



# Determining a Conceptual Framework for Adoption of Islamic Credit Card in Context of Malaysia

Dariyoush Jamshidi<sup>\*1</sup>, Nazimah Hussin<sup>2</sup>

<sup>1</sup>Ph.D student, International Business School (IBS), Universiti Teknologi Malaysia (UTM)

<sup>2</sup>Senior Lecturer, International Business School (IBS), Universiti Teknologi Malaysia (UTM)

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## ABSTRACT

The introduction of Islamic banking system in the last years of twenty century have created a new way of applying banking affairs on the basis of Islamic principles. Scholars believe that the scheme is stable in its nature and would enhance the economic development of countries that applied the system. Due to high competition in banking industry of Malaysia, Islamic banks are competitively innovating new products in order to have higher market share and remain competitive. One of the financial products that have been offered by some Islamic as well as dual banks is Islamic credit card. This Islamic product needs to be marketed to better position Islamic banks with diversity portfolio of products. Therefore, this conceptual paper intends to provide a framework that influence different groups of bank customers in the adoption and usage intention of Islamic credit card. The presented framework of this study is based on the perceived attributes of Rogers (2003) Innovation Diffusion Theory. Whilst the trust and attitude in the area of adoption studies has been justified as major determinants in regards with the adoption of Islamic credit card in context of Malaysia, current study extends useful determinants for future research. The findings of the study would be useful for managers as well as decision makers in expanding a better future for Islamic financial instruments.

**KEYWORDS:** Islamic Credit Card, Islamic banking, perceived attributes of innovation, Malaysia, Diffusion of Innovation Theory

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## INTRODUCTION

Islamic banking concept has been emerged as a new way of banking system in the last years of twenty century, although, this banking scheme has an old history. Daud et al., (2011) argued that the emergence of Islamic banking scheme in context of the Muslim countries is the most inspiring financial phenomena at the end of this century. According to Metawa and Almossawi, (1998) the main attempt of this system refers to system to achieve social and economic progress in different society by applying monetary and financial facilities which are in accordance to Shariah principles. Actually, all banking activities such as products and services offered by Islamic banks as well as transaction deposit must be on the basis of Shariah principles (Abdullah et al., 2012). In other words, this novel banking system (Islamic banking) greatly focus on right, wrong and ethics in its financial operations (Hamid and Masood, 2011). Likewise, effort for increasing all halal aspects of business, paying zakat, usury (riba) prohibition in all banking actions, monopoly prohibition, considering business operation implementation based on legitimate and profit basis are the key principles of Islamic banking functions (Mirakhor, 2000).

There are some principles in regards with Islamic banking which has been indicated by Gait and Worthington (2008). These principles are as follows:

The gharar prohibition in contracts encompasses the full disclosure of information, avoidance of risk taking, and asymmetric information removal in different contracts.

Prohibition of riba which typically refers interest based financing removal in operations,

Keeping away from of those type of financing activities which are sinful in addition to publicly irresponsible (such as gambling, alcohol and pork),

Highlighting the risk sharing financial activities, it is recommended that institutions as financial funds suppliers and entrepreneurs as demanders of these funds rather than pre-determined profit and loss sharing, share risk of business in their investment activities,

The materiality desirability which refers to necessity of financial transactions to have "material finality" that indicates to direct or indirect connection of financial operations to actual economic transaction,

Justice reflection, it declares that a financial transaction among different parties is not allowed to direct to exploitation of any party to the business.

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**\*Corresponding Author:** Dariyoush Jamshidi, Ph.D student, International Business School (IBS), Universiti Teknologi Malaysia (UTM).E.mail: [dariyoush1986@yahoo.com](mailto:dariyoush1986@yahoo.com)

Islamic banking system advocators believe that this scheme in its nature is intrinsically stable and unlike conventional banking system do not lead the financial operations to economic problems (Shayegani and Arani, 2012). What is more, fair distribution of income, risk sharing in financial activities, economic stability, promote productive activities that influence economic growth, adjusting supply and demand force for different type of available funds which will lead to positive influence on financial system of applied countries would be enhanced through implementation of Islamic banking scheme (Ahmad et al., 2011). These possible advantages of this unique banking system have expanded this fiscal phenomenon in different part of the world. Particularly, over the past years high level of popularity is achieved by Islamic banks and this new scheme has been expanded in different part of globe from Singapore to Australia, United Kingdom and United States (Amin, 2007).

