Customer Continuance Intention towards Digital Banking Application

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ABSTRACT: Internet banking in Indonesia has increased from 150 million transactions in 2012 to 406 million transactions by 2016. Present paper tried to study the digital banking application 'ABC' of Bank ABC of Indonesia to find out what are the factors influencing the customers' Continuance Intention (CI) while using 'ABC'. Result of the analysis using 423 valid respondents identified three main influencing factors, from highest to the lowest as Trust (T), Habit (H) and Price Saving Orientation (PSO). The model used can predict the CI of customers' towards ABC as the R^2 gave a value of 71%. Result also revealed that male customers' consider Trust (T) as an important factor than the female consumers. Bank ABC may use the information in their future marketing strategies for retaining existing customers and also attracting potential consumers.

1 INTRODUCTION

In parallel with the advancement of use of internet in Indonesia (APJII, 2018), e-banking services also increased to 27%, from 13 million users in 2012 to 54 million in 2016, having a growth rate of 169% over the four years period mainly due to the digital banking services offered by Indonesian banks (Beritasatu, 2018). This resulted in 151 million transactions in 2012 which increased to 407 million transactions in 2016 (CNN, 2018). Bank ABC is a foreign exchange bank and is a merger between PQR Bank and WYZ Bank. Having the operations in Indonesia. To ease the banking services to their customers, Bank ABC launched their own banking application 'ABC', which is a progressive financial application which allows its customers' to carry out every budgetary action from making all payments, withdraw and deposit cash and also designing money for managing personal finance. 'ABC' has the feature of not only for making payments but also accepting deposits which enables it to attract 3 million application downloaders with 700 dynamic users in Indonesia (BTPN, 2018). Historical milestones of ABC includes winning the honor as The Best Digital Bank in Indonesia in 2018 by the Asian Banker for Indonesia Country Awards (Jenius, 2018) and also ranking Top 50 Digital Only Banks released by Financial IT Magazine (Infobanknews, 2018). The main objective of the present paper is to assess the factors influencing the customers' Continuance Intention (CI) towards using the digital banking application 'ABC' and also to see the moderating effect of two demographic variable Age and Gender. The result may give insights on what factors makes the 'ABC' so popular among the Indonesian customers'.

2 THEORATICAL FRAMEWORK AND METHODOLOGY

There are well developed theories and models on technology adoption for assessing what factors influences users in adopting the technology and using the same continuously (Sharma and Mishra, 2014) and they are *Diffusion of Innovation Theory* by Roger in 1960, *Theory of Reasoned Action* (TRA) by Fishbein and Ajzen in 1975, *Theory of Planned Behavior* (TPB) by Ajzen in 1985,

Social Cognitive Theory (SCT) by Bandura in 1986, *Technical Adaption Model* (TAM) by Davis in 1989, *The Model of PC Utilization* (MPCU) by Thompson et al in 1991, The *Motivation Model* (MM) by Davis et al in 1992, *Extended TAM2 Model* by Venkatesh and Davis in 2000, *Unified Theory of Acceptance and Use of Technology* (UTAUT) by Venkatesh in 2003 and *Model of Acceptance with Peer Support* (MAPS) by Sykes et al in 2009.

Most commonly used model in assessing the technology acceptance level by the users is the UTAUT model as it combines all other earlier theories and models. For the present paper, Modified UTAUT2 Model (Venkatesh et al, 2012) was used as few modifications were required specific to the Indonesian customers and the banking industry. Firstly the variable Behavioral Intention (BI) was replaced with Continuance Intention (CI) as it was appropriate for assessing customers' use of banking application. Secondly, excluded Use Behavior (UB) as the aim was to identify CI (Xu, 2014). Thirdly, a new variable Trust (T) was added (Indrawati & Ariwiati, 2015; Alalwan et al, 2017; Farah et al, 2015) based on the pilot survey. Fourthly, replaced Price Value (PV) with Price Saving Orientation (PSO) as there is no cost involvement while using digital banking services. And finally, excluded the variable Experience (E) as a moderating variable since the data used in the study is cross sectional rather than longitudinal.

The final eight Independent Variables (Venkatesh et al, 2012; Escobar-Rodriguez & Carvajal-Trujillo, 2014; Indrawati et al, 2015) used are Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Condition (FC), Hedonic Motivation (HM), Price Saving Orientation (PSO), Habit (H) and Trust (T). These IVs are moderated with two demographic variables, namely Age and Gender. These IVs are moderated with two demographic variables, namely, Age and Gender. Finally the resulting Dependent Variable (DV) is defined as Continuance Intention (CI). Altogether 45 statements were included, five each for the eight IVs and one DV, and given to the customers for answering. The data so collected were used to test the significance of the IVs on the DV and also the moderating effect of Age and Gender. To facilitate the testing of the influence of IVs on the DV, eight main hypotheses were formulated. For the purpose of testing the moderating effect of Age and Gender, set of 16 sub hypotheses are also formulated.

The main eight hypotheses are, "*PE (H_1) / EE (H_2) / SI (H_3) / FC (H_4) / HM (H_5) / PSO (H_6) / H (H_7) / T (H_8) has a positive and significant influence towards CI*". For testing the moderating effects of Age and Gender which influences the IVs towards DV, formulated sixteen sub hypotheses are, "*Age (a) and Gender (b) as a moderator has influence on PE (H_{1a} and H_{1b}) / EE (H_{2a} and H_{2b}) / SI (H_{3a} and H_{3b}) / FC (H_{4a} and H_{4b}) / HM (H_{5a} and H_{5b}) / PSO (H_{6a} and H_{6b}) / H (H_{7a} and H_{7b}) / T (H_{8a} and H_{8b}) towards CI*". All these hypotheses are tested at 5% one-tailed (Indrawati, 2017).

A structured questionnaire was developed based on the earlier works (Indrawati & Ariwiati, 2015; Alawan, et al, 2015; Escobar-Rodriguez & Carvajal-Trujillo, 2014) was administered initially through pilot survey and the data collected was tested for content validity, reliability and readability. Subsequently, a pilot test was carried out taking a sample of 30 respondents to ensure that the items in the questionnaire for each of the constructs are valid and reliable. Finally using Google Forms, data was collected from 645 respondents during November 23rd to December 23rd 2018, of which only 423 found valid (66% response rate) as the remaining 222 respondents not used the digital banking application for not more than three months. Majority of the respondents are females (57.2%) and also belongs to the students' community (60.9%). The Corrected/Adjusted Item-Total Correction (CITC) gave a correlation coefficient of above 0.3 and found to be valid (Indrawati, 2017). Cronbach Alpha also gave a value above 0.7 for all the 45 statements and found to be valid also.

3 ANALYSIS AND DISCUSSION

The data was initially tested for the validity and reliability using Cronbach Alpha (CA) and Composite Reliability (CR), and Convergent validity was also tested with the help of Average Variance Extracted (AVE) which is given in Table 1, and the result clearly shows that all the 45 statements are valid and reliable. To determine the influence of the latent variables toward another latent variable, based on structural model and using bootstrap procedure, the path coefficients and t-test values are obtained which is given in Table 2. Using one tailed significance level of 5%,

any t-value greater than 1.65 is considered as significant and the formulated hypotheses are accepted, hence it can be said that only three IVs, namely, T, H and PSO have positive and significant influence on CI, hence H_6, H_7, and H_8 are accepted and the remaining hypotheses are rejected. None of the remaining five IVs, namely HM, FC, SI, PE and EE have any influence on CI which is in line with earlier studies (Anjarsari & Ariyanti, 2015; Venkatesh et al, 2012; Arenas-Gaitan et al, 2015; Qasim & Abu-shanab, 2016).

Table 1. CA, CR and AVE

Factor	CA	CR	AVE
PE	0.88	0.91	0.68
EE	0.90	0.93	0.73
SI	0.92	0.94	0.77
FC	0.80	0.87	0.63
HM	0.90	0.92	0.67
PSO	0.85	0.89	0.63
H	0.91	0.93	0.75
T	0.91	0.93	0.74

Table 2. Path, Coefficients, t-values, and hypotheses status

No.	Path	Coefficient	t-value	Hypothesis
1	**T→CI**	**0.377**	**6.923**	**H_8 Accepted**
2	**H→CI**	**0.345**	**5.762**	**H_7 Accepted**
3	**PSO→CI**	**0.111**	**2.096**	**H_6 Accepted**
4	HM→CI	0.065	1.071	H_5 Rejected
5	FC→CI	-0.047	0.892	H_4 Rejected
6	SI→CI	0.040	0.819	H_3 Rejected
7	PE→CI	0.043	0.818	H_1 Rejected
8	EE→CI	0.026	0.442	H_2 Rejected

Structural model (Inner Model) test result gave R^2 value of CI as 71%, which clearly indicates that the proposed model have a strong predicting ability of the factors influencing CI. The Goodness of Fit (GoF) index value came to 0.71, hence the model is also considered as valid. The effect of each of the eight IVs on the DV is also studied using the effect size formula and criteria, the result of which is given in Table 3, which indicates that all the values are very small and confirms again that the model has a strong predictive power. The present study also utilized group comparison approach to test the sub hypotheses to see the moderating effect of Age and Gender with Chin Formula which gives the t-values is given in Table 4.

Table 3. Effect Size by DV

Link		F-square	Size/weight
EE	to CI	0.001	Small
FC	to CI	0.002	Small
H	to CI	0.116	Small
HM	to CI	0.004	Small
PE	to CI	0.002	Small
PSO	to CI	0.015	Small
SI	to CI	0.003	Small
T	to CI	0.090	Small
FC	to UB	0.219	Small

Table 4. Moderation Effect

Path	t-value	
	Age	Gender
T→CI	0.860	**0.547**
H→CI	0.955	1.354
PSO→CI	0.209	1.976

The result shows that only Gender has the moderating effect on T towards CI, hence only one sub hypotheses (H_{8b}) among the sixteen is accepted. Age do not have any influence on moderating IVs towards the DV. Finally it can be said that Trust only has a positive and significant influence on Continuance Intention with Gender moderating. