



## The drivers of the success adoption of e-banking among the youths in Malaysia: UPM as a case

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### Article Info

Received:25.11.2014  
Accepted:20.12.2013  
Published online:01.02.2014

ISSN: 2231-8275

### ABSTRACT

The purpose of this paper is to investigate the drivers of the successful adoption of the e-Banking among youths in Malaysia. University Putra Malaysia as a case has been selected to narrow down the scope. This target group are the growing adults where accepting and using e-Banking facilities. The drivers will be more specific and accurate since they are the heavy users nowadays. This research has three independent variables with one dependent variable. A questionnaire with five-point likert scale is applied to 386 respondents. Three attributes are tested namely security, cost, charges, and privacy. Results indicate that all three variables have a significant value towards the dependent variable. The research implications are mainly to strengthen the methods to improve security, cost and privacy. This paper is the extension of earlier studies. It defines the drivers of successful adoption of e-Banking among youths in Malaysia. It examine under scope of three variables, which are security, cost and charges and privacy. The findings will be very useful for the future development of Internet banking particularly among youths in Malaysia.

**Keywords:** e-banking, cost, privacy, security, drivers.

### 1. Introduction

The world is changing and varying at a astounding or staggering rate and technology is deliberated to be the key driver for these modifications around us. An analysis of technology and its uses, practices and benefits show that it has permeated in almost every aspect of our life. Numerous activities are handled electronically by reason of the acceptance of information technology at home as well as at workplace. E-banking is the personal banking service on the Internet, protected and secured with bank identifiers. It is available anywhere and anytime. E-banking allows paying invoices to finnish and foreign recipients effortlessly and securely. One can also check or crisscross their account balances and transactions. Customers can order a new or different card, withdraw a loan arranged and make mutual fund

subscriptions. Other than that, there is a facility to access e-Banking services by obtaining bank identifiers.

E-banking as such is free of charge but commissions and fees in accordance with the service tariff will be levied on guidelines and other transactions carried out through e-Banking. Slowly but steadily, the customers are moving in the direction of the internet banking which is also acknowledged as e-Banking. The ATM and the Net transactions have become widespread. E-banking or Online banking is a universal term for the conveyance of banking services, facilities and products through the electronic channels such as the telephone, the internet, the cell phone etc. The notion and scope of e-Banking is still developing. It assists an effective payment and accounting system thereby enhancing the speed of delivery of banking services significantly. While in other word, electronic banking is one of the truly extensive avatars of E-commerce the world over. Numerous authors define e-banking differently but the most explanation depicting the sense and features of e-Banking are banking is a blend of two, Electronic technology and Banking. Here, Electronic Banking is a process by which a customer executes banking transactions electronically without visiting a brick-and-mortar institution.

This study will focus on the drivers of success adoption of e-Banking among youth in Malaysia. As a case study, University Putra Malaysia has been chosen. Its aim is to gain a deeper understanding of the drivers influencing the adoption of e-Banking. Internet banking in Malaysia has grown significantly alongside the use of smart phones and tablets and the penetration rate is half of the country's population, says Deputy Finance Minister Datuk Ahmad Maslan. He said on Wednesday that as at June 2013, there were 14.6 million subscribers of Internet banking in Malaysia. "It makes for a total of 14.3 million individuals and 0.3 million corporate subscribers. This gives a 49.1% rate of penetration in our population," he said during the opening of BankTech Asia 2013 Congress.

The main objective of this study is to identify the drivers that lead to the success adoption of e-Banking among youth in Malaysia. Therefore, to achieve the objective of this study, three research questions have been developed namely is the security affect the success of e-Banking adoption among youths in Malaysia, is the cost affect the success of e-Banking adoption among youths in Malaysia, and is the privacy affect the success of e-Banking adoption among youths in Malaysia.

