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Factors Affecting the Decisions of Tabung Haji Customers in Malaysia to Use ATM Banking: An Empirical Investigation

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Abstract

The aim of this paper is to provide a preliminary investigation of the factors that determine whether Malaysia's Tabung Haji customers in Eastern Malaysia will use or not a new facility introduced by the institution, namely Automated Teller Machine or ATM banking. As such, this study introduces the concept Tabung Haji ATM Banking (TAB). In order to explain the factors, this paper extends the applicability of the technology acceptance model (TAM) to TAB and includes "perceived credibility (PC)", and "perceived religiosity (PR)", in addition to "perceived usefulness (PU)" and "perceived ease of use (PEOU)". The results indicate that PU, PEOU, PC and PR are the key determinants to predicting the intentions to use TAB. In addition, PEOU is significantly associated with PU, which, in turn, affecting usage intention among Tabung Haji customers on TAB. This study suffers from two limitations, first is on its location of study and, second is on its limited number of measures suggested in the modified model for the study. Nevertheless, these limitations provide directions for the future study and also provide new information in a new introduced financial innovation at Tabung Haji. The results will be primarily of benefit to Tabung Haji since this study offers insights on the intentions of its customers to use TAB.

Keywords: Personal finance; Tabung Haji; Technology acceptance model; Research study; Malaysia

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INTRODUCTION

According to Mishkin and Eakins (2008), e-banking facilities have enabled banks to lower the cost of bank transactions by having the customer interact with electronic banking facilities rather than with a human being. In Malaysia ATM was introduced in 1981 (Guru *et al.*, 2000) in order to strengthen the efficiency of banking and financial services. Simply put, ATM banking is defined as a banking facility that enables banking transactions to be conducted using an automated teller machine that allows bank customers to withdraw cash, make deposits, transfer funds from one account to another and check balances (Mishkin and Eakins, 2008; Guru *et al.*, 2000). Indeed, Malaysia bank customers have utilized ATM banking since its inception in 1981, due to its merits. Elucidated in more detail, the merits of ATM banking are threefold. First, ATM banking is a flexible banking facility to consumers, whereby it is available to use for 24 hours a day, 7 days per week. Second, ATM banking offers a value-added in bank customers' banking transaction as it provides more convenience for the customers. Last but not least, ATM banking has its own synergy to generate economies of scale, whereby the bank management can offer many products at cheaper costs since the transaction costs are kept declining as the size of transaction increases. For instance, ATM offers a number of financial transactions such as bill payment, cash withdrawal and share application, and at the same time a financial intermediary can advertise its product and service offerings on the ATM. Considering these merits, Tabung Haji introduced ATM banking to its customer on 15 April 2008, in order to provide alternative to its customers to conduct routine financial transactions such as to make deposits and cash withdrawals.

Prior to the introduction of ATM banking, most of the customers of Tabung Haji were using over the counter services in order to fulfill their financial transactions such as to make deposits and so forth. However, on 15 April 2008, Tabung Haji customers can perform ATM financial transactions such as to make deposits, cash withdrawal as well as balance queries. The practice is based on the concept "outsourcing" whereby Tabung Haji builds collaborations with two Islamic financial institutions namely Bank Islam Malaysia Berhad (BIMB) and Bank Kerjasama Rakyat (Bank Rakyat). These two financial institutions are particularly chosen owing to their active involvement in Islamic banking product and service offerings as well as their similarities in promoting the application of Islamic principles in each of their financial transactions. There is limited evidence that suggests Tabung Haji customers are refused to use ATM banking. Indeed, they were already familiar with ATM use because they were also the customers of many commercial banks in Malaysia whereby these banks also provide ATM banking. This argument, simultaneously, motivate the researcher to investigate factors of why Tabung Haji customers choose ATM banking.