According to Mokhtar et al. (2008), the history of establishment of Islamic banking in Malaysia refers to founding of Tabung Haji (the Pilgrim Management and Fund Board) in 1963. The government of this country set up this organization in order to provide mobilization of funds from different group of Muslims to support them for pilgrimage performance of Makkah as well as encourage them to join in economic activities. Successful implementation of this institute convinced many financial parties in context of Malaysia to request for establishment of Islamic bank (Ecchabi and Olaniyi, 2012). However, Islamic banking system in Malaysia was officially established in 1983 and followed by introduction Interest Free Banking Scheme in conventional banking in 1993 which consequently led to foundation of dual banking system in Malaysia (Zainol et al., 2008). Specifically, Bank Negara Malaysia or central bank of this country which is known as responsible for governing banking institution of Malaysia constructed Islamic banking scheme so as to operate in parallel with conventional banking method to provide higher efficiency regarding providing banking facility for different groups of people in this country (Hamid and Azmin, 2001). Currently, the Islamic banking as well as Islamic finance importance is no longer deniable in context of Malaysia (bin Mohamed et al., 2011). Besides, Ahmad and Haron (2002) indicated that Malaysia is not only committed to build up Islamic banking arrangement but also would endeavor to complete Islamic financial scheme. In point of fact, Malaysia is branded as the first Islamic nation in which Islamic banking scheme has been supported (Khattak and Rehman, 2010).

Considering customers' requirements and wishes in regards with representing new products and services is a basic fact to for Islamic banks to remain competitive in aggressive banking industry (Thambiah et al., 2011a). More particularly, there is a high competition for Islamic banks to present as many numbers as of facility and products so as to remain profitable as well as competitive in banking industry in different part of the world. While owing to uncertainties regarding customers' reaction as wells demand among consumers, realization of these goals seems to be difficult, however, Islamic credit card introduction as an Islamic product has been managed as a consequence of this facility merits. These numerous intrinsic worth enhances issuer institutions to develop their operations as well as activities portfolio which lead to attaining more benefits. Nevertheless, even though Islamic credit card has been issued by some banks in competitive banking industry of Malaysia, this Islamic banking facility remained unused or unnoticed by various groups of bank customers (Amin, 2012). Consequently, it is significantly important to realize and figure out the potential factors that influence adoption and usage of this Islamic banking innovation among different groups of banking consumers. Accordingly, this conceptual paper aims to comprehend and determine the nature of Islamic credit card adoption and usage intention among different Malaysian bank clients. Given that, this study will seek to examine the important potential factors that may have an impact on the adoption and usage of Islamic credit card in context of Malaysia. These factors can extend usage of this Islamic service which consequently would lead to increase its current low market share.

## **Conceptual Framework**

### **Innovation Diffusion Theory (IDT)**

Sequence of events that people exceed from early level of knowledge regarding a service, product, or innovation to achieve positive or unfavorable attitude about it to make choice whether adopt or reject which accordingly lead to exploitation of innovation as well as support of adoption decision is known as the innovation diffusion process (Rogers, 1983). In point of fact, these two process (diffusion and adoption) are two strongly connected procedures regarding acceptance of new services, innovations and products (Norazah, 2006). Hence, the core theoretical constructs in diffusion and adoption researches frequently highlight customers' perception, user acceptance, behavior prediction and finally innovation adoption. Normally, Rogers' Diffusion of Innovation is one of the most applied models in adoption behavior prediction studies in different area of social science context. according to Anuar et al., (2012a), Innovation Diffusion model provide the ability in which scholars investigate the way a new innovation, product, or service extend among diverse individuals clusters. Accordingly, while Rogers is working on 5<sup>th</sup> edition of his text, he has identified more than 5200 adoption and diffusion researches in different context. In more detail, this theoretical model has been empirically tested in a substantial number of studies linked to new products and innovations (Hernandez et al., 2009).

Adoption process refers to passing from awareness in the direction of full acceptance of a product, service or innovation (Rogers, 2003). Accordingly, Rogers (2003, 1995) have classified the five characteristics of an innovation which are the key determinants of adoption rate of an innovation that is to say relative advantage, complexity, compatibility, trial ability and observability. Likewise, these five attributes are important factors regarding acceptance, usage and adoption behavior of potential adopter (Liao and Lu, 2008). Moreover, these innovation characteristics have been applied in different framework solely or incorporation with other models and variables as the great indicator of adoption rate consisting of, mobile banking adoption (Püschel et al., 2010), internet banking adoption (Nor et al., 2010), adoption of mobile commerce (Wu and Wang, 2005), smart phone adoption (Chen et al., 2009), online shopping adoption intention (Vijayarathy, 2004) and mobile payment usage intention (Kim et al., 2010). Additionally, Rogers (2003) indicated that most of the variance in innovation adoption rate of different products and innovations from 49 to 87 percent has been explained by these five attributes. Consequently, the diffusion of literature studies offer a proper framework to be developed for Innovation adoption researches in context of Islamic banking studies (Thambiah et al., 2011b). Nonetheless, in Islamic banking context, only a research by Thambiah et al., (2011b) have explored the adoption of Islamic retail banking services in Malaysia by implementing Diffusion of Innovation Theory. Thus, this paper would expand Diffusion of Innovation theory to Islamic credit card perspective. However, latest studies (Kolodinsky et al., 2004; Agarwal and Prasad, 1998, Phuangthong and Malisuwan, 2008) in combination with the conclusion of a meta-analysis of 75 diffusion articles which was conducted by Tornatzky and Klein (1982), revealed that only relative advantage, compatibility and complexity were constantly linked to innovation adoption in different context. For this reason, only these three attributes can be used in predicting and explaining customers' intention towards Islamic credit card adoption.

