



Journal of Internet Banking and Commerce

An open access Internet journal (<http://www.arraydev.com/commerce/jibc/>)

*Journal of Internet Banking and Commerce, April 2012, vol. 17, no. 1
(<http://www.arraydev.com/commerce/jibc/>)*

PERCEIVED BARRIERS OF INNOVATIVE BANKING AMONG MALAYSIAN RETAIL BANKING CUSTOMERS

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Abstract

This study aims to identify perceptual barriers of Internet banking adoption among Malaysian retail banking customers. The perceptual barrier factors that analyzed were difficulty to operate, hassle to use, unreliable, perceived risk and high connection fees. This study employs a quantitative approach using questionnaire survey at selected banks in Malaysia. The results indicate that there are significant barriers exist in the perception of Internet banking adoption among Malaysian retail banking customers. The results indicate several implications for bank managers to change the perceptions of retail internet banking customers.

Keywords: Perceived barriers, Retail Internet Banking, Banking customers, Internet banking adoption.

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INTRODUCTION

Banking industry engaged technology (IT) to acquire, process, and deliver the information to all relevant users. IT is not only critical in the processing of information but also serves a way for the banks to differentiate their products and services in order to gain competitive edge. Customers are becoming value-sensitive and banks need to constantly innovate and update to match customers' expectation and to provide convenient, reliable, and expedient services. Driven by the competition to capture a larger share of the banking market, banks have started introducing its distribution channel via a new media which is the Internet. Internet banking has been in usage for a couple of years. In fact, it was introduced in the 1980's and has been growing profusely starting from mid nineties. Main attraction of internet banking to customers is round the clock availability of the services and ease of transactions.

In the past, the computer systems that made the information systems operate were rarely noticed by customers. Today, Web sites, electronic mail, and electronic bill and payment systems are an important way for banks to reach their customers. The Internet, as an enabling technology, has made banking products and services available to more customers and eliminated geographic and proprietary systems barriers. However, the success of internet banking would greatly depend on the adoption rate of this technology by customers. Millions of dollars have been invested by banks to set up the Internet banking facilities. Despite the investments and the availability of the banking systems via Internet, banks find it difficult to persuade banking customers to adopt Internet banking. Therefore, it is necessary to identify the main barriers that hinder retail banking customers from adopting Internet banking (Wang et al 2003).

Previous researches have concluded in their study that credibility is one of the concerns among Internet banking adopters. It reflects that the services provided are unreliable, risky and this would enable banking customers to feel reluctant to adopt Internet banking. (Wang et al 2003, Rotchanakitumnuai & Speece 2003). These factors have reduced the confidence of the adopters while non adopters who intend to adopt in future do not trust and therefore reflect the negative perception towards adopting the Internet banking services.

LITERATURE REVIEW

In Malaysia, with the rapid technological advancements and increasing consumer demands for more efficient delivery services, the financial landscape has continued transition towards increased level of significance of Internet Banking as one of banking distribution channels (Central Bank of Malaysia, 2005). Adoption of internet banking is primarily determined by the number of people connected to Internet. Customers will not be able to utilize internet banking without internet connectivity. The relative success of internet banking can be gauged by identifying the current and anticipated users of Internet. Table 1 summarizes the penetration rate of internet banking adopters from 2006 to 3Q 2009 (MCMC, 2009).

In Malaysia, the internet banking adoption rate is 25.9% in 3Q 2009, which is considered low to a country which has high number of Internet subscribers (Central Bank of Malaysia, 2011). Banking activities are easily digitized and automated, thus, from operational perspective, lend themselves to Internet adoption (Elliot and Loebbecke, 2000). The potential competitive advantage of the Internet for banks lies in the areas of cost reduction and delivering customer satisfaction. In service industries in general and in the banking industry, in particular, the Internet has been explored and exploited as a means of improving service provision (Jun et al., 2004).

In general innovations would enable consumers to improve in the way they transact their banking transaction but innovations could also face resistance from the customers and resistance to change is a reaction that has to be overcome before adoption begins.