Previous studies in Malaysia have reported e-banking facilities adoption ranging from

Internet banking up to mobile banking. Explained in more detail, previous studies have explored Internet banking acceptance in different locations and perspectives. In Malaysia, for instance, two essential studies explicitly by Ramayah *et al.* (2003) and Guriting and Ndubisi (2006) have investigated Internet banking acceptance in Pulau Pinang and Kota Kinabalu, respectively. With respect to mobile banking, selectively, there are three studies on mobile banking acceptance in Malaysia. In Eastern Malaysia, Amin *et al.* (2007) and Amin *et al.* (2008) investigated mobile banking acceptance in commercial banks and BIMB, respectively. In Western Malaysia, Sulaiman *et al.* (2007) also investigated mobile banking acceptance. In view of the similarities, except of Sulaiman *et al.* (2007), the above studies have applied TAM in order to identify factors that affect e-banking facilities acceptance. However, none of these studies draw an attention on Tabung Haji ATM banking, in which it is due to its latest introduction by the said institution to its customers. As such the study on TAB acceptance remains unexplored and inconclusive. Consequently, further study is required in order to fill the gap.

Attributable to the fact that TAB study remains unexplored and inconclusive, therefore, there is a need to examine the factors determining Malaysia Tabung Haji customers' intention to use the ATM banking. To meet this goal, this study extends the applicability of the technology acceptance model (TAM) in a TAB context. Choosing TAM was based on its parsimony and predictive power which make it easy to apply in different information system (IS) devices (Amin *et al.*, 2008; Pikkarainen *et al.*, 2004; Kleijnen *et al.*, 2004; Ramayah *et al.*, 2003). Furthermore, TAM provides us a plus point to better comprehend the relationship between perceived usefulness, perceived ease of use, perceived credibility, perceived religiosity and usage intentions. The current study extends TAM to TAB, and develops a comprehensive version of TAM to reflect the TAB concept. However, depending on the particular technology context, additional constructs are required to reflect a newly introduced financial innovation. Since, many researchers have found that security and privacy influence consumer behavior (Luarn and Lin, 2005; Kleijnen *et al.*, 2004; Wang *et al.*, 2003), the researcher has decided to add this variable to the TAM and labeled as "perceived credibility". The researcher also proposes the second construct ("perceived religiosity") to enhance the understanding of an individual's acceptance behavior of TAB. Clearly, there exists studies have found that perceived religiosity influence consumer behavior (Mokhlis, 2006; Ong and Moschis, 2006). By explaining usage intention from the Tabung Haji customer's perspective the findings of this research will not only help the said institution to develop a better user-accepted TAB, but also provides insights into how to present a newly emerging context of TAB to potential users.

AN OVERVIEW OF TABUNG HAJI AND ITS ATM BANKING BACKGROUND

Tabung Haji is introduced in order to facilitate Muslims in Malaysia to perform *hajj*. It is among the best financial institution for caring up Muslim Malaysians welfare with regard to *hajj*. Tabung Haji was introduced in 1969 in order to manage and cater for the needs of Muslims in Malaysia to perform *hajj* (Tabung Haji, 2008). In the world, it is the first of its kind in the world provides a comprehensive assistance for the prospective *hajj and hajjah* (Islamic Research and Training Institute (IRTI), 1995). Hitherto, Tabung Haji has the following objectives (Tabung Haji, 2008):

1. To enable Muslims to accumulate savings and then use the proceed for their expenses in performing the pilgrimage or for other purposes beneficial to them.
2. To enable Muslims via their savings to participate in investments in industry, plantations and so forth according to Islamic teaching.
3. To provide for the protection, control and welfare of Muslims while on pilgrimage through the various facilities and services of Tabung Haji.

With the objectives in mind, Tabung Haji is dedicated to provide excellent and comprehensive services with premium quality to satisfy the pilgrims need prior, during and after their pilgrimage. This is besides giving maximum returns to depositors (Tabung Haji, 2008). Prior to the introduction of Tabung Haji, those Malaysian Muslims used traditional methods of saving money to enable them to perform *hajj*. They accumulated money in pillows under mattresses and in earthen jars which were buried for safety. It is sometimes referred as, two works in one time. They also purchased land or livestock which later could be sold to get the money needed for their trip to Mecca (IRTI, 1995). They also sometimes purchased jewelry and gold product as a means to preserve their wealth and at the same time used these commodities to pledge them out in return for cash (IRTI, 1995). These traditional ways were quite riskier with regard to security and value depreciation of assets. Tabung Haji is the solution (IRTI, 1995). It developed for systematic mobilization of funds from the Muslim community to assist them perform the pilgrimage as well as participate in investment and economic activities.

As one of the Islamic financial intermediaries, Tabung Haji also complies with Islamic tenets and principles in its financial transactions and management (IRTI, 1995). In the early stages, as there was no Islamic financial model to follow, Tabung Haji was very careful to ensure that every financial decision was made in accordance with Islamic laws. Like any other financial institutions, Tabung Haji obtained its funds also from public through selling out its "liabilities" namely deposits to Muslims only. Explained in more detail, the financial functions of Tabung Haji can be divided into two major categories. The first concerns on financial management including savings and the withdrawal of funds by depositors. The second concerns on the investment carried out with these savings (IRTI, 1995). One thing is for sure, the financial expertise and economies of scale have led Tabung Haji to generate a huge sum of funds, and then used these funds to invest in permissible stocks and bonds, for *halal* profits. These advantages are also benefiting of Tabung Haji customers with high returns and secured investment activities.

ATM banking was introduced by Tabung Haji on 15 April 2008, as noted earlier, for three main reasons (Utusan Online, 2008). First, it offers better services by providing the Tabung Haji customers with an added convenience, flexibility and cost-saving option in conducting their financial transactions. Second, this new service escalates Tabung Haji customers' accessibility for financial transactions on 24 hours basis. Third, Tabung Haji also believes that ATM banking services will contribute towards cost-saving in its operations by diverting the Tabung Haji customers from banking halls to this new service, thus enabling to save the operating cost or opening new service outlets. Consequently, ATM banking will further enhance its service efficiency to customers. At the moment, TAB services are limited to making deposits, cash withdrawals, and balance queries. Nevertheless, the services will be expanded by the institution in the near future.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Perceived usefulness and perceived ease of use are the original constructs of TAM. Davis (1989) defined perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance. There is extensive research in the IS community that provides evidence of the significant effect of perceived usefulness on usage intentions (for example, Cheong and Park, 2005; Chiu *et al.* 2005; Luarn and Lin, 2005). Moreover, Cheong and Park (2005) and Chiu *et al.* (2005) found that perceived usefulness was positively related to online purchase intentions and mobile internet respectively. These studies results are consistent with the findings of Luarn and Lin (2005), who found that perceived usefulness had a positive effect on usage intentions of mobile banking customers. Similarly, a study by Ramayah and Suki (2006) on mobile personal computer (PC) also found that perceived usefulness was a strong determinant of mobile PC adoption among Master of Business Administration students at Universiti Sains Malaysia (USM). The reason for the inclusion of this measure in the study is that Tabung Haji's customers exploit TAB as a useful way of financial transactions. Hence, perceived usefulness is appropriate for this study.

The hypothesis below was developed and tested for this study:

H₁. There is no significant relationship between perceived usefulness and usage intentions.

The second measure in TAM's original constructs is perceived ease of use. Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). Extensive research since the late 1990s provides evidence of the significant effect perceived ease of use has on usage intentions (Adams *et al.*, 1992; Davis, 1989; Guriting and Ndubisi, 2006; Ramayah *et al.*, 2002; Ramayah *et al.*, 2003). Moreover, Guriting and Ndubisi (2006) found that perceived ease of use had a significant positive effect of behavioral intention to use online banking in Eastern Malaysia. Likewise, bank customers are likely to adopt online banking when it is easy to use (Guriting and Ndubisi, 2006).

A study by Ramayah *et al.* (2003), conducted in Penang in peninsula Malaysia found that perceived ease of use had a significant impact on intention to use Internet banking. The result corroborates the findings by Ramayah *et al.* (2002), Adams *et al.* (1992) and Davis *et al.* (1989). Consequently, it is expected that the general causalities found in TAM are also applicable to the TAB environment. In addition, Davis *et al.* (1989) proposed that perceived ease of use was an antecedent of perceived usefulness. In consonance with Davis *et al.* (1989), results from previous research revealed the significant relationship between two constructs, namely perceived ease of use on perceived usefulness (Davis *et al.*, 1989; Kleijnen *et al.*, 2004; Wang *et al.*, 2003). Thus, on the basis of these findings, the following hypotheses were developed:

H₂. There is no significant relationship between perceived ease of use and usage intentions.

H₃. There is no significant relationship between perceived ease of use and perceived usefulness.

Besides the two general constructs of TAM, the usage intentions for TAB can also be affected by the security and privacy concerns of Tabung Haji customers. Indeed, these concerns are translated as perceived credibility, which refers to the two pivotal dimensions - security and privacy (Wang *et al.*, 2003). By definition, perceived credibility is one's judgment concerning the security of the TAB system. Furthermore, Wang *et al.* (2003) found perceived credibility to be significantly related to the technology acceptance of Internet banking. Luarn and Lin (2005) also found that a positive causality existed between perceived credibility and one's intention to use mobile banking. In more detail, the importance of security and privacy to the acceptance of banking technologies has been noted in many banking studies (for example, Howcroft *et al.*, 2002; Polatoglu and Ekin, 2001; Sathye, 1999). Based on these findings, perceived credibility was seen to be applicable to the context of TAB. Thus, the following hypothesis was suggested:

H₄. There is no significant relationship between perceived credibility and usage intentions.

The final construct to be added to TAM was perceived religiosity. There exists a limited study in view of perceived religiosity on e-banking facilities adoption. Evidently, religion appears to influence one's behaviour in his life in general (Ebaugh, 2002; Francis, 2001). By definition, religion is a belief in God accompanied by a commitment to follow principles believed to be set forth by God (McDaniel and Burnett, 1990). It is also a socially shared set of beliefs, ideas and actions that relate to a reality that cannot be verified empirically yet is believed to affect the course of natural and human events (Terpstra and David, 1991). As such, perceived religiosity refers to the degree to which a person believes that using TAB would be of religion influence, as it is allowable. There is also evidence that suggests that religion will influence of consumer behavior. For example, Mokhlis (2006) indicated that three shopping orientation factors, namely quality conscious, impulsive shopping and price conscious were consistently related to religiosity, suggesting that religiosity should be considered as a possible determinant of shopping orientations in consumer behavior model. Ong and Moschis (2006) found that individual's religiosity was correlated with consumer behavior that varies based on individual's age. However, it is not clear whether the causal variable is perceived religiosity or other variables associated with TAB usage intentions. Further, previous studies are quite limited and the above studies were none of them exploring TAB. In order to overcome this concern, the following hypothesis was suggested:

H₅. There is no significant relationship between perceived religiosity and usage intentions.

RESEARCH METHODS

Subjects

Previously, there were limited studies conducted to investigate factors influencing Tabung Haji customers over the ATM banking acceptance, is perhaps, because it is relatively new. Relating to questionnaire distribution, self-administered questionnaires were distributed to 140 respondents in January 2010. The participants for the study were drawn from Tabung Haji customers in Labuan, Eastern Malaysia. For the purpose, the questionnaires were distributed in three locations, namely at Tabung Haji counter, at

Bank Rakyat and also at BIMB. In this study, the participation of customers was voluntary. Concerning data collection, the respondents were politely invited to participate in the survey. If the respondents agreed to participate, the researcher distributed the questionnaire and left the respondents alone until the questionnaire was completed. There were 22 customers who did not participate when invited, mainly owing to time constraints. In the end, 140 participants offered their views for the survey.

In view of Davis TAM's (1989) model, it indicates a study of technology adoption is mainly to measure the level of intention of a customer to use computer technology in the future. Since TAB is relatively a new service offered by Tabung Haji to its customers, therefore, the current study is intended to concentrate to Tabung Haji customers' usage intention. It was assumed that very few customers would be using the technology at the time the survey was conducted. In this study, 140 bank customers responded to the questionnaire although 18 were discarded because of incomplete data. Only 122 usable responses received were analyzed. The descriptive statistics are summarized in Table I.

Table I: Demographic results

Profile	Description	Respondents	Percentile
Gender	Male	48	39.3
	Female	74	60.7
Age	Less than 20	8	6.6
	21-30	47	38.5
	31-40	48	39.3
	41-50	19	15.6
	51-60	8	6.6
Marital status	Single	50	41.0
	Married	72	59.0
Monthly income (RM)	<1,000	8	18.0
	1,001-2,000	39	32.0
	2,001-3,000	40	32.8
	3,001-4,000	22	6.6
	4,001-5,000	13	10.7

Measures

Questionnaire items were adapted from prior studies, which are described as follows: perceived usefulness (Davis, 1989), perceived ease of use (Davis, 1989), perceived credibility (Wang *et al.*, 2003), and perceived religiosity (Mokhlis, 2006; Ong and Moschis, 2006). In the questionnaire, the respondents were required to rate their level of agreement with statements and/or propositions on a 5-point Likert Scale, ranging from "1" representing "strongly disagree" to "5" representing "strongly agree". Prior to the study, the questionnaire was pre-tested using 12 undergraduate students majoring in "International Banking and Offshore" and "Islamic Finance". Choosing these students are because they were satisfactorily exposed with banking innovations including ATM banking via their registered courses such as "Financial Institutions and Bank" and "Islamic Banking Practice", respectively. The motive for this test was to discover any problems associated with the study instrument. All respondents to the test commented that the questions were easily understood with an average completion time of five minutes, being similar to that of de Run and Ting's (2006) study.

RESULTS AND DISCUSSIONS OF THE STUDY

The research instrument was tested for reliability using Cronbach's coefficient alpha estimate as reported in Table II. The Cronbach's alpha values for all dimensions range from 0.6884 to 0.8920, exceeding the minimum alpha of 0.6 (Hair *et al.*, 1998), thus the constructs measures were deemed reliable.

Regression analysis was conducted to reveal how different factors affect the use of TAB. The results of this analysis are set out in Table II below. Theoretically, this study confirms the appropriateness of TAM in predicting TAB acceptance levels among Tabung Haji customers in Labuan, Eastern Malaysia. Evidently, perceived usefulness is significantly associated with usage intentions ($t=7.508$, p -value=0.000). This result is consistent with the previous studies (for example, Cheong and Park, 2005; Chiu *et al.*, 2005; Davis, 1989). This suggests that Tabung Haji customers will use TAB when it is useful for financial transactions.

Table II: Hypotheses testing and Cronbach's alpha value

	Model 1	Model 2	Cronbach's alpha
(Constant)	USINT ($\beta=.258$)	PU ($\beta=4.053$)	-
PU	$\beta=.284$ $t=7.508$ (0.000**)	-	87.94%
PEOU	$\beta=.111$ $t=2.011$ (0.047*)	$\beta=.670$ $t=6.347$ (0.000**)	89.20%
PC	$\beta=.119$ $t=2.889$ (0.005**)	-	80.35%
PR	$\beta=.205$ $t=2.853$ (0.005**)	-	84.42%
USINT	-	-	68.84%
F-statistic	45.224 (0.000**)	40.290 (0.000**)	-
R-Square	.607	.251	-
Adjusted R- Square	.594	.245	-

Note: ** $p < 0.01$, * $p < 0.05$, PU=Perceived usefulness; PEOU=Perceived ease of use; PC=Perceived credibility; PR=Perceived religiosity; USINT=Usage intentions