Accordingly, dependent and independent variable of this study has been derived from Rogers' (2003) Diffusion of Innovation theory. Therefore, independent variables of study would be relative advantage, complexity, compatibility, trust and finally attitude while the dependent variable of current research is adoption of Islamic credit card (ICC) which would be measure within the dimension of Islamic credit card acceptance and usage. The Figure 1 points up the anticipated framework of this paper. This theoretical framework explains the conceptual foundation that the study would be conducted.

### **Perceived Relative Advantage**

The degree to which an innovation or products is perceived to be better than the substituted idea or innovation is known as relative advantage of new products or service (Rogers, 2003). Relative advantage has been designed to reflect perceptions of customers which all or certain qualities of the proposed innovation can offer incremental value to its potential adopter comparing with present available options (Flight et al., 2011). Rogers (1995, 2003) have indicated that relative advantage can be explained as economic profitability, social prestige, and/or other potential benefits that possible user would receive by applying the current innovation. In consistent, different scholars in numerous area of adoption and usage studies have indicated that relative advantage is one of the most remarkable predictors in adoption innovations of different products and services (Brown et al., 2003, Tan and Teo, 2000, Hsu et al., 2007, Lu et al., 2011, Tung and Rieck, 2005, Thambiah et al., 2011b, Gerrard and Cunningham, 2003). Rogers (2003) believed that improvement in social status as well as economic profits is perceived to be important by adopter as relative advantage terms whilst, saving in time and effort, low initial cost, social prestige, discomfort decreasing and economic profitability have been considering as relative advantage sub dimensions (Gerrard and Cunningham, 2003). However, in this paper we would consider relative advantage of Islamic credit card in terms of economic benefits (reduce risk, decrease interest burden, profit and loss sharing), convenience and efficiency of this Islamic innovation. Accordingly, the following hypothesis would be tested:

**H1:** There is a positive relationship between relative advantage and adoption of Islamic credit card among Malaysian bank customers.

### **Perceived Complexity**

The degree to which a product, idea or innovation seems to be difficult to understand as well as use is main concept of complexity (Rogers, 2003). Actually, complexity explain required level of physical or mental efforts which is needed by individuals for adopting and continues usage of a particular innovation (Nor et al., 2010). In addition, it has been hypothesized to be negatively associated with adoption rate of an innovation (Rogers, 1995; Corrigan, 2012) due to the fact that complexity of an innovation, idea or product can act as an inhibitor for its implementation in successful way (Wang et al., 2010). Thus, complexity is measured as the exact opposite side of ease of use that have been acknowledged to have direct impact on adoption of internet (Lederer et al., 2000).

According to Lee et al., (2011), it has been proved by many numbers of studies that complexity have a negative connection with rate of adoption. In contrast, a study by Tan and Teo (2000) in Singapore confirmed that complexity as one of perceived attributes of innovation characteristics does not have any noteworthy impact on adoption of internet banking. Yet, Ndubisi and Sinti (2006) verified that complexity of internet banking as a novel service has

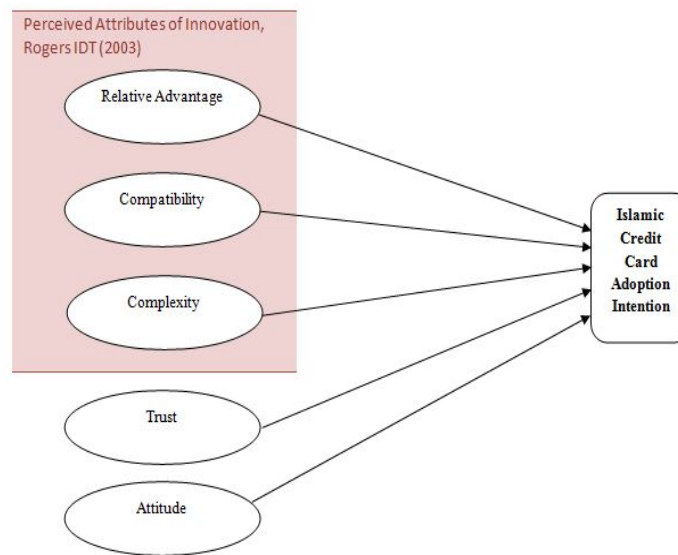
negatively influenced its usage and adoption among bank customers in Malaysia. Therefore, even though Malaysian bank consumers are by now familiar with practice of conventional credit card, however, according to earlier studies and their mixed outcome on the subject of complexity and adoption rate, it would be crucial to test perceived complexity of Islamic credit card and its adoption among different groups of banks clients. Accordingly, this paper would hypothesize that:

**H2:** There is a negative relationship between complexity and adoption of Islamic credit card among Malaysian bank customers.