The resistance in the form of barrier through difficulty to operate, hassle to use, unreliable, risk and high connection fees seems to be the high priority which influences consumers to adopt Internet banking. These barriers would motivate consumers to continue their traditional banking method in which they prefer to deal with human rather

than technology (Heinonen, 2004). Banks are not only competing in traditional banking services, but also expanded the scope of the competition to an e-environment with Internet banking services (Gonzalez et al., 2004). These banks are introducing Internet banking as an assurance to their customers that they will be able to maintain a competitive quality service in future, in efforts to avoid losing their customers to the branches of the foreign banks (Jenkins, 2007). Factors that need to be analyzed in order to determine the degree of barriers towards adoption of Internet banking are perceived difficulty to operate, perceived hassle to use, perceived unreliable, perceived risk and perceived high connection fees are discussed in detail.

PERCEIVED DIFFICULTY TO OPERATE

Some customers may have a negative image of computers in general and Internet channel in particular. Therefore, some consumers may perceive internet banking technology as too complicated and difficult to use. These segments of customer have strong resistance towards Internet banking services or use limited services which deem not so complicated. As such, these groups perceive Internet banking service has no added value or relative advantage or increase their ability to control their financial issues (Laukkanen et al. 2007).

Many customers, who are not comfortable with computers and the Internet, often find it difficult to use internet banking especially for beginners as Internet banking is considered time consuming for them as they need to understand the banking website. In many instances, a simple mistake, like clicking a wrong button, may create a panic for them. Many individuals often keep wondering if they have properly executed the transaction as sometimes, internet banking can be time consuming and tedious, as many websites take a considerable time to get started. Consumers or the starter may also encounter technical difficulties and connectivity problems while conducting internet banking transactions especially those using broadband (Swiss Bank, 2010). In a study conducted by Meuter et al. (2000) explained the behaviour patterns of consumers in which they perceive the use of Internet banking requires acceptance of the technology, which can be complicated.

To use Internet financial services, consumers not only need to understand the technology, they also need to understand financial services. The complex nature of financial services often renders the task of financial information search (Black et al, 2002). In addition, previous scholars found that Internet banking was found to be difficult to operate (Meuter et al., 2000; Black et al, 2002 and Laukkanen et al., 2007); due to functional barriers (Teo and Pok, 2003; Wu and Wang, 2005); and unclear process of Internet operations (Kuisma *et al.*, 2007). Therefore, it can be concluded that difficult to operate Internet banking is negatively related to adoption of retail Internet banking among bank customers.

Perceived hassle to use

The multiple layers of security add to the hassle of making an internet banking transactions no matter small or large amount of transactions. The process is rather standardized in terms of security as the customers need to undergo several layers of security measures which are seen as hassle for even small amount transactions. It is also costly for the bank to implement these layers of security.

The hassle of making such internet banking transactions will discourage consumers from using this method. They would prefer to transact by cash or checks (Tan, 2010) and this encourage consumers to remain as branch banking customers. As web technology needs frequent updates, the internet services gets disrupted frequently and it may cause the Internet banking to go under construction or off line for some time. Customer need to go through hassle in the form of unable to perform transaction especially the transaction is a very important transaction (HSBC, 2011).

To enroll Internet banking, customers need to be present at the local branch to fill out application forms. Therefore, customers need to devote their valuable time in order to secure applications for Internet banking. In addition, customers also need to go to branch in the event if any problems occurred during performing Internet banking transaction as there is no online assistance available for customers (HSBC 2011). As such, customer feels that it is time consuming to go to the bank branches to solve the problems (Walker et al., 2002; Westland, 2002). In one study, it was found that 50% of Internet banking web sites has page layout problems that make information hard to find for ordinary customers who are not tech savvy. Their findings suggest that website layout affects Internet banking consumers' behaviour. The study also confirms the TAM relationships in all treatments and indicates that layout has an effect on user acceptance of Internet banking in terms of TAM constructs (Vrechopoulos, & Atherinos, 2009).

Customers reluctant to use Internet banking as they fear the time provided to complete a transaction is insufficient and most of the time they are unable to complete certain transactions as they need to obtain approval code before completing the transactions. This causes inconvenience and hassle to customers who are slow and careful in performing banking transactions. The Internet banking is viewed as complex, cumbersome and barrier to usage (Walker et al., 2002; Westland, 2002; Vrechopoulos, & Atherinos, 2009 ; Tan, 2010; Gerrard & Cunningham, 2003; Howcroft *et al.*, 2002; Black *et al.*, 2002). Therefore, it can be concluded that hassle to use Internet banking is negatively related to adoption of retail Internet banking among bank customers.

Perceived unreliable

Customers who rely on Internet banking services may have greater intolerance for a system that is unreliable or one that does not provide accurate and current information. Clearly, the longevity of Internet banking depends on its accuracy, reliability and accountability (Central Bank of Barbados, 2002). Consumers often lack confidence in trusting the Internet technology mainly due to system security issues, non confidence of bank websites and doubts about the reliability of Internet services (Min and Galle, 1999; Ratnasingham, 1998). In Malaysia Internet banking scam had risen drastically as the number of reports made to cyber security increased from 634 in 2009 compared to 1,426 reports in 2011 (CBM 2011). This scam involves on how Internet banking customers were tricked to reveal their username and password by providing a fake website which is identical to actual Internet banking websites which is known as "phishing". Schneier (2000) revealed that "phishing" attack takes place when the Internet's architecture makes it very easy for someone in a remote part of the world to imitate a legitimate bank website exposing customer's information and they are vulnerable to such attacks. One of the main reasons of why banking customers do not trust Internet technology is due to the uncertainty of the reliability of the Internet services (Lee and Turban, 2001; Min and Galle, 1999; Paul, 1996; Ratnasingham, 1998). Customers who adopt Internet banking

services are more likely to perceive problems related to loss of privacy, as the Internet apparently allows outsiders to access their private information easily (Gattiker et al., 2000; Jones et al., 2000). Therefore banking customers do not believe in privacy policies as it will expose customers' confidential information (Gerrard and Cunningham, 2003). Slow response time after performing the transaction would lead to a delay of service delivery and cause customers to be **ensured** that the transaction was completed (Jun and Cai, 2001). Therefore, it can be concluded that unreliability of adopting Internet banking is negatively related to adoption of retail Internet banking among bank customers.

Perceived risk

Customers may deem to perceive new technology based service as a threat and would cause them to reject it. Therefore perceived risk is associated with reliability and system failure (Walker et al., 2002). The main issue that worries the banking consumers are the transaction risks while performing Internet banking services and failure of the banks to assure prompt services would be delivered (Walker et al., 2002; Westland, 2002). Security concern is among the most important factor that discourages consumers from adopting Internet banking (Jones et al., 2000, Black et al., 2001; Lee & Turban, 2001; Nilsson et al., 2005; Yousafzai et al., 2005). In Malaysia, a related study was undertaken by Lallmahamood (2007) strengthening the argument of security and privacy factor playing an important role in determining consumer adoption of Internet banking.

Frequently slow response time after the transaction leads to a delay of service delivery and cause customers to be ensured that the transaction was completed (Jun and Cai, 2001). Any security breaches would lead to destruction of operating systems and leak of customers' private and detailed information (Min and Galle, 1999). Furthermore unconvinced customers with the bank's security systems and infrastructures would reverse the decision to adopt Internet banking (Black et al., 2001; Gattiker et al., 2000). In conclusion, security is a crucial factor in determining the adoption level as customers fear the high risk involved in performing financial transactions via website (Aladwani, 2001; Black et al., 2001; Gerrard and Cunningham, 2003; Sathye, 1999). Therefore, it can be concluded that perceived risk of adopting Internet banking is negatively related to adoption of retail Internet banking among bank customers.

Perceived high connection fee

High connection fees are another important factor that affects the adoption of retail Internet banking. Therefore, lower connection fees would enable consumers to adopt retail Internet banking at a greater level. Generally customers would be comparing new services costs to branch banking costs to facilitative the adoption level. Li and Zhong (2005) mentioned that cost of internet connections also one of the important aspects in adoption of internet banking services.