Table II also shows that perceived ease of use is significantly related to usage intentions ($t=2.011$, p -value=0.047). This confirms the opinion that when TAB is easy to use, Tabung Haji customers feel that less effort is required to operate the system. It also suggests that perceived ease of use is significantly associated with perceived usefulness ($t=6.347$, p -value=0.000). This is also consistent with the previous studies of Davis *et al.* (1989), Kleijnen *et al.* (2004) and Wang *et al.* (2003), who found that perceived ease of use is highly associated with perceived usefulness in the adoption of technological products and services. Hence, the greater the perceived ease of use among Tabung Haji customers, the more likely it is that TAB will be adopted by Tabung Haji customers in Labuan, Eastern Malaysia.

Perceived credibility is significantly associated with usage intentions ($t=2.889$, p -value=0.005), which indicates that privacy and security are important in attracting Tabung Haji customer to using TAB. Obviously, Tabung Haji customers have a tendency to use TAB if the system is fully protected and given full support by the management of

the said institution. This result again is consistent with the previous researches (for instance, Luarn and Lin, 2005; Wang *et al.*, 2003). The finding suggests that TAB must be secure in order to be adopted by Tabung Haji customers. In fact, although an individual may believe that TAB is useful and easy to use, the issue of security and privacy will be likely carefully considered before it is adopted.

Further, the results also indicate that perceived religiosity is positively correlated with usage intentions ($t=2.853$, $p\text{-value}=0.005$), which, in turn, supports the findings of previous studies such as Mokhlis (2006) and Ong and Moschis (2006). In this study, perceived religiosity has greater ability to predict and explain the customers' behavioral over shopping orientation and purchase behavior, respectively. The result of this study is convincing, as far as the respondents are Muslims where perceived religiosity is a key matter in their financial transactions.

In sum, the study rejected H_1 , H_2 , H_3 , H_4 , and H_5 . Consequently, these outcomes indicate that perceived usefulness, perceived ease of use, perceived credibility and perceived religiosity are significantly related to usage intentions. Further, perceived ease of use is significantly related to perceived usefulness, which, in turn, affecting usage intentions.

CONCLUSION AND PRACTICAL IMPLICATIONS

This study has successfully reviewed the factors affecting Tabung Haji customers' intention to use TAB. Yet, this study applied TAM to a newly emerging context of TAB in Labuan, Eastern Malaysia. The results indicate that all the hypothesized relationships in the core model were confirmed. The null hypotheses for H_1 , H_2 , H_3 , H_4 , and H_5 were rejected, consequently accepting alternative hypotheses. The contributions of this study into technology acceptance are provided as follows:

1. The application of TAM in TAB was different to systems previously examined - nevertheless, findings were consistent with Guriting and Ndubisi (2006) and Cheong and Park (2005) concerning perceived usefulness and perceived ease of use as significant antecedents of the TAB.
2. The study supported Luarn and Lin's (2005) research, which found a significant direct relationship between perceived credibility and behavioral intention to use mobile banking and so the study extends this generalizability to TAB.
3. The perceived religiosity was found to have a significant influence on behavioral intention. Unlike other studies, this study introduced "perceived religiosity" in which it is believed to have influence over service acceptance as Tabung Haji offered. Evidently, this study confirmed the importance of PR on TAB usage intentions.

In terms of practical implications, there are two parties who are benefiting from the research outputs. Tabung Haji, is one of the Islamic financial institutions in Malaysia that offers ATM banking, could take several actions in order to promote the use of TAB among its customers. It is then of Tabung Haji advantage to create a positive perceptions among its customers regarding of TAB services. Creating positive perceptions might be adequately achieved by offering free information without any

charges or at minimum charges. As such, Tabung Haji is called to supply a mini-guide at all branches that provides succinct and cogent information concerning the efficiency, effectiveness and risk-free attributes of the TAB system. The second party that will be of advantage for the present study is a prospective researcher. The present study, in particular, supplies pivotal information for further research in the area of TAB, which, in turn enriches the availability of TAB research's information. The prospective researcher is anticipated to carry out a comprehensive research regarding the TAB system by incorporating all Malaysians from Peninsula, Sabah and Sarawak. As a result, the current and future research are able to add to the limited information currently available about ATM banking mainly from Tabung Haji's perspective in Malaysia.

