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The Role Of Technology Acceptance Model On Rhb Mobile Banking

Ahmad Adzri Bin Abdul Halim Shah, Anuar Shah Bin Bali Mohamed, Rana Mohsin Ali, Raja Nerina Binti Raja Yusof

Abstract: Mobile banking developments and trends in recent years had great impacts on banking sector worldwide. Therefore, the disruptive innovative technology has accelerated changes in the way of banking business. The purpose of this paper is to explore the role of Technology Acceptance Model on RHB Mobile Banking. The sample used in this study includes 85 responses of RHB Mobile Banking users collected through structured questionnaire distributed via cyberspace. For statistical analysis, structural equation model (SEM) approach was used. The present study suggests that mobile banking use increases as long as customer perceives it as useful tool. Findings confirmed that perceived usefulness, perceived ease of use and perceived trust were the key constructs for promoting mobile banking usage in Malaysia. Furthermore, the importance performance matrix analysis trust has seen the most important factor. Thus, banks can focus on cultivation of positive trust beliefs about mobile banking among prospect customers.

Index Terms: Mobile banking, Technology acceptance model, perceived ease of use, perceived usefulness, perceived trust, intention to use, internet banking.

1. INTRODUCTION

Many banks around the world have launched their mobile banking to provide customers with more convenient ways to access banking information and services. Mobile banking is basically the type of banking done via internet. In simple terms it is to do electronic exchange of money from one account to another. It is different from traditional banking as there is no physical presence; no specific banking hours; no long queues to wait; management and operation of account is done by the account holder itself[1] This research differ because it is based on many factors such as the level of development of the particular country, its national culture and the customers' knowledge of mobile banking and the infrastructure of information technology. In Malaysia, mobile banking research focuses on the adoption model, the drivers of customer intention to use mobile banking, and the use of electronic payment. There are few research studied customer perceived trust (PT) in mobile banking, even though trust plays an important role in electronic commerce adoption, especially mobile banking transactions, and trust is one of the most significant factors in customer acceptance of mobile banking[2].

1.1 Mobile Banking

Mobile banking, which is also referred to as cell phone banking is the use of mobile terminals such as cell phones and personal digital assistants to access banking networks via the wireless application protocol [3]. The mobile banking is similar to internet banking in that it provides a fast and convenient way of performing common banking transactions [4]. In order to enjoy the benefits of mobile banking, a user needs a mobile phone that is equipped with the features required by the bank

that provides this service [4]. Once a user obtained a registered account for mobile banking from the banking institution, the user would be able to do banking transactions from anywhere. The mobile banking can be done either by accessing the bank's web page through the web browser on the mobile phone, via text messaging, or by using an application downloaded to the mobile phone [5]. Mobile banking allows customers to perform three fundamental transactions which are storing money in an account that is accessible by the mobile device, completing cash-in and cash-out transactions with the stored account, and transferring money among different accounts.

2 LITERATURE REVIEW

2.1 Technology Acceptance Model (TAM)

Davis [4] developed the TAM, according to this model "users' adoption of computer system" depends on their "behavioral intention to use", which in turn depends on "attitude", consisting of two beliefs, namely Perceived Ease Of Use (PEOU) and Perceived Usefulness (PU). TAM has been widely used for predicting the acceptance and use of information systems, and recently has been applied to predict internet adoption as well. In a recent study, Lederer [7] adapted TAM to study World Wide Web usage and found evidence to support TAM.

2.2 Perceived Ease of Use

PEOU is defined as the degree to which a person believes that using a particular system would be free of effort within an organizational context [4]. According to Davis [4], the approximation to this construct is based on measures to determine how systems allow to perform tasks faster, increase productivity, performance and work efficiency. Considering these fundamentals, we have formulated the following hypothesis: H1. PEOU of the proposed mobile banking has a positive impact on its PU.

