al. (2004) in their study of online banking in Finland. They found that perceived usefulness is one of the most significant influences on the intention to use online banking among the consumers.
According to Nelson and Queenie (2006), online banking adoption in Malaysia is moderately low and there is limited research to understand the key adoption determinant. Although there is evidence that the electronic revolution has commenced in Malaysia, widespread electronic banking is still several years away. Furthermore in Malaysia, online-banking research is still in its early years, which makes it hard for banks and other interested parties to design intervention that would enhance the delivery of online banking.

Like perceived usefulness, perceived ease of use is important because customers' may believe the given application is useful, but at the same time they might think that the system is difficult to use (Davies, 1989). It is one of the important determinants in adoption of a lot information technology such as online banking (Wang et al., 2003). Malaysian user especially Kuching's citizen have little experience in using internet and therefore, ease of use of the online banking web sites might influence their adoption decision. As different studies show various result, this study will be focusing on the influence of perceived ease of use on the intention to adopt online banking in Kuching, Sarawak.

However, customers' acceptance and confidence in the system remain a prime factor in ensuring the success of Internet banking. According to McKinsey & Company (2002), it was reported that only 31 percent of Malaysians indicated an interest in banking on the Internet in future, and a further 66 percent were worried by security concerns. The present study aims at examining the impact of perceived trust and security on the acceptance of Online banking in Malaysia. The results of this study will be useful to Malaysian domestic banks for the assessment of the impact of security and privacy and
for the formulation of appropriate strategies to raise customers' confidence level in Internet banking (Munirudddeen, L., 2007).

In order to raise the confident level of customer in the adoption of online banking, government play a vital role in establishing a clear cyber law to minimize the risk of online banking transaction. In this study, this issue will be raise in order to determine whether this factor is important in influencing the customers' intention in online banking in Kuching, Sarawak.

1.6 Objective of the study

According to Wang (2003), the studies on internet banking are important given that they are useful to the banking industry in formulating marketing strategies to promote new forms of Internet banking systems in the future. The objective of the study is to identify the factors that encourage consumers in Kuching, Sarawak to adopt internet banking services and to use the study's findings to develop strategies for banks on how to maximize the rate of adoption.

Therefore, this study aims to obtain objectives such as:

i. To examine whether perceived ease of use has a positive effect on the intention of the adoption of online banking;

ii. To examine whether perceived usefulness has a positive effect on the intention of the adoption of online banking;

iii. To identified the perceived trust and security has a positive effect on the intention of the adoption of online banking; and
iv. To examine whether government support has a positive effect on the intention of the adoption of online banking;

In order to achieve the objectives above, the element from Technology Acceptance Model (TAM) together with security concern and government support will be used in this study in order to examine the perspective of Malaysian’s (Kuching’s citizen) in the adoption of online banking services.

1.7 Conceptual Framework

One of the most common model used by the researcher in this study of user’s adoption of technology is Technology Acceptance Model (TAM) (Davies, 1989). This model proposed that both perceived usefulness and perceived ease of use can be used to predict attitude towards using new technology, which in turn can affects the behavioural intention to use actual system directly (Davies, 1989; Venkatesh et al., 2003).

Perceived usefulness is define by Davis, 1989 as the “degree to which a person believes that using a particular system would enhance his or her job performance. Thus, for users of online banking, they will adopt the system if they believe the system will bring benefits such as reducing time spent on going to bank and improving efficiency”.

According to TAM, perceived ease of use is the “degree to which the prospective adopter expects the new technology adopted to be free effort regarding its transfer and utilization” (Davies, 1989). Therefore, if users feel that online banking is easy to use and free of hustle then the chances of the to use the system will be greater.
Based on the existence studies, this research will also use TAM ad the base model and will extend the model by including other variables which the researcher’s believe are important for the study of online banking adoption in Kuching, Sarawak. This study model also aims to focus on factors which are specific to Kuching, Sarawak which has become major challenge for online banking areas which are the government support and consumers’ trust on security and privacy due to the unclear internet laws and regulation in Malaysia.

*Figure 1.1: The research Model*

### Independent Variables

- Perceived ease of use
- Perceived usefulness
- Government support
- Perceived trust and

### Dependent Variable

- Adoption of Online Banking
  - Consumer intention to use

1.8 Significance of the study

This study is perceived as important in 2 different perspectives, which are:

i. Theory

In term of the theoretical development, this paper seeks to find a model, which will contribute to the basic for the research of the adoption of online banking.
ii. Practitioners

As for the banks itself, online banking is one of the weapons for the banks to compete with each other in these technological era. This is supported by Giannakoudi (1999) which stated that the online banking provides advantages to the banks including the increased of the customers’ base, cost saving and product innovation, marketing and communications, development of non-core businesses and the offering of services regardless of geographic area and time.

It could contribute to the strategic planning and managerial decision for the decision makers of the banks in increasing their efficiency in the offering the online banking to their customers. This could also help the banks to improve their quality of service in dealing with customers in the adoption of online banking.

This study proposes some practical applications in the development and adoption of Internet banking. It suggests that Internet banking sites or portal developers should provide useful and easy to use features on their Web sites to encourage users to adopt the services. It was also found that respondents put much emphasis on issues like convenience and security level password in conducting Internet banking transactions.

Apart from that, this study also include the voice of different age group which not only focusing to young age users only. For example, older people may find it a lot more challenging to conduct online banking and this could be taking into account as the important factor in influencing the adoption of online banking.