In particular, this research suffers from two main drawbacks. Firstly, the current study confined its location of study in one city, notably Labuan, in Eastern Malaysia that may affect the generalization of findings. Secondly, the study did not consider comprehensive measures. Importantly, these limitations are seen as supplying directions for future study in the area. Two recommendations are of utmost importance to tackle the said limitations. Firstly, the future study as addressed earlier, could conduct a cross-cities study, and at the same time escalating the number of respondents in order to produce more accurate and comparable results. Kuala Lumpur, Johor Bahru and Kuching are the potential locations which could be suggested in future researches. Secondly, the inclusion of new measures like those of "perceived attitude" and "perceived social norm" will supply results that are comprehensive and firm with regard to the antecedents for the use of TAB.

REFERENCES

Adams, D.A., Nelson, R.R., and Todd, P.A. (1992), "Perceived usefulness, ease of use, and usage of information technology: a replication", *MIS Quarterly*, Vol. 16 No.2, pp.227-47.

Amin, H., Hamid, M.R.A., Lada, S., and Anis, Z. (2008), "The adoption of mobile banking in Malaysia: the case of Bank Islam Malaysia Berhad (BIMB)", *International Journal of Business and Society*, Vol. 9 No.2, pp.43-53.

Amin, H., Baba, R., and Muhammad, M.Z. (2007), "An analysis of mobile banking acceptance by Malaysian customers", *Sunway Academic Journal*, Vol. 4, pp.1-12.

Cheong, J.H., and Park, M.C. (2005), "Mobile internet acceptance in Korea", *Internet Research*, Vol. 15 No. 2, pp. 125-40.

Chiu, Y.B., Lin, C.P., and Tang, L.L. (2005), "Gender differs: assessing a model of online purchase intentions in e-tail service", *International Journal of Service Industry Management*, Vol. 16 No. 5, pp. 416-35.

Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-40.

Davis, F.D. Bagozzi, R.P., and Warshaw, P.R. (1989), "User acceptance of computer

technology: a comparison of two theoretical models", *Management Science*, Vol. 35 No. 8, pp. 982-1003.

de Run, E.C., and Ting, P.L. (2006), "Estimating the probability of service recovery strategies in franchise fast food restaurant", *Labuan Bulletin of International Business and Finance*, Vol. 4, pp. 91-104.

Ebaugh, H.R. (2002), "Presidential address 2001, return of the sacred: reintegrating religion in the social sciences", *Journal of the Scientific Study on Religion*, Vol. 41 No.3, pp. 385-395.

Francis, L.J. (2001), "Christianity and dogmatism revisited: a study among 15-16 year olds in the United Kingdom", *Religious Education*, Vol. 96, pp. 211-226.

Guriting, P., and Ndubisi, N.O. (2006), "Borneo online banking: evaluating customer perceptions and behavioral intention", *Management Research News*, Vol. 29 No. 1/2, pp. 6-15.

Guru, B.K., Vaithilingam, S., Ismail, N., and Prasad, R. (2000), "E-banking in Malaysia: a note on evolution of services and consumer reactions", *Journal of Internet Banking and Commerce*, 2000, Vol. 5 No.1. [Online, available at <http://www.arraydev.com/commerce/JIBC/0001-07.htm> , accessed on February 27, 2010].

Hair, J.F. Jr, Anderson, R.E., Tatham, R.L., and Black, W.C. (1998), *Multivariate Data Analysis*, 5th ed., Prentice Hall, New Jersey.

Howcroft, B., Hamilton, R., and Hewer, P. (2002), "Consumer attitude and the usage and adoption of home-based banking in the United Kingdom", *International Journal of Bank Marketing*, Vol. 20 No. 3, pp. 111-21.

Islamic Research and Training Institute (IRTI). (1995), *Tabung Haji as an Islamic Financial Institutions*, IRTI & Islamic Development Bank, Jeddah, Saudi Arabia.

Kleijnen, M., Wetzels, M., and de Ruyter, K. (2004), "Consumer acceptance of wireless finance", *Journal of Financial Services Marketing*, Vol. 8 No. 3, pp. 206-17.

Luarn, P., and Lin, H.H. (2005), "Toward an understanding of the behavioral intention to use mobile banking", *Computers in Human Behavior*, Vol. 21 No. 6, pp. 873-91.

McDaniel, S. W., and Burnett, J. J. (1990), "Consumer religiosity and retail store evaluative criteria", *Journal of the Academy of Marketing Science*, Vol. 18, pp. 101-112.

Mishkin, F., and Eatkins, S. (2008), *Financial Markets and Institutions*, 6th ed., Addison Wesley, New York.

Mokhlis, S. (2006), "The effect of religiosity on shopping orientation: an exploratory study in Malaysia", *The Journal of American Academy of Business, Cambridge*, Vol. 9 No. 1. [Online, available at [http:// www.jaabc.com/jaabcv9n1preview.html](http://www.jaabc.com/jaabcv9n1preview.html) , accessed on June

27, 2009].

Ong, F.S., and Moschis, G.P. (2006), "Religiosity and consumer behavior: a cross-cultural study", *International Conference on Business and Information*, 12-14 July 2006, Singapore.

Pikkarainen, T., Pikkarainen K., Karjaluoto, H., and Pahnla S. (2004), "Consumer acceptance of online banking: an extension of the technology acceptance model", *Internet Research*, Vol. 14 No. 3, pp. 224-35.

Polatoglu, V.N., and Ekin, S. (2001), "An empirical investigation of the Turkish consumers' acceptance of Internet banking services", *International Journal of Bank Marketing*, Vol. 19 No. 4, pp. 156-65.

Ramayah, T., and Suki, N.M. (2006), "Intention to use mobile PC among MBA students: implications for technology integration in the learning curriculum", *UNITAR e-Journal*, Vol. 1 No.2, pp.1-10.

Ramayah T, Dahlan, N., Mohamad, O., and Ling, K.P. (2002), "The impact of external variables on intention to use Internet banking: a preliminary analysis", *Proceedings of the MMU International Symposium on Information and Communications Technologies M²USIC'02 ICT: A Catalyst for K-Economy*, 2-3 October 2002, Kuala Lumpur.

Ramayah T, Jantan, M., Noor M.N.M., and Ling, K.P. (2003), "Receptiveness of Internet banking by Malaysian consumers", *Asian Academy of Management Journal*, Vol. 8 No. 2, pp. 1-29.

Sathye, M. (1999), "Adoption of Internet banking by Australian consumers: an empirical Investigation", *International Journal of Bank Marketing*, Vol. 17 No. 7, pp. 324-34.

Sulaiman, A., Lim, C. H., and Wee, A. (2005), "Prospects and challenges of e-banking in Malaysia", *The Electronic Journal on Information Systems in Developing Countries*, Vol. 22 No.1, pp.1-11.

Tabung Haji. (2008), "Background of Tabung Haji", [Online, available at <http://www.tabunghaji.gov.my> , accessed on June 27, 2008].

Terpstra, V., and David, K. (1991), *The Cultural Environment of International Business*, 3rd ed., South-Western Publishing Company, Ohio.

Utusan Online. (2008), "Pendeposit Tabung Haji kini boleh guna ATM", [Online, available at <http://www.utusanonline.com.my> , accessed on April 16, 2008].

Wang, Y.S., Wang, Y.M., Lin, H.H., and Tang, T.I. (2003), "Determinants of user acceptance of Internet banking: an empirical study", *International Journal of Service Industry Management*, Vol. 14 No. 5, pp. 501-19.