Li & Worthington, (2004), Sohail & Shanmugham, (2003) and Zheng and Zhong (2005) also supported the earlier findings that cost of internet connections are important elements in the adoption of Internet banking. Therefore, it can be concluded that perceived high connection fee is negatively related to adoption of retail Internet banking among bank customers.

RESEARCH FRAMEWORK

The research framework shown in Figure 1, adopted for this study seeks to measure the impact of perceived barriers among banking customers. The framework postulates that adopters of internet banking are influenced by perceived barriers such as difficulty to operate, hassle to use, unreliable, perceived risk and high connection fees which are the most common variables that affect the adoption of Internet banking.

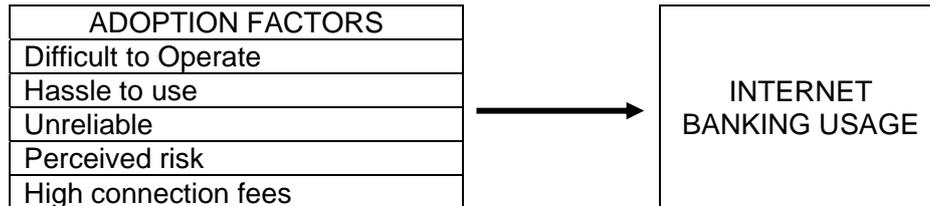


Figure 1: Research Framework

FINDINGS

The statistic result which indicates that p value is 0.000 which is lesser than significant level of 0.001; therefore we can conclude that there is a significant negative relationship between perceived difficulty to operate and Internet banking usage among Malaysian consumers. The negative relationship indicates that when the degree of perceived difficulty to operate increases the level of internet banking adoption decreases. The test statistic result which indicates that p value is 0.000 which is lesser than significant level of 0.001; therefore we can conclude that there is a significant negative relationship between perceived hassle to use and Internet banking usage among Malaysian consumers. The negative relationship indicates that when the degree of perceived hassle to use increases the level of internet banking adoption decreases.

Table 2: Adjusted R² value and significance level

Category	Adjusted R ²	F	Sig
Perceived Difficulty to Operate	.161	40.595	.000**
Perceived hassle to use	.088	20.959	.000**
Perceived unreliability	.167	42.369	.000**
Perceived risk	.060	14.077	.000**
Perceived high connection fees	.099	23.602	.000**

The test statistic result which indicates that p value is 0.000 which is lesser than significant level of 0.001; therefore we can conclude that there is a significant negative relationship between perceived unreliability and Internet banking usage among Malaysian consumers. The negative relationship indicates that when the degree of perceived unreliability increases the level of internet banking adoption decreases. The test statistic result which indicates that p value is 0.000 which is lesser than significant level of 0.001; therefore we can conclude that there is a significant negative relationship between perceived risk and Internet banking usage among Malaysian consumers. The negative relationship indicates that when the degree of perceived risk increases the level of internet banking adoption decreases. The test statistic result indicates that p value is 0.000, which is lesser than significant level of 0.001.

Therefore, we can conclude that there is a significant negative relationship between perceived high connection fees banking usage among Malaysian consumers. The negative relationship indicates that when the degree of perceived connection fees increases the level of internet banking adoption decreases.

DISCUSSION

This study aims to identify the perceived barriers that discourage Malaysian retail banking customers to adopt Internet banking. It investigates whether the adoption factors such as difficulty to operate, hassle to use, unreliable, risky and high connection fees. This study adopts a quantitative approach using questionnaire survey at selected banks in Malaysia. The results indicate that there are significant barriers in the adoption of Internet banking in terms of difficulty to operate, hassle to use, unreliable, risky and high connection fees. The results indicate that all hypotheses regarding perceived difficulty to operate, perceived hassle to use, perceived unreliable, perceived risk and perceived high connection fee were supported.

