

MEDIATING EFFECTS OF ATTITUDE TOWARDS CONSUMERS' PERCEIVED INTERACTIVITY IN USING MOBILE BANKING

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Abstract

A mediocre volume researches has been sustained out on mobile banking embracement, however, scanty quantity of dissertation zero in on the mediating effects of attitude towards using mobile banking. In actuality, literatures on the pivotal enthusiasms of the attitude towards using mobile banking are deprived of a well established norm of measurement. Therefore, there is a need to evaluate the mediating effects of Malaysian consumers' attitude towards using mobile banking services. This investigation infuses the disparity by incorporating Technology Acceptance Model with perceived cost, perceived risk and perceived interactivity ambiances are assimilated. This study's paramount aspiration is to investigate heuristically the mediating effects of Malaysian consumers' attitude towards using mobile banking services through structural equation modeling procedure. The discoveries connoted consumers' attitude towards using mobile banking is a significant indirectly mediating effect in the relationship between usefulness, perceived interactivity, perceived cost, perceived risk, relative advantage and easefulness with the consumers' intention to use mobile banking. A commentary of the kismet of mobile banking settles this paper.

Keywords: Consumers' Perceived Interactivity, Mediating Effects, Attitude towards Using Mobile Banking

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INTRODUCTION

The banking industry in Malaysia first started 130 years ago with the establishment of a branch of the Chartered Mercantile Bank of India, London and China in Penang in 1875 (Muda, 1995). Over the years, Malaysian banking industry evolved from paper based to card based moving forward to internet based and now propelling into mobile banking (Mohammad, 2008). Mobile banking is making headway in which this horizon technology that will embellish the people's way of living across the globe. Captivatingly, mobile banking is characterized in myriad manners. In conjunction with that, Drexelius & Herzig (2001) pioneered mobile banking as the aptness to administer bank proceedings by means of a mobile device. Additionally, Barnes & Corbitt (2003), instituted that mobile banking is a passage in

which the customer interface with a bank using a mobile phone or personal digital assistant. Hence, Wikipedia puts together these various denotation as a universal interpretation that mobile banking is a program that grants patrons of a monetary establishment to comport an aggregate of pecuniary proceedings through a mobile device such as a mobile phone or tablet. Broadly speaking, it's about orchestrating financial transactions by the medium of a mobile terminal. Basically, mobile banking is concerning monetary pursuits wielding a mobile phone or tablet.

An abundance examination on the technology adoption has been performed but not plenty studies are undertaken on the mediating effects of consumers' attitude towards using mobile banking deep down the Malaysian panorama. Homogeneously, Malaysia's mobile banking pursuit is nevertheless in its infancy stages and unhip to Malaysian radius that contributes to underemployment of this attribute (Amin *et al.*, 2007). This is consonant with the observations of Bank Negara Malaysia in 2015 that divulged that the subscribers of mobile banking services' is virtually lower as compared to the mobile phone ingress rate published by the Malaysian Communications and Multimedia Commission (Bank Negara Malaysia, 2016).

The main aspiration of the study is to discover the mediating effects of consumers' attitude towards using mobile banking services in connection with usefulness, easefulness, relative advantage, perceived interactivity, perceived cost and perceived risk with intention to use mobile banking.

LITERATURE REVIEWS

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was designed by Fred Davis that upholds that external stimulus comprising actual system's features and capabilities exercise control over the users' inducement to use the system which predicts the usage of the system. Davis implanted additionally that users' motivation of actual usage prevailed to be regulated by three aspects that are perceived ease of use, perceived usefulness and attitude towards using a system whereby which users' behavioral intention acts as the mediator. Perceived usefulness is defined as the degree to which a person believed that using a particular system would enhance his or her job performance. Correspondingly, perceived ease of use is delineated as the degree to which a person believes that using a particular system would be free of effort (Davis *et al.*, 1989).

Attitude Towards Using Mobile Banking

Celik (2008) examined the determinants of customers' internet banking acceptance in Turkey which revealed that perceived ease of use and perceived usefulness significantly influences the consumers' attitudes towards using internet banking whereby perceived usefulness is affected by perceived ease of use. Moreover, consumers' attitudes and perceived usefulness significantly influences their behavioral intentions to use internet banking. Rezaei *et al.* (2008) investigated the external factors that might affect the intention to use e-learning among graduate students of agriculture in University of Tehran, Iran which found strong influence of perceived usefulness on students' intention to use e-learning. Vrechopoulos & Atherinos (2009) examined the effects of web banking layout on consumer behavioural intentions among post-graduates of Athens University of Economics and Business, in Athens, Greece which revealed that perceived usefulness and perceived ease of use, significantly influences the consumers' attitude toward using the e-banking system. Allegedly, perceived ease of use has a significant

positive influence on perceived usefulness in the context of web banking while attitude influences significantly the behavioural intentions to use this system.