### Perceived Compatibility

Compatibility refers to the degree to which an innovation, idea or product is known to be consistent with past related experience, current values and different needs of potential adopters (Rogers, 2003). Anuar et al., (2012b) argued that an innovation or product that seems to be incompatible with social system norms as well as values would not have the chance to be accepted and consequently adopted by potential customers as fast as product that is compatible with current standards and consumer values. Rogers believed that individuals would be more likely to adopt a new idea or innovation when this innovation is compatible with them. Furthermore, previous studies widely have indicated that compatibility as one of perceived attributes of innovation characteristics in concept of beliefs and past experiences as well as values affect innovation adoption in multiple different context (Tung et al., 2008, Norazah, 2006, Beiglo and Zare, 2011, Wu et al., 2007, Hernandez and Mazzon, 2007, Arts et al., 2011, Giovanis et al., 2012, Papiés and Clement 2008, Elahi and Hassanzadeh, 2009). Bank customers in Malaysia currently have the long established experience in regards with conventional credit card holding and Islamic credit card seems to be on ethical and religious values basis. Hence, on the basis of above discussion this study would consider the following hypothesis to be tested:

**H3:** There is a positive relationship between perceived compatibility and adoption of Islamic credit card among Malaysian bank customers.



**Fig. 1:** Conceptual Model of Islamic Credit Card (ICC) Adoption.

### Trust

Normally, diverse explanation have been given for trust by scholars depending to a variety of researches' perspective including marketing (Sirdeshmukh et al., 2002), sociology (Lewis and Weigert, 1985) and economics (Williamson, 1975). Nevertheless, Rousseau et al., (1998) believed that owing to its interesting dynamic impact and multidimensional meaning, lack of general agreement exist about trust definition. Generally, trust has been described as enthusiasm of people to be vulnerable linked to another people or part actions (Mayer et al., 1995). Likewise, Pavlou, (2003) point that this depends on the other part or person responsible mode actions. More distinctively, consumer trust in self-service technology refers to competent and reliable performance expectation (Johnson, 2007).

Trust of consumers to technology as well as innovation services is dissimilar from trust of customers to general performance and in addition differentiated from trust to employee behaviors (Johnson et al., 2008). Nevertheless, fears of professional hackers as well as privacy invasion has augmented the uncertainty level of some banking facilities (Yoon, 2002, Yap et al., 2010). Actually, trust is identified as extensively accepted predictor of adoption in different studies and scholars constantly have indicated that trust influence adoption of different type of innovation,

products and services( Gefen, 2000,Gholami et al., 2010,Sohail and Shanmugham, 2003,Suh and Han, 2003, George, 2002, Liu and Wu, 2007). This paper also intend to investigate the role of trust in context of Islamic credit card from customers' point of view relating to performance as well ability of this Islamic service because trust to Islamic credit card would enable this Shariah based service to be recognized as a predictable as well as reliable financial service that do not have any harmful consequences for its potential holders. Therefore, it would be able to enhance different groups of bank customers to apply it in their daily banking activities as well as purchase transaction. Thus, this paper would propose that:

**H6:** There is a positive relationship between trust and adoption of Islamic credit card among Malaysian bank customers.

### **Attitude**

According to Fishbein and Ajzen (1975) attitude is defined as evaluative effect of individuals' negative or positive feelings in a specific behavior performing. Actually, attitude is related to behavioral intention of individuals considering the fact that they shape their intentions to do a specific behavior in the direction of which they have positive outcome(Tan and Teo, 2000). Likewise, the more recent definition of attitude refers to the degree of unfavorableness or favorableness of people feelings regarding a psychological topic(Ajzen and Fishbein, 2000).In many studies in numerous context the significant influence of attitude toward usage and adoption of new innovation, product or services has been pointed (Al-Somali et al., 2009,Taylor and Todd, 1995, Davis et al., 1989, Teo and Pok, 2003,Eri, 2004,Lu et al., 2003, Ramayah et al., 2005,Hung et al., 2003, Kim et al., 2009). Besides, Akurtan and Tezacan (2012)revealed that attitude is the most notable predictor of adoption intention of mobile banking among its potential users.

Moreover, in context of Islamic banking researches attitude has been modified(Amin et al., 2009, Amin et al., 2011,Taib et al., 2008). In more detail, Amin et al., (2011) proved that attitude is a key factors that influence Islamic personal financing usage. Furthermore, Taib et al., (2008)indicated a significant positive link between attitude of customers and Islamic partnership home financing among different groups of Malaysian postgraduate students. Yet,it seems that there is lack of empirical confirmation in the Islamic credit card studies as to whether attitude is able to influence adoption of Islamic credit card among Malaysian bank customers. These explain why the following hypothesis would be tested:

**H7:** There is a positive relationship between attitude and adoption of Islamic credit card among Malaysian bank customers.