Therefore, it can be concluded that when the level of perceived barrier factors increases, the adoption of Internet banking among retail banking customers decreases. Therefore, the results support the findings of the previous research conducted. Thus, the result suggests managerial implications for retail bankers in Malaysia to minimize the barrier perception among Malaysian retail banking customers in order to enlarge the customer base in the adoption of Internet banking services. The findings on perceived difficult to operate in this study supports the findings of previous scholars of Fain & Roberts, 1997; Meuter et al., 2000; Black et al, 2002 and Laukkanen et al., 2007. The main reason of why respondents find it difficult to operate due to functional barriers appeared to be obstacles to adoption. The functional barrier refers to be the usage barrier of an innovation and ease of use of Internet banking (Teo and Pok, 2003; Wu and Wang, 2005). It also includes unclear process of Internet operations (Kuisma *et al.*, 2007). Other obstacles that hinder customers to adopt Internet banking is the difficulty of use or learn to use because of unclear instructions.

The complexity nature of the innovation makes it difficult and cumbersome to use Internet banking and therefore, they are very likely to perform banking transactions in traditional ways (Cheung et al. 2000). In another concern, Internet banking web pages were found to be confusing because the procedures seem to be complex. It was also found in the survey that Internet banking were found to be difficult to use as customers had to remember and key in excessive information such as username, password and also requires tagging password before completing a banking transaction. The findings on perceived hassle to use in this study supports the findings of previous scholars of Walker et al., 2002; Westland, 2002; Vrechopoulos, & Atherinos, 2009 and Tan, 2010. In the case of technological innovation, hassle to use can be defined as the complexity of the service which creates barrier to an adopter Gerrard and Cunningham, 2003; Howcroft *et al.*, 2002; Black *et al.*, 2002). The standardized process of security measurement on Internet banking transactions is needed even for small amount of transactions. Customers need to undergo several layers of security measurements which are seen as greater levels of hassle for many Internet banking customers. Therefore, Internet banking customers may be reluctant to adopt Internet banking as to avoid unnecessary hassle as this process found to be inconvenient to them.

It is suggested that there is a greater need for banks to simplify the process through customization of operations for larger and smaller amount of transactions via Internet banking.

As the Internet banking operations needs frequent service updates by respective banks, this create frequent service disruptions and may cause hassle in the form of unable to perform transactions at odd hours especially when the transaction is a very important and urgent transactions. This phenomenon is seemed to be affecting highly busy working customers who preferred to perform Internet banking transaction during their free time at odd hours. These service interruptions usually occurred due to upgrading bank services and also running summary of daily batch operations.

Therefore, it is suggested that Internet banking operations by respective banks should resort to a new solution with high speed technology and added functionality that would reduce longer interruptions hours to shorter duration. New customers would be reluctant to use Internet banking as they fear that the time allocated to complete a transaction is insufficient and most of the time they end up in repeating the process all over which seen to be a form of hassle. Therefore, it is suggested that the Internet banking operations should incorporate new enhanced features that would automatically secure the previous transactions which enables hassle free Internet banking operations for bank customers.

The findings on perceived unreliable in this study supports the findings of previous scholars of Paul, 1996; Ratnasingham, 1998; Min and Galle, 1999; Gattiker et al., 2000; Jones et al., 2000; Jun and Cai, 2001; Lee and Turban, 2001; Central Bank of Barbados, 2002; Gerrard and Cunningham, 2003 and Central Bank of Malaysia, 2011. It was found that banks do not update accurate and current information on their bank websites and this has caused misleading information resulting in customers arriving at wrong decisions especially involving financial investments whereby the Internet banking customers tend to incur financial losses.

Therefore, it is suggested that bank websites information need to be updated frequently on daily basis as this would enable customers arrive at right decision making pertaining to transactions and investments. As the Internet banking operations progresses, many dishonest individuals take advantage of the technology by creating fake websites to dupe Internet banking customers who are then tricked to reveal their user name and password and ending up in financial loses. Therefore, it is suggested that Internet banking providers to create awareness program or campaign to educate Internet banking customers on the threat posed by fake websites operators. In addition, banks should enhance their security measurement to prompt the customers of potential threats by differentiating between legal and illegal websites.