## **2.0 LITERATURE REVIEW**

### **2.1 Security**

Juwaheer, Pudaruth, Ramdin (2012) investigate the factors influencing the adoption of internet banking services in Mauritius. Drawing from the technology acceptance model,

theory of reasoned action, theory of planned behaviour and the extensive literature on demographic profiling of internet banking users, trust and security aspects associated with adoption rate of internet banking, this paper combines various predetermined constructs in one model. Results have indicated that security aspects are deemed crucial factors to explaining internet banking adoption in Mauritius.

Nasri (2011) present all the factors which influence the adoption of Internet Banking in Tunisia. This paper used survey design questionnaire which is likert scales and sample profile to analyze the factors affecting bank customer's decision to adopt Internet Banking. Here a total of 253 respondents in Tunisia were sampled for responding. It is influenced most strongly by security. Singhal and Padhmanabhan (2008) determine the major factors responsible for internet banking based on respondent's perception on various internet applications. This research is based on primary data which was collected by structured survey and secondary data from published resources from the users and non users on Internet Banking. The findings cannot be generalized as the research is based on probability sampling. However, there is a similar result which is security.

Eze, Manyeki, Yaw and Har (2011) determine the factors that influence young adults to use internet banking because it is becoming critical for the bank managers to understand their customers' needs in order to deliver service effectively. Samples of 310 participants using convenience-sampling method have been selected. The results indicate that it is securities of the users' information's are the main determinants. Shah, Khan and Xu (2010) investigate the organisational factors which are critical to the success of e-Banking. The top factors found to be most critical for the success in e-Banking are quick responsive products/services, organisational flexibility, services expansion, systems integration and enhanced customer service. The results shows that top factor in order of importance were system security.

Moreira, Rocha, Almeida (2012) examines the use of Internet Banking among Portuguese college students contextualized with other existing studies/publications and performing a critical analysis from the obtained results. The results concluded that a high level of adherence of Internet Banking services, related with high levels of perceived security. Sanayei and Jafari (2011) investigated three factors, perceived use and intelligent, data security, and quality of services in electronic banking, which appear to be most effective in customers' acceptance of such services. The results shows that factors studied in the research, data security influence the acceptance of customers. Geetha and Malarvizhi (2011) present the factors which are affecting the acceptance of e-Banking services among the customers and also indicate level of concern regarding security and privacy issues in Indian context. The results show security has significant impact on adoption of Banking among customers. Sohrabi, Yee and Nathan (2013) examine the critical success factors for the adoption of electronic banking in the context of Malaysia. The data sources are from primary and secondary data which includes questionnaire. Dimensions such as trust, cost, security and privacy was examined and the result was obtain from 268 respondents. The findings of this

research show that security have significant relationship with customer's adoption of online banking in Malaysia. Tasmin, Aliyu and Takala (2012) present a major section of the literature on internet banking services with a particular emphasis on the challenges of customer service delivery in the banking industry. The result shows that service delivery such as security is the major integral determinants of electronic banking services.

Alam, Musa and Hassan (2009) evaluate the academic literature on internet banking drivers and found that there is a need to conduct research on corporate customer internet banking adoption. The results for this paper show that behavioural intentions such as security are drivers to the internet banking adoption. Hosein (2010) investigate and identify those areas in which bank could improve or modify their services to increase the adoption rate of internet banking. Here the data was gathered from non internet banking users via a survey questionnaire. The results show that security is one of the critical success factors of internet banking.

Aliyu, Younus and Tasmin (2012) investigate the factors that influence the consumer adoption of electronic banking in Nigeria and found that there is a need to conduct research on Electronic Banking adoption behaviour. The study also examines the relationship between Electronic banking adoption and the determining factors for critical success of Electronic Banking in Nigeria. The results show that, security is a factor among others which affect electronic banking. Poons (2008) evaluate the determinants of users' adoption momentum of e-Banking in Malaysia. Results indicate that all elements for ten identified factors are significant with respect to the users' adoption of e-Banking services. Results indicate that security factor play an important role in determining the users' acceptance of e-Banking services with respect to different segmentation of age group, education level and income level. Ahmad (2011) determines and explores the adoption of e-Banking functionality and investigates the impact of e-banking on the outcomes for customer satisfaction. The results showed that adoption of e-Banking which is security had a positive effect.