## **RESEARCH METHODOLOGY**

The current research would be applied a quantitative method of research in which the structured questionnaire would be employed in order to collect the relevant data from respondents. Likewise, considering the conceptual framework of current research (figure 1), the structured questionnaire would be prepared. Previous researches in the area of adoption studies and usage of innovations(Brown et al., 2003, Zhou et al., 2010, Tan and Teo, 2000) would be utilized for deriving the relevant item of each question. Besides, the items of questionnaire would be measured by five point Likert Scale which are 1) strongly disagree, 2) disagree, 3) neither disagree or agree, 4) agree, and 5) strongly agree. To participate in the structured questionnaire, the respondents must be identified whether they are presently users of Islamic credit card as well as whether they are account holders in any banks that issue this type of credit card or not. Furthermore, demographic items (age, monthly income, occupation, gender, religion, education level, and ethnicity) of respondents would be the other part of the questionnaire in order to provide more comprehensive and suitable results.

As mentioned earlier the country for conducting this study is Malaysia and since there is no population frame exist for this research to enable random sampling, a sample frame of about 350 Malaysian bank clientele in different area of Kuala Lumpur city would be considered by applying convenience sampling method. Actually, the target population of this study would be individuals who currently have an account in one of foreign or local branches of different banks in context of Malaysia. Kuala Lumpur city has been selected for conducting the data collection because this city is the main center of banking institutions which most competitive banking and financial environment in comparison with other cities of Malaysia is represented (Hamid and Azmin, 2001). Both Muslim as well as non Muslim bank clients in Kuala Lumpur city would be considered as sample frame of current research noting that Muslims are 60 % of population in context of Malaysia and more to the point non Muslim clientele receive benefits from Islamic banking structure, this method is not only of interest by Muslim customers. Consequently, there is high level of competition for attracting Muslim and non Muslim bank customers(Hoq and Amin, 2010). Then, it is required to participate both Muslim and non Muslim bank customers as potential Islamic credit card users. The sample of this study would be drawn from bank clientele that visit different bank counters of multiple branches in Kuala Lumpur city center. The research instrument of this study will be personally administrated.

## DATA ANALYSIS TECHNIQUES

Multiple research techniques which included-test, descriptive analysis, factor analysis, analysis of variance and multiple linear regressions will be used in present research. The applied software for current research would be SPSS version 17.0 as well as Amos. To estimate the respondents' feedback, descriptive analysis will be produced for the initial analysis by employing mean, frequency and standard deviation of collected data. Additionally, in order to gauge reliability as well as validity of constructs, factor analysis would be implemented. Besides, multiple linear regressions which will be used to determine the potential connection between independent variables of this study (relative advantage, complexity, compatibility, and trust) and the dependent variable of study (adoption and usage intention of Islamic credit card). Accordingly, these multiple test would be able to identify potential factors that have a significant impact on adoption of Islamic credit card as a new innovation.

## Conclusion

The aim of this conceptual paper is to introduce a new theoretical framework on the basis of perceived attributes of innovation of Rogers (2003) innovation diffusion theory in regards with Islamic credit card as an Islamic banking innovation that needs to be marketed in order to develop the usage and adoption of this Islamic facility among different groups of bank customers in Malaysia. As mentioned earlier, according to the evaluation of suitability of different aspects of perceived attributes of innovation together with widespread literature review in banking as well as Islamic banking area, this conceptual paper attempt to give details regarding conceptual framework for probing Islamic credit card usage and adoption by Malaysian bank clientele.

This conceptual paper has an effort to draw attention to the importance of benefit of Islamic credit card as an Islamic banking innovation and additionally different customers' perception concerning Islamic credit card adoption. In addition, the significance role of trust and customer attitude as an important factor in banking and financial services operations regarding Islamic credit card has been explored. Actually, this study is one of the first efforts in its kind area of Islamic banking and specifically Islamic credit card adoption which would present suitable information on the topic of the factors influencing Islamic credit card adoption in Malaysia. Importantly, these recognized consequences would be significantly practical and helpful for marketers as well as different bank managers in constructing suitable marketing strategy in high competitive banking industry of Malaysia which consequently would result in attract of more number of Islamic credit card holders.