Teo *et al* (2010) investigated the pre-service teachers' self-reported intention to use technology and found that attitude towards use is a significant predictor of behavioral intention to use. Chong *et al* (2010) probed the elements that affect the adoption of online banking in Vietnam. The result shows that perceived usefulness is positively associated with the intention to use online banking. On the contrary, Masinge (2010) found that the perceived usefulness and perceived ease of use has a significant effect impact on the adoption of mobile banking at the bottom of the social pyramid in South Africa whereas the perceived ease of use has a significant positive relationship with perceived usefulness. Riquelme & Rios (2010) found that social risk has a significant influence on the intention to adopt mobile banking in Singapore. Cruz *et al* (2010) found that perceived risk and perceived cost has a significant influence on the Brazilian's adoption intention of mobile banking services. Also, Wessels & Drennan (2010) examined the consumer acceptance of mobile phone banking among Australian consumers aged 18 years and older that revealed that perceived usefulness has a significant effect on consumer's attitude towards and intention to use mobile banking adoption. Likewise, perceived risk has a significant effect on consumer's attitude towards and intention to use this technology.

Al-Jabri & Sohail (2012) examined the factors influencing the mobile banking adoption in Saudi Arabia that revealed that relative advantage has a significant effect on the mobile banking adoption. On the other hand, Guritno & Siringoringo (2013) investigated consumers' attitude towards online airlines ticket purchase in Indonesia which revealed that perceived ease of use and perceived usefulness influences their attitudes towards online airlines ticketing usability. Rashed *et al* (2013) examined the determinants of behavioral intention to use mobile banking in Yemen and found that perceived ease of use along with perceived usefulness have a significant influence on the intention to use mobile banking. Shahsavari & Sajadi (2013) investigated the enterprise resource planning acceptance drivers in Iran which revealed that perceived ease of use positively influences perceived usefulness and both these variables have significant relationship with the intention to use of enterprise resource planning systems. Kabir (2013) investigated the factors that influence the users of banking utilities to use mobile banking in Bangladesh. It's found that relative advantage, perceived usefulness and perceived ease of use have significant relationship with the intention to use mobile banking services.

In addition, Karuppiah *et al* (2014) studied the customer acceptance of internet banking in Brunei Darussalam and found that perceived ease of use and relative advantage affects significantly the intention to use the internet banking service. The behavioral intention to use the internet banking is effected by the perceived financial cost (Tung *et al*, 2014). Identically, Yu (2014) found that attitude significantly influences consumers' behavioral intention to switch from online banking to mobile banking. Nyeko *et al* (2014) investigated the factors influencing the short message service (SMS) mobile banking adoption in the West Nile Region in Uganda and found that perceived ease of use has a significant influence on the adoption of SMS banking. Alsheikh & Bojei (2014) examined the determinants affecting end users' intention to adopt mobile banking in Saudi Arabia that revealed that perceived risk is a significant predictor for adopting mobile banking services in the initial stages adoption. Arvidsson (2014) found that relative advantage as a significant predictor of consumers' attitudes to adopt the mobile payment services in Sweden. AlSoufi & Ali (2014) studied customers' perception of m-banking adoption in Kingdom of Bahrain and found that perceived usefulness and ease of use affects their intention to use mobile banking.

Mohammadi (2015) examined the factors that affect consumers' attitudes towards the use of mobile banking in Iran. The result shows that perceived ease of use of mobile banking influences consumers' perceived usefulness significantly. In addition, both the perceived ease of use and perceived

usefulness of mobile banking exhibits significant effect on users' attitudes towards use of mobile banking which influences their intention to continue using mobile banking. Priya & Raj (2015) investigated perception of bank customers towards difficulties in adapting mobile banking technology in India. The result shows that the adoption of mobile banking is significantly influenced by security risk, privacy risk, financial performance risk and time risk. Özbek *et al* (2015) examined the effects of risk and cost perceptions on tourists' adoption level of online booking among Russian tourists touring Antalya, Turkey that revealed that perceived ease of use has a weighty positive effect on perceived usefulness. On the other hand, both perceived ease of use and perceived usefulness displayed significant effect on behavioral intention to use online booking too. Al-Somali *et al* (2015) conducted a study of e-commerce adoption in Saudi Arabian organisations. The result showed that relative advantage significantly influences the adoption of e-commerce. Furthermore, significant relationship is exhibited between cost and the adoption of e-commerce too. Additionally, cost significantly influences consumers' attitude and usage intentions toward mobile banking services among customers of Bank Saderat in Tehran, Iran (Hosseini *et al*, 2015).

Li *et al* (2015) investigated the effect of website interactivity along with promotional framing on consumer attitudes toward online advertising among students from a national university in Southern Taiwan which revealed that website interactivity can enhance consumer attitudes. Hsieh (2015) examined the physicians' acceptance of electronic medical records exchange system in Taiwan that revealed that perceived risk is a significant predictor of physicians' intention to use an electronic medical records exchange system. Colleen (2015) examined the effects of perceived interactivity on attitude and intention to use a new product of digital information among Americans which found that perceived interactivity has a significant influence on the attitudes and adoption intentions of digital natives. Smeda *et al* (2015) investigated the factors affecting the e-book adoption among mathematics and statistics university students in Libya. The result shows that there is a significant relationship between students' perceived ease of use of e-book and its perceived usefulness as well as their attitude toward using e-book. At the same time, perceived usefulness significantly influences students' attitude toward using e-book. Ostensibly, students' attitude toward using e-book influences their behavioural intention. Jafari *et al* (2016) examined the factors influencing the mobile advertising acceptance in Mashhad, Iran that disseminated that perceived ease of use and perceived usefulness significantly influences consumers' attitude towards mobile advertising. In unison, intention to accept mobile advertising is significantly governed by consumers' attitude towards advertisement.

Emad *et al* (2016) investigated the elements that influence peoples' acknowledgment of eHealth Systems. This study showed that perceived ease of use and perceived usefulness played an important role in influencing peoples' intention to utilize health informatics. Yadav (2016) investigated the active factors that influence customers' intention regarding use of internet banking among bank customers in Himachal Pradesh, India which revealed that perceived usefulness has a positive influence on i-banking adoption intention while perceived ease of use insignificant in relation to the latter.

RESEARCH MODEL DEVELOPMENT

Model Specification

In a study, three types of variables are available which is known as dependent variable, intervening variable and independent variable. In depth studies were taken in order to develop the

conceptual framework as shown in Figure 1. Worth to mention studies by Wu *et al* (2015), Arvidsson (2014), Hsieh (2015), Tung *et al* (2014) & Li *et al* (2015) has been a great source of brainwave for this study. The mediating variable is of chief importance in this research. The aspirations of this research is to understand as well as to quantify the mediating effect of attitude towards using mobile banking