2.3 Perceived Usefulness

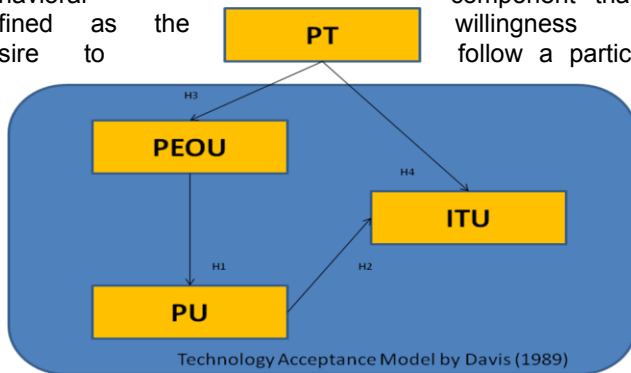
According to Davis [4], PU can be defined as the degree to which a person believes that using a specific system will increase his or her job performance. In this research, this variable is relevant since mobile applications of banks are considered innovative within online banking, and the usefulness provided consumers is closely related to the

- Ahmad Adzri Bin Abdul Halim Shah - Faculty of Economics and Management, Universiti Putra Malaysia, Serdang Darul Ehsan Selangor 43400, Malaysia
- Anuar Shah Bin Bali Mohamed - Faculty of Economics and Management, Universiti Putra Malaysia, Serdang Darul Ehsan Selangor 43400, Malaysia E-mail: anuar@upm.edu.my
- Rana Mohsin Ali - Putra Business School, Universiti Putra Malaysia, Serdang Darul Ehsan Selangor 43400, Malaysia
- Raja Nerina Binti Raja Yusof - Faculty of Economics and Management, Universiti Putra Malaysia, Serdang Darul Ehsan Selangor 43400, Malaysia

advantages that it offers. Therefore, we propose the following hypothesis: H2. PU has a positive effect on the intention of use of the proposed mobile banking.

2.4 Perceived Trust

Traditionally, trust has been formed by two basic components: a cognitive component that defines trust as “the belief that the other party’s word or promise is reliable and the party will fulfill its obligations in an exchange relationship” [9] and a behavioral component that is defined as the willingness or desire to follow a particular



pattern of behavior, which determines the success rate of acceptance of the innovation [9]. In the context of the internet, authors like Pavlou [8] and Bounagui & Nel [9] have identified a positive relationship between trust and ease of use. Thus: H3. PT in the proposed mobile banking has a positive effect on the PEOU. Other studies have also shown a positive relationship between trust and intention to use [10][11]. Therefore: H4. PT has a positive effect on the intention of use of the proposed mobile banking.

3 METHODOLOGY

3.1 Survey Design & Sampling

Quantitative method is used by researchers to collect the data required. In the Malaysian context, most studies examining the role of culture in technology adoption have used questionnaire surveys, for example, Abdullah and Lim [11] and Ebrahimi [12]. Neuman [13] suggests that self-administered survey questionnaires are easy to administer, relatively cost-effective and enable collection of a wide variety of data. Self-administered surveys are an easy cost-effective method that allows the researcher to access a large number of respondents in a short time. In light of these benefits, self-administered surveys were used in this study as the respondents also have a high level of education. A questionnaire is developed for measuring the respondent’s observation. The survey is directed towards customers of RHB Bank in Sepang city of Malaysia. Before conducting the survey, formal letters will be written to the respective commercial banks. Where, researcher will ask for the permission to collect the data within bank branches. Convenience sampling method was used in this study. Convenience sampling defined as a process of data collection from population that is close at hand and easily accessible to researcher. Hair [14] illustrated that convenience sampling allows researcher to complete interviews or get responses in a cost effective way.

3.2 Instrument Development

The researcher develops the survey questionnaire based on

previous studies. This questionnaire comprises closed-ended questions. According to Sekaran [15], open-ended questions allow respondents to answer them in any way they like, whereas closed-ended questions require respondents to select their answers from the choices given. The questionnaire is divided into three sections as below:

Section 1: Demographic information

Section 2: Mobile banking usage

Section 3: Statements related to TAM on mobile banking usage

This 5-point Likert scale was used for Section 3, while a number of defined response choices were used for Sections 1 and 2. According to Sekaran [15], Likert scales are the most frequently-used scales in information systems research.