## REFERENCES

- Abdullah, A. A., Sidek, R. and Adnan, A. A. 2012. Perception of Non-Muslims Customers towards Islamic Banks in Malaysia. *International Journal of Business and Social Science*, 3(11), 151-163
- Agarwal, R., & Prasad, J. (1998). The antecedents and consequents of user perceptions in information technology adoption. *Decision support systems*, 22(1), 15-29.
- Ahmad, A., Rehman, K. U. and Safwan, N. 2011. Comparative study of Islamic and conventional banking in Pakistan based on customer satisfaction *African Journal of Business Management*, 5, 1768-1773.
- Ahmad, N., & Haron, S. (2002). Perceptions of Malaysian corporate customers towards Islamic banking products and services. *International Journal of Islamic Financial Services*, 3(4), 13-29.
- Ajzen, I. and Fishbein, M. 2000. Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European review of social psychology*, 11, 1-33.
- Akturan, U. and Tezcan, N. 2012. Mobile banking adoption of the youth market: Perceptions and intentions. *Marketing Intelligence & Planning*, 30, 444-459.
- Al-somali, S. A., Gholami, R., Clegg, B. 2009. An investigation into the acceptance of online banking in Saudi Arabia. *Technovation*, 29, 130-141.
- Amin, H. 2007. An empirical investigation on consumer acceptance of internet banking in an Islamic Bank. *Labuan Bulletin of International Business and Finance*, 5, 41-65.
- Amin, H. 2012. Patronage factors of Malaysian local customers toward Islamic credit cards. *Management Research Review*, 35, 512-530.
- Amin, H., Rahman, A. R. A. and Ramayah, T. 2009. What makes undergraduate students enroll into an elective course?: The case of Islamic accounting. *International Journal of Islamic and Middle Eastern Finance and Management*, 2, 289-304.
- Amin, H., Rahman, A. R. A., Sondoh JR, S. L. and Hwa, A. M. C. 2011. Determinants of customers' intention to use Islamic personal financing: The case of Malaysian Islamic banks. *Journal of Islamic Accounting and Business Research*, 2, 22-42.

- Anuar, M. M., Adam, F. and Mohamad, Z. 2012. Muslim Consumers' Perception on Internet Banking Services. *International Journal of Business and Social Science*, 3, 63-71.
- Arts, J. W. C., Frambach, R. T., & Bijmolt, T. H. A. (2011). Generalizations on consumer innovation adoption: A meta-analysis on drivers of intention and behavior. *International Journal of Research in Marketing*, 28(2), 134-144.
- Beiglo, S. H. B. and Zare, R. 2011. A Survey on Factors Effecting Continuity the Use of Government'E-Services. *Australian Journal of Basic and Applied Sciences*, 5, 209-220.
- bin Mohamed, M., Badaruddin, M. N. B. A., & Choong, C. K. (2011). Trust formation process in Islamic banking in Malaysia. *African Journal of Business Management*, 5(30), 11779-11785.
- Chen, J. V., Yen, D. C., & Chen, K. (2009). The acceptance and diffusion of the innovative smart phone use: A case study of a delivery service company in logistics. *Information & Management*, 46(4), 241-248.
- Corrigan, J. A. (2012). The implementation of e-tutoring in secondary schools: A diffusion study. *Computers & Education*.
- Brown, I., Cajee, Z., Davies, D. & Stroebel, S. 2003. Cell phone banking: predictors of adoption in South Africa— an exploratory study. *International Journal of Information Management*, 23, 381-394.
- Daud, M., Yussof, I. M. and Abideen, A. 2011. The establishment and operation of Islamic Banks in Nigeria: Perception study on the role of the Central Bank of Nigeria. *Australian Journal of Business and Management Research Vol*, 1.
- Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. 1989. User acceptance of computer technology: a comparison of two theoretical models. *Management science*, 35, 982-1003.
- Ecchabi, A. and Olaniyi, O. N. 2012. using theory of reasoned action to model the patronisation behaviour of islamic bank customers in Malaysia. *Research Journal of Business Management*, 6, 70-82.
- Elahi, S., & Hassanzadeh, A. (2009). A framework for evaluating electronic commerce adoption in Iranian companies. *International Journal of Information Management*, 29(1), 27-36.
- Eri, Y. 2004. Retailing on Internet the Buying Intention. *MBA Thesis, School of Management, University Sains Malaysia, Penang*.
- Fishbein, M. and Ajzen, I. 1975. *Belief, attitude, intention and behavior: An introduction to theory and research*.
- Flight, R. L., D'Souza, G., & Allaway, A. W. (2011). Characteristics-based innovation adoption: scale and model validation. *Journal of Product & Brand Management*, 20(5), 343-355.
- Gait, A. and Worthington, A. 2008. An empirical survey of individual consumer, business firm and financial institution attitudes towards Islamic methods of finance. *International Journal of Social Economics*, 35, 783-808.
- Gefen, D. 2000. E-commerce: the role of familiarity and trust. *Omega*, 28, 725-737.
- George, J. F. 2002. Influences on the intent to make Internet purchases. *Internet Research*, 12, 165-180.
- Gerrard, P. and Cunningham, J. B. 2003. The diffusion of Internet banking among Singapore consumers. *International Journal of Bank Marketing*, 21, 16-28.
- Gholami, R., Ogun, A., Koh, E. and Lim, J. 2010. Factors affecting e-payment adoption in Nigeria. *Journal of Electronic Commerce in Organizations (JECO)*, 8, 51-67.
- Giovanis, A. N., Binioris, S., & Polychronopoulos, G. (2012). An extension of TAM model with IDT and security/privacy risk in the adoption of internet banking services in Greece. *EuroMed Journal of Business*, 7(1), 24-53.
- Hamid, A. and Azmin, N. 2001. A Study on Islamic Banking Education and Strategy for the New Millennium: Malaysian Experience. *International Journal of Islamic Financial Services*, 2, 3-11.
- Hamid, A. and Masood, O. 2011. Selection criteria for Islamic home financing: a case study of Pakistan. *Qualitative Research in Financial Markets*, 3, 117-130.
- Hernandez, B., Jimenez, J., & Martin, M. J. (2009). Future use intentions versus intensity of use: An analysis of corporate technology acceptance. *Industrial Marketing Management*, 38(3), 338-354.
- Hernandez, J. M. C., & Mazzon, J. A. (2007). Adoption of internet banking: proposition and implementation of an integrated methodology approach. *International Journal of Bank Marketing*, 25(2), 72-88.
- Hsu, C. L., Lu, H. P. and Hsu, H. H. 2007. Adoption of the mobile Internet: An empirical study of multimedia message service (MMS). *Omega*, 35, 715-726.