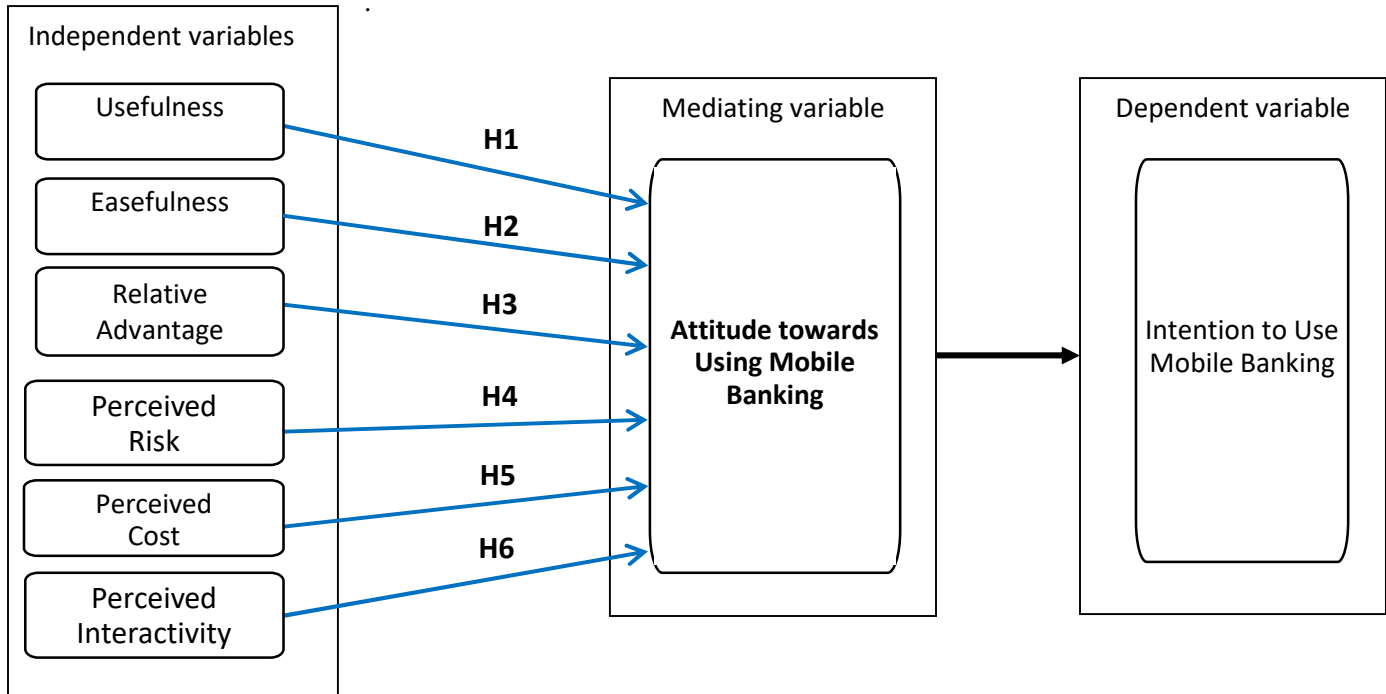


Figure 1: Research Framework of mediating effects of consumers' attitude towards using mobile banking services

Simultaneously, six hypotheses are devised as below:

H₁: Attitude Towards Using Mobile Banking mediates the relationship between Usefulness and Intention to Use Mobile Banking.

H₂: Attitude Towards Using Mobile Banking mediates the relationship between Easefulness and Intention to Use Mobile Banking

H₃: Attitude Towards Using Mobile Banking mediates the relationship between Relative Advantage and Intention to Use Mobile Banking.

H₄: Attitude Towards Using Mobile Banking mediates the relationship between Perceived Cost and Intention to Use Mobile Banking.

H₅: Attitude Towards Using Mobile Banking mediates the relationship between Perceived Risk and Intention to Use Mobile Banking.

H₆: Attitude Towards Using Mobile Banking mediates the relationship between Perceived Interactivity and Intention to Use Mobile Banking.

Stratified sampling method was incorporated in this disquisition in which Malaysia's age pattern is exploited in becoming the pedestal to classify the population is into assorted subgroups (Sekaran & Bougie, 2009). In addition to this minutest prejudiced probability sampling method, the breakthrough are eminently syllogizable. Moreover, it conserves time, money and energy reserves considering the minimal capital procurable for this study. Data was collected in the form of paper rooted survey questionnaire, an amalgamation of dichotomous, interval, category and Likert scales embedded questions in seven weeks within Dec 2015 – Feb 2016 centered at Klang Valley. In fact, personally administered questionnaire was undertaken to collect data. In conjunction with that it empowers me to give an introduction on my research subject matter as well as inspiring them to be forthright in their feedback. 1000 questionnaires was distributed in which 389 usable data was utilized for analysis. In this study, Structural Equation Modeling pursuit is espoused.

Model Estimation

This study is part of a larger study in which the factors influencing the Malaysian consumers' intention to use mobile banking services is evaluated. The basic ground work is well planned and carefully accomplished right from churning the data to analyzing it empirically. Hence, the process to determine the underlying dimensions has already been analyzed by dependent variable (intention to use mobile banking) and independent variables of usefulness, easefulness, relative advantage, perceived interactivity, perceived cost and perceived risk. On the other hand, exploratory factor analysis is undertaken to check the reliability, Kaiser-Meyer-Olkin Measure of sampling adequacy and Bartlett's Test of sphericity. On top of that, Confirmatory factor analysis has been executed to confirm if the data fits the specified model structure which includes Model fit indices test, Average variance extracted and composite reliability. Furthermore, discriminant validity of the constructs in the model is verified too. All these can be viewed in the paper published in Darmesh *et al* (2016). Therefore, in this paper, the main focus will be highlighted on determining the **mediating effects of consumers' attitude** towards using mobile banking services in respect to usefulness, easefulness, relative advantage, perceived interactivity, perceived cost and perceived risk with intention to use mobile banking.

Hence, in this paper, indirect relationships between the latent variables are tested. In other words, the mediating effect of the mediating variable is analyzed. Indirect effects are defined as effects that are mediated by at least one intervening variable (Bollen, 1987). The mediator is also known as intermediate variable explains how or why an independent variable influences an outcome. It characterizes the pathway from the exogenous variable to the outcome through the mediator (Gunzler *et al*, 2013). All the indirect effects of independent variables onto the dependent variables are statistically significant if p values are less than 0.05 (Bollen, 1987).