As banking customers' fears of the exposure of private and confidential information of customers' profile, this would have a negative impact on the adoption level. Therefore, it is suggested, that banks should provide adequate assurance to ensure customer confidentiality is always at their top priority. Slow response time during performing the Internet banking transactions would lead to a delay in the completion of the service delivery and cause customers to be unsure of the completion of the transaction.

Therefore, it is suggested that banks need to enhance the adequate acceptable response time to enable customers to perform their Internet banking transactions efficiently. The findings on perceived risk in this study supports the findings of previous scholars of Sathye, 1999; Min and Galle, 1999; Gattiker et al., 2000; Jones et al., 2000; Aladwani, 2001; Black et al., 2001; Jun and Cai, 2001; Lee & Turban, 2001; Walker et al., 2002; Westland, 2002; Gerrard and Cunningham, 2003; Nilsson et al., 2005; Yousafzai et al., 2005 and Lallmahamood 2007. Generally customer are reluctant to adopt Internet banking since they perceive risk in the form of revealing customers personal and account information to third party.

It is also a form of psychological barrier as customer fear of information leakage which would cause financial losses to customers. Therefore there is an element of potential harm to customers' wealth if the customers would adopt the innovation banking services. With the resistance from consumers, banks need to develop a different method to approach these customers with emphasizing the strategies taken by the banks to reduce the information leakages through effective communication. Therefore the best solution to this problem is to provide detailed explanation and information to the consumers to enable them to convince that innovation is not bad but it complements traditional banking.

The element of mobility has to be explained in detail as an attempt to provide customers an added value in convincing customers to adopt Internet banking. In addition, banks need to undertake a reasonable accepted level of security approach in providing the services to customers. The issue of phishing is posing serious predicament to Internet banking adopters. Therefore the legal webpage should have some unique form of indication to avoid customer being hoodwinked by fake website. Appropriate training and communications need to be conducted to educate adopters and non adopters to be vigilant in identifying fake website.

In addition, banks should demonstrate the level of protection banks have undertaken in securing the website and what are the means of customers falling in the trap of fake websites. Therefore customers need to educate in order to protect them through demonstration of how existing and potential customers would be able to use the website in a secure manner. Generally banks attempt to secure the website and that approach would create web page complication and unfriendly to use. Therefore banks need to manage both the security as well user friendly approach in order to secure more customers in adopting internet banking services.

The findings on perceived high connection fees in this study supports the findings of previous scholars of Sohail & Shanmugham, 2003; Li & Worthington, 2004; Li and Zhong 2005 and Zheng and Zhong 2005. This means that consumers who are comfortable with the traditional banking services have lower probabilities to adopt Internet banking if they perceive that Internet banking is an additional cost. The cost associated with Internet banking in this study focuses on Internet access fees and connection charges. In order to attract existing internet banking customers to use Internet banking services in a greater level and potential adopters to adopt internet banking, connection fees need to be reasonably priced. It may not be viable if the connection fees are high as customers would sense that it is not feasible to perform financial transaction via Internet.

In view of this, banks should communicate with the government as well as internet service provider to offer Internet at a reasonable price.

CONCLUSION

Banks and Internet providers also can complement each other through financial transaction by banking customers with a win-win situation for both parties. The issue of computer and hardware costs does not arise as it is only one time investment and therefore consumer would not be reluctant to invest.

The issue of internet access arises as it is a continuous process where customers need to maintain their Internet access expenditures on monthly basis. Marketers in banking sector should focus on consumers who are reluctant to switch to internet banking in order to boost usage of Internet banking. Marketing strategies to be adopted by marketers should be focused on issues or concerns of non-adopters and work towards convincing them.

It is important to organize awareness programs and campaigns to promote internet banking usage. Guidance on how to use internet banking should also be provided on the web and at physical distribution centres to facilitate the consumers. In addition, assuring the barriers in a positive manner would enable consumers to act positively which would affect consumers' attitude towards adoption and usage of Internet banking services.

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