## ***2.2 Cost and charges***

Sohrabi, Yee and Nathan (2013) examine the critical success factors for the adoption of electronic banking in the context of Malaysia. The data sources are from primary and secondary data which includes questionnaire. Dimensions such as trust, cost, security and privacy was examined and the result was obtain from 268 respondents. The findings of this research show that costs have significant relationship with customer's adoption of online banking in Malaysia. Tasmin, Aliyu and Takala (2012) present a major section of the literature on internet banking services with a particular emphasis on the challenges of customer service delivery in the banking industry. The result shows that service delivery such as cost/fees are the major integral determinants of electronic banking services. Alsajjan and Dennis (2006) verify online banking acceptance behaviour which is to reduce cost and save time. The results for this paper show that charges play an important role in increasing the

usability under the online banking environment. Here it is stated that lower charges for online transactions should be promoted.

Alam, Musa and Hassan (2009) evaluate the academic literature on internet banking drivers and found that there is a need to conduct research on corporate customer internet banking adoption. The results for this paper show that behavioural intentions such as cost are the drivers to the internet banking adoption. Kurnia, Peng and Liu (2010) assess and explore the factors impacting e-Banking adoption in China as an example of developing country. Facing an intense competition from foreign-owned banks, Chinese domestic banks have recently been actively engaged in e-banking initiatives. The result shows cost and chargers have positive effect on e-Banking adoption.

Aliyu, Younus and Tasmin (2012) investigate the factors that influence the consumer adoption of electronic banking in Nigeria and found that there is a need to conduct research on Electronic Banking adoption behaviour. The study also examines the relationship between Electronic banking adoption and the determining factors for critical success of Electronic Banking in Nigeria. The results show that, cost/price are two factors among others which affect electronic banking. Kaleem (2007) collect the SMEs owners/executives/managers perceptions towards the potential benefits and the risk associated to electronic banking in Pakistan. The study also segregates the data into electronic banking (EB) users and non-users basis to identify discrepancies in their perceptions towards the available financial services or facilities. This results show electronic banking minimizes cost of transaction. Ahmad (2011) determines and explores the adoption of e-Banking functionality and investigates the impact of e-banking on the outcomes for customer satisfaction. The results showed that adoption of e-Banking which is charges had a positive effect.

### **2.3 Privacy**

Hosein (2010) investigate and identify those areas in which bank could improve or modify their services to increase the adoption rate of internet banking. Here the data was gathered from non internet banking users via a survey questionnaire. The results show that privacy is one of the critical success factors of internet banking. Sohrabi, Yee and Nathan (2013) examine the critical success factors for the adoption of electronic banking in the context of Malaysia. The data sources are from primary and secondary data which includes questionnaire. Dimensions such as trust, cost, security and privacy was examined and the result was obtain from 268 respondents. The findings of this research show that privacy has significant relationship with customer's adoption of online banking in Malaysia.

Poons (2008) evaluate the determinants of users' adoption momentum of e-Banking in Malaysia. Results indicate that all elements for ten identified factors are significant with respect to the users' adoption of e-Banking services. Results indicate that privacy factor plays an important role in determining the users' acceptance of e-Banking services with respect to different segmentation of age group, education level and income level. Ahmad (2011) determines and explores the adoption of e-Banking functionality and investigates the impact

of e-banking on the outcomes for customer satisfaction. The results showed that adoption of e-Banking which is privacy had a positive effect.

#### **2.4 Adoption**

Singhal and Padhmanabhan (2008) determine the major factors responsible for internet banking based on respondent's perception on various internet applications. This research is based on primary data which was collected by structured survey and secondary data from published resources from the users and non users on Internet Banking. The findings cannot be generalized as the research is based on probability sampling. It is stated the importance of e-Banking adoption. Hosein (2010) investigate and identify those areas in which bank could improve or modify their services to increase the adoption rate of internet banking. Here the data was gathered from non internet banking users via a survey questionnaire. The results show that the adoption of e-Banking is very important to determine the success of it.

Ahmad (2011) determines and explores the adoption of e-Banking functionality and investigates the impact of e-banking on the outcomes for customer satisfaction. The results showed that adoption of e-Banking had a positive effect. Sohrabi, Yee and Nathan (2013) examine the critical success factors for the adoption of electronic banking in the context of Malaysia. The data sources are from primary and secondary data which includes questionnaire. Dimensions such as trust, cost, security and privacy was examined and the result was obtain from 268 respondents. The findings of this research stress about the importance of e-Banking adoption.

Takala (2012) present a major section of the literature on internet banking services with a particular emphasis on the challenges of customer service delivery in the banking industry. The result shows that service delivery such as security is the major integral determinants of electronic banking services. However the success of this variable strongly depends on the adoption itself. In this paper it has stated that.

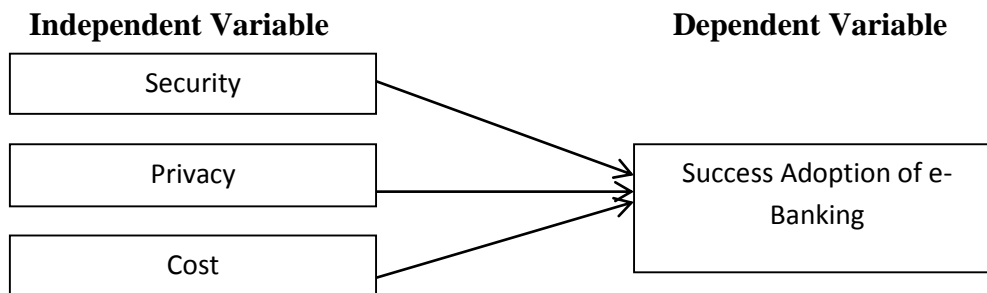
### **3.0 METHODOLOGY**

#### **3.1 Data Collection Method and Sampling**

The study adopts primary data as well as secondary data. Here, secondary data was basically collected from different published sources and online journals. Whereas, primary data is the survey questionnaires. The questionnaires consist of 2 parts. Part 1 is on respondent profile whereas part 2 consists of the conceptual variables identified in this paper such as privacy, security and cost. All items were measured by responses on a five-point Likert scale with statements ranging from 1= Strongly Disagree to 5= Strongly Agree. All questions are asked in English and consist of 20 questions for the part 2. The questionnaire was adopted from the journal Critical Success Factors for the Adoption of e-Banking in Malaysia by Sohrabi, Yee and Nathan (2013).

The sample of this study consists of all the UPM students. Total population of UPM students are more than 10,000. A set of 450 questionnaires have been distributed in various methods such as face to face, via e-mail and via post. From there, have collected 386 questionnaires back to be tested using SPSS.

### 3.2 Conceptual Framework:



### 3.3 Research Hypothesis

#### *Hypothesis 1:*

H<sub>1</sub> Security has significant effect on user's adoption of e-Banking among youths in Malaysia.

#### *Hypothesis 2:*

H<sub>2</sub> Cost and charges has significant effect on user's adoption of e-Banking among youths in Malaysia.

#### *Hypothesis 3:*

H<sub>3</sub> Privacy has significant effect on user's adoption of e-Banking among youths in Malaysia.

### 3.4 Data Screening

The normality test was conducted and the result of the two coefficients of skewness and kurtosis is shown as per below for each variables.

Table 3.1: Normality result

Variable	Skewness	Kurtosis
Security	-0.877	-0.289
Cost & Charges	-0.832	-0.311
Privacy	-0.911	-0.274
Adoption	-0.311	-1.151

From the table shown above, the normality of the data distribution is between -1 to 1 for the skewness coefficient and -3 to 3 for kurtosis coefficient.

The reliability test is conducted for the study in SPSS. The Cronbach's Alpha measures the internal consistency or homogeneity among the multi-item scales. The minimum Cronbach's Alpha of 0.70 considered to be acceptable (Sekaran, 2003). Furthermore, Cuieford (1965) also mention that Cronbach's alpha exceeding 0.7 indicates acceptable reliability. The result for reliability test in this study is shown in the table below.

Table 3.2: Reliability result

Variable	Cronbach's Alpha
Security	0.741
Cost & Charges	0.791
Privacy	0.921
Adoption	0.911

#### 4.0 RESULTS AND DISCUSSION

Three hundred and eighty six (386) samples were used for data analysis and hypotheses testing. From 386 samples, 150 are male respondents and 236 female respondents. The study found that female respondents are active internet bank users than male respondents. Most of the respondents are single, aged between 18-24 and are full-time students in University Putra Malaysia (UPM).

##### 4.1 Correlation

The Bivariate Pearson Correlation test is conducted to determine the significant relationship between the 3 main factors which are the security, cost and charges, and privacy's effect towards the effect of success adoption of e-Banking among youths in Malaysia and the results can be seen in table below.

Correlations

		Security	cost & charges	privacy	adoption
security	Pearson Correlation	1	.470**	.380**	.354**
	Sig. (2-tailed)		.000	.000	.000
	N	386	386	386	386



cost and charges	Pearson Correlation	.470**	1	.408**	.444**
	Sig. (2-tailed)	.000		.000	.000
	N	386	386	386	386
privacy	Pearson Correlation	.380**	.408**	1	.609**
	Sig. (2-tailed)	.000	.000		.000
	N	386	386	386	386
adoption	Pearson Correlation	.354**	.444**	.609**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	386	386	386	386

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From the table above, the alternate hypothesis for all three main drivers of success adoption of e-Banking can be resulted as per below:

H1: Security has significant effect on user's adoption of e-Banking among youths in Malaysia.

Since the correlation result between security and adoption is positive at 0.354\*\* which is significant at 0.01 level (2-tailed), the effect between these two variables is strong. Therefore, the first hypothesis, H1 is accepted.

H2: Cost and charges has significant effect on user's adoption of e-Banking among youths in Malaysia.

Since the correlation result between cost and charges and adoption is positive at 0.444\*\* which is significant at 0.01 level (2-tailed), the effect between these two variables is strong. Therefore, the second hypothesis, H2 is accepted.

H3: Privacy has significant effect on user's adoption of e-Banking among youths in Malaysia.

Since the correlation result between privacy and adoption is positive at 0.609\*\* which is significant at 0.01 level (2-tailed), the effect between these two variables is strong. Therefore, the third hypothesis, H3 is accepted.

#### **4.2 Linear Regression**

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#### **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.354 <sup>a</sup>	.125	.123	.68454	.125	54.937	1	384	.000

a. Predictors: (Constant), security

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.744	1	25.744	54.937	.000 <sup>a</sup>
	Residual	179.941	384	.469		
	Total	205.685	385			

a. Predictors: (Constant), security

b. Dependent Variable: adoption

Table 4.1: Regression Result for Hypothesis  
**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.728	.155		17.565	.000
	security	.333	.045	.354	7.412	.000

a. Dependent Variable: adoption

1

Hypothesis 1: Security has significant effect on user's adoption of e-Banking among youths in Malaysia. With regards to the model summary, R square is equal to 0.125 which indicates that there is a strong explained user's experience of e-Banking. The finding suggests that high security is important in influencing users adoption of e-Banking.