Mediating effect of Attitude towards Using Mobile Banking

Table 1 presents the indirect effect statistics of the mediating variable Attitude Towards Using Mobile Banking. The 95% confidence interval for the indirect effect of Usefulness is [0.108, 0.407]. The value 0 does not fall within this interval. Hence, Attitude Towards Using Mobile Banking is a mediator in the Usefulness to intention to use mobile banking relationship. Allegedly, the 95% confidence interval for the indirect effect of Easefulness is [0.094, 0.4]. The value 0 does not fall within this interval. Hence, Attitude Towards Using Mobile Banking is a mediator in the Easefulness to intention to use mobile banking relationship.

Table 1 : Mediating effect of Attitude towards Using Mobile Banking

Variable	Indirect Effects*	95% Confidence interval*		P-value
		Lower	Upper	
Usefulness	0.244	0.108	0.407	0.002
Easefulness	0.243	0.094	0.4	0.002
Relative Advantage	0.174	0.068	0.28	0.002
Perceived Risk	-0.202	-0.284	-0.127	0.001
Perceived Cost	-0.123	-0.221	-0.043	0.002
Perceived Interactivity	0.131	0.023	0.246	0.013

*Unstandardized regression weight

Interestingly, the 95% confidence interval for the indirect effect of Relative Advantage is [0.068, 0.28] whereby the value 0 does not fall within this interval. Hence, Attitude Towards Using Mobile Banking is a mediator in the Relative Advantage to intention to use mobile banking relationship. Moreover, the 95% confidence interval for the indirect effect of Perceived Risk is [-0.284, -0.127] whereby the value 0 does not fall within this interval. Hence, Attitude Towards Using Mobile Banking is a mediator in the Relative Advantage to intention to use mobile banking relationship.

Furthermore, The 95% confidence interval for the indirect effect of Perceived Cost is [-0.221, -0.043] by which the value 0 does not fall within this interval. Hence, Attitude towards Using Mobile Banking is a mediator in the Perceived Cost to intention to use mobile banking relationship. Identically,, the 95% confidence interval for the indirect effect of Perceived Interactivity is [0.023, -0.246] by virtue of the value 0 does not fall within this interval. Hence, Attitude towards Using Mobile Banking is a mediator in the Perceived Interactivity to intention to use mobile banking relationship. Comprehensively, all the hypothesized paths in regards to indirect relationships between the latent variables of the research model has p-value less than 0.05, hence, the significance of the corresponding hypotheses is substantiated (Bollen, 1987).

Hypothesis Summary

Furthermore, the last paper, Darmesh *et al* (2016) has already tested the hypothesis of the Structural Equation Modeling in relation to the dependent variable (intention to use mobile banking) and independent variables of usefulness, easefulness, relative advantage, perceived interactivity, perceived cost and perceived risk such as H₁, H₂, H₃, H₄, H₅ and H₆. However, the hypotheses of this study is of the mediating effects, it's discovered that H₁, H₂, H₃, H₄, H₅ and H₆ are supported by the data as shown in Table 2.

Table 2 : Research Hypothesis Validity

Regression Path	Hypothesis	Findings
<u>Mediating Effects of Attitude</u>		
Usefulness Attitude	H ₁	Supported
Easefulness Attitude	H ₂	Supported
Relative Advantage Attitude	H ₃	Supported
Perceived Cost Attitude	H ₄	Supported
Perceived Risk Attitude	H ₅	Supported
Perceived Interactivity Attitude	H ₆	Supported

CONCLUSION

This study has revealed that Attitude towards Using Mobile Banking is a mediator in the relationship between Easefulness and Intention to Use Mobile Banking. In fact, the indirect effect of Attitude towards Using Mobile Banking is prevalent in the relationship of Usefulness and Intention to Use Mobile Banking. Moreover, Attitude towards Using Mobile Banking does mediate the relationship between Relative Advantage and Intention to Use Mobile Banking. Moreover, Attitude towards Using Mobile Banking intervene the relationship between Perceived Cost and Intention to Use Mobile Banking. Identically, the relationship between Perceived Risk and Intention to Use Mobile Banking is also mediated by Attitude towards Using Mobile Banking. Comprehensively, consumers' attitude towards using mobile banking mediates the relationship between exogenous variables and endogenous variable. Hence, H₁, H₂, H₃, H₄, H₅ and H₆ are fortified by the data.

Over and above, attitude of consumers towards using mobile banking is the key in determining consumers' intention to use mobile banking. In other respects, if the consumers' attitude is well sculptured as in moulding in the direction of inclining towards using mobile banking services then these will translate into more peoples' intention to use mobile banking. One way or another, accentuation on emotional intelligence while endeavouring a marketing game plan is vital as it involves capturing the consumers' minds. Conjointly, the insights of this study enables mobile banking service providers and

mobile banking app developers to take de rigueur initiatives in their marketing strategy towards reaping larger market share.

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