- Hung, S. Y., Ku, C. Y. and Chang, C. M. 2003. Critical factors of WAP services adoption: an empirical study. *Electronic Commerce Research and Applications*, 2, 42-60.
- Johnson, D. S. 2007. Achieving customer value from electronic channels through identity commitment, calculative commitment, and trust in technology. *Journal of interactive marketing*, 21, 2-22.
- Johnson, D. S., Bardhi, F. and Dunn, D. T. 2008. Understanding how technology paradoxes affect customer satisfaction with self-service technology: The role of performance ambiguity and trust in technology. *Psychology and Marketing*, 25, 416-443.
- Khattak, N. and Rehman, K. 2010. Customer satisfaction and awareness of Islamic banking system in Pakistan. *African Journal of Business Management*, 4, 662-671.
- Kim, C., Mirusmonov, M. and Lee, I. 2010. An empirical examination of factors influencing the intention to use mobile payment. *Computers in Human Behavior*, 26, 310-322.
- Kim, H., Kim, T. T. and Shin, S. W. 2009. Modeling roles of subjective norms and eTrust in customers' acceptance of airline B2C eCommerce websites. *Tourism Management*, 30, 266-277.
- Kolodinsky, J. M., Hogarth, J. M., & Hilgert, M. A. (2004). The adoption of electronic banking technologies by US consumers. *International Journal of Bank Marketing*, 22(4), 238-259.
- Lederer, A. L., Maupin, D. J., Sena, M. P. and Zhaung, Y. 2000. The technology acceptance model and the World Wide Web. *Decision support systems*, 29, 269-282.
- Lee, Y. H., Hsieh, Y. C. and Hsu, C. N. 2011. Adding Innovation Diffusion Theory to the Technology Acceptance Model: Supporting Employees' Intentions to use E-Learning Systems. *Educational Technology & Society*, 14, 124-137.
- Lewis, J. D. and Weigert, A. 1985. Trust as a social reality. *Social forces*, 63, 967-985.
- Liao, H. L. and Lu, H. P. 2008. The role of experience and innovation characteristics in the adoption and continued use of e-learning websites. *Computers and Education*, 51, 1405-1416.
- Liu, T. C. and Wu, L. W. 2007. Customer retention and cross-buying in the banking industry: an integration of service attributes, satisfaction and trust. *Journal of Financial Services Marketing*, 12, 132-145.
- Lu, J., Yu, C. S., Liu, C. and Yao, J. E. 2003. Technology acceptance model for wireless internet. *Internet Research*, 13, 206-222.
- Lu, Y., Cao, Y., Wang, B. and Yang, S. 2011. A study on factors that affect users' behavioral intention to transfer usage from the offline to the online channel. *Comput. Hum. Behav.*, 27, 355-364.
- Mayer, R. C., Davis, J. H. and Schoorman, F. D. 1995. An integrative model of organizational trust. *Academy of management review*, 709-734.
- Metawa, S. A. and Almosavi, M. 1998. Banking behavior of Islamic bank customers: perspectives and implications. *International Journal of Bank Marketing*, 16, 299-313.
- Mirakhor, A. 2000. General characteristics of an Islamic economic system. *Anthology of Islamic Banking, Asma Siddiqi (ed.)*. London: Institute of Islamic Banking and Insurance.
- Mokhtar, H. S. A., Abdullah, N. and Alhabshi, S. M. 2008. Efficiency and competition of Islamic banking in Malaysia. *Humanomics*, 24, 28-48.
- Ndubisi, N. O. and Sinti, Q. 2006. Consumer attitudes, system's characteristics and internet banking adoption in Malaysia. *Management Research News*, 29, 16-27.
- Nor, K., Pearson, J. M. and Ahmad, A. 2010. Adoption of internet banking: Theory of the diffusion of innovation. *International Journal of Management Studies*, 17, 69-85.
- Norazah, M. S. 2006. *Consumer Innovation and Adoption of On-line Shopping: Malaysian Internet User's Prospective*. PH.D Thesis, Multimedia University, Malaysia.
- Papies, D., & Clement, M. (2008). Adoption of new movie distribution services on the Internet. *Journal of Media Economics*, 21(3), 131-157.
- Pavlou, P. A. 2003. Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International journal of electronic commerce*, 7, 101-134.
- Phuangthong, D., & Malisuwan, S. (2008). User acceptance of multimedia mobile internet in Thailand. *International Journal of the Computer, the Internet and Management*, 16(3), 22-33.
- Puschel, J., Mazzon, J. A. and Hernandez, J. M. C. 2010. Mobile banking: proposition of an integrated adoption intention framework. *International Journal of Bank Marketing*, 28, 389-409.