4 DATA ANALYSIS

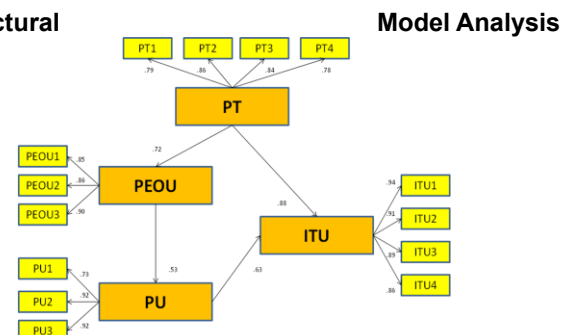
4.1 Reliability Test

In this research, the reliability test focuses on important variables that use Likert scale points in sections 3, 4 and 5 of the questionnaire. The results of the reliability test for each section suggested that the range of the reliability is between 0.737 and 0.915. As Cronbach’s alpha value for all constructs is more than 0.70, all the constructs can be accepted as being reliable. Compatibility of the language in the questionnaire was improved and the key variables in this research using the Likert scale have met the reliability assumptions. Hence, it can be deduced that the questionnaire employed in this research has met the criteria of the understandability and reliability needed for any research instrument. No amendments to the instrument were necessary before proceeding to actual data collection.

4.2 Convergent Analysis

Convergent validity of measurement model is usually ascertained by examining the factor loading, average variance extracted and composite reliability [16]. All the values were above than 0.6 that indicates the convergent validity. The convergent validity was also confirmed through estimation of average variance extracted (AVE) by recommended values of Fornell and Larcker [16] as it must be greater than 0.5. The average variance extracted that reflects the overall amount of variance in the indicators was accounted for latent construct. Further to this measurement, model needs to assess the composite reliability. Table above depicts composite reliability (CR) degree where the construct indicator represents the latent construct values exceeded 0.7 recommended by Hair [14].

4.3 Structural



The results reveal that all four hypotheses had significance relationship with their respective variables. Table above depicts that the relationship between trust to ease of use is supported by H1: ($\beta = 0.72$, $p < 0.001$). Next, the relationship between perceived ease of use to usefulness is supported by H2: ($\beta = 0.53$, $p < 0.001$). H3 showed that perceived usefulness is positively related with intention to use by ($\beta = 0.63$, $p < 0.001$). Finally, the results of H4, where the relationship between trust to intention is supported by ($\beta = 0.88$, $p < 0.001$).

Results of Structural Model Analysis (Hypothesis Testing)

#	Constructs	B	P-Values	Results
H1	PEOU \rightarrow PU	.53	***	Supported
H2	PU \rightarrow ITU	.63	***	Supported
H3	PT \rightarrow PEOU	.72	***	Supported
H4	PT \rightarrow ITU	.88	***	Supported

Note: Significance level where, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

5 CONCLUSION AND RECOMMENDATION

This study has contributed significantly to research on consumer behavioral intention to adopt internet technology. The findings of this study suggest that perceived trust was the most influential factor after usefulness in prediction of customer's intentions. Furthermore, the proposed model makes important contribution to the emerging literature on e-commerce especially in mobile banking context. The results of this study revealed that the willingness to adopt mobile banking will increase if customers believe that perceived ease of use and perceived usefulness are correctly managed. Therefore, banks can focus on website development process and how they can bring easiness in use of internet banking websites. This study used structural equation modeling (SEM) approach, respectively, to validate the measurements and test the causal relationships and empirically examined the determinants of customer intention to adopt mobile banking. Furthermore, this study collects the actual RHB mobile banking customer's responses from Sepang city of Malaysia. Future research can apply this model in other developing countries to contrast and compare the factors that affect the mobile banking adoption. Second, the variables selected in this study may not include all the variables that affect mobile banking adoption. Using other variables derived from technology acceptance theory or theory of planned behaviors researchers can observe the behavioral intention of mobile banking users. This study is cross-sectional in its nature and measures the mobile banking user's behavior at one point in time that may be less significant as compare to longitudinal study.

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