An analysis of variance (ANOVA) is used to test whether there is a significant linear relationship between security cost and e-Banking adoption. Referring to table 4.1, ANOVA table, the p-value is 0.000 which shows that there is a significant relationship between security and e-Banking adoption.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.444 <sup>a</sup>	.197	.195	.65571	.197	94.388	1	384	.000

a. Predictors: (Constant), cost and charges

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.582	1	40.582	94.388	.000 <sup>a</sup>
	Residual	165.103	384	.430		
	Total	205.685	385			

a. Predictors: (Constant), cost and charges

b. Dependent Variable: adoption

Table 4.2: Regression Result for Hypothesis 2

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.652	.128		20.754	.000
	Cost and charges	.364	.037	.444	9.715	.000

a. Dependent Variable: adoption

Hypothesis 2: Cost and charges has significant effect on user's adoption of e-Banking among youths in Malaysia.

With regards to the model summary, R square is equal to 0.197 which indicates that there is a strong linear between cost and charges and users e-Banking adoption. Approximately 44.4% of variance of cost and charges can significantly explained customer's adoption of e-Banking for cost and charges variable. The finding suggests that the lower cost and charges, the more users tend to adopt e-Banking.

An analysis of variance (ANOVA) is used to test whether there is a significant linear

relationship between cost and charges and success of e-Banking adoption. Referring to table 4.2, ANOVA table, the p-value is 0.000 which shows that there is a significant relationship between cost and charges and success adoption of e-Banking.

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.609 <sup>a</sup>	.371	.370	.58032	.371	226.747	1	384	.000

a. Predictors: (Constant), privacy

#### ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.363	1	76.363	226.747	.000 <sup>a</sup>
	Residual	129.322	384	.337		
	Total	205.685	385			

a. Predictors: (Constant), privacy

b. Dependent Variable: adoption

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.579	.154		10.274	.000
	privacy	.568	.038	.609	15.058	.000

a. Dependent Variable: adoption

Table 4.3: Regression Result for Hypothesis 3

Hypothesis 3: Privacy has significant effect on user's adoption of e-Banking among youths in Malaysia.

With regards to the model summary, R square is equal to 0.371 which indicates that there is a strong linear between privacy and users adoption of e-Banking. Approximately 60.9% of variance of privacy can significantly explained users adoption of e-Banking among youths in Malaysia. The finding suggests higher the privacy, higher the adoption of e-Banking among youths in Malaysia.

An analysis of variance (ANOVA) is used to test whether there is a significant linear relationship between privacy and users adoption of banking. Referring to table 4.3, ANOVA table, the p-value is 0.000 which shows that there is a significant relationship between privacy and success of e-Banking adoption.

## **5.0 CONCLUSION**

This study focus on crucial factors for the success adoption of electronic banking among youths in a fast developing country, Malaysia. The findings of this research show that security, cost and charges and privacy have significant relationship with youth's adoption on e-Banking in Malaysia. Lower cost or charges increase the number of e-Banking users and subsequently adoption of e-Banking. In this study, bank can concentrate on lowering down the charges more or design a package where it can cut cost for the users. Hence, banks can concentrate on drivers that are found to influence the users such as improving security and privacy and create a better websites. Furthermore, the findings discussed in this study are useful for banks to improve their security and privacy functions in e-Banking that will safeguard more customers' personal information at the lower cost for users to achieve profitability in the long term.

### **5.1 Limitations**

Some limitations of this study low regional diversity among the respondents participated in this survey where all of them are University students. The study concentrated solely on respondents from regions in Malaysia compromising of UPM students. Future studies could focus on collecting a larger number of responses from a wider region because even the time was very limited.

### **5.2 Recommendations**

Banks must inform their clients about its security policy through all available media such as their websites, newspapers or through e-mail. Besides, banks must consider training and education programs that will help clients, customers and non-adopters in particularly to overcome the difficulty of using online banking. Finally, banks should make an awareness campaign of security aspects of their internet services to encourage the use on internet banking and reduce the cost and charges of the usage of e-banking services.

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