- Ramayah, T., Chin, Y. L. and Ibrahim, A. 2005. Determinants of intention to use an online bill payment system among MBA students. *E-Business*, 80-91.
- Rogers, E. M. 1983. Diffusion of Innovation. 3rd Ed, the Free Press, NY ed.
- Rogers, E.A. 1995. Diffusion of Innovation. 4<sup>th</sup> edition, the free press, NY.
- Rogers, E. M. 2003. Diffusion of Innovations. 5th Edition, the Free Press, NY.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S. and Camerer, C. 1998. Not so different after all: A cross-discipline view of trust. *Academy of management review*, 23, 393-404.
- Shayegani, B. and Arani, M. A. 2012. A Study on the Instability of Banking Sector in Iran Economy *Australian Journal of Basic and Applied Sciences* 6, 213-221.
- Sirdeshmukh, D., Singh, J. and Sabol, B. 2002. Consumer trust, value, and loyalty in relational exchanges. *The Journal of Marketing*, 15-37.
- Sohail, S. and Shanmugham, B. 2003. E-banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences*, 150, 207-217.
- Suh, B. and Han, I. 2003. Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1, 247-263.
- Taib, F. M., Ramayah, T. and Razak, D. A. 2008. Factors influencing intention to use diminishing partnership home financing. *International Journal of Islamic and Middle Eastern Finance and Management*, 1, 235-248.
- Tan, M. and Teo, T. S. H. 2000. Factors influencing the adoption of Internet banking. *Journal of the AIS*, 1, 5.
- Taylor, S. and Todd, P. A. 1995. Understanding information technology usage: A test of competing models. *Information systems research*, 6, 144-176.
- Teo, T. S. H. and Pok, S. H. 2003. Adoption of WAP-enabled mobile phones among Internet users. *Omega*, 31, 483-498.
- Thambiah, S., Ismail, H. and Eze, U. C. 2011a. Customer Awareness and Current Usage of Islamic Retail Banking Products and Services in Malaysia, *Australian Journal of Basic and Applied Sciences*, 5, 667-671.
- Thambiah, S., Ismail, H. and Malarvizhi, C. A. 2011b. Islamic Retail Banking Adoption: A Conceptual Framework, *Australian Journal of Basic and Applied Sciences*, 5, 649-657.
- Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *IEEE Transactions on engineering management*, 29(1), 28-45.
- Tung, F. C., Chang, S. C. and Chou, C. M. 2008. An extension of trust and TAM model with IDT in the adoption of the electronic logistics information system in HIS in the medical industry. *International journal of medical informatics*, 77, 324.
- Tung, L. L., & Rieck, O. (2005). Adoption of electronic government services among business organizations in Singapore. *The Journal of Strategic Information Systems*, 14(4), 417-440.
- Vijayarathy, L. R. 2004. Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information & Management*, 41, 747-762.
- Wang, Y. M., Wang, Y. S., & Yang, Y. F. (2010). Understanding the determinants of RFID adoption in the manufacturing industry. *Technological Forecasting and Social Change*, 77(5), 803-815.
- Williamson, O. 1975. Markets and hierarchies: Analysis and antitrust implications. New York: Free Press.
- Wu, J. H., & Wang, S. C. (2005). What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model. *Information & Management*, 42(5), 719-729.
- Wu, J. H., Wang, S. C., & Lin, L. M. (2007). Mobile computing acceptance factors in the healthcare industry: A structural equation model. *International journal of medical informatics*, 76(1), 66-77.
- Yap, K. B., Wong, D. H., Loh, C. and Bak, R. 2010. Offline and online banking—where to draw the line when building trust in e-banking? *International Journal of Bank Marketing*, 28, 27-46.
- Yoon, S. J. 2002. The antecedents and consequences of trust in online-purchase decisions. *Journal of interactive marketing*, 16, 47-63.
- Zainol, Z., Shaari, R. and Ali, H. M. 2008. A Comparative Analysis on Bankers' Perceptions on Islamic Banking. *International Journal of Business and Management*, 3, P157.
- Zhou, T., Lu, Y. and Wang, B. 2010. Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, 26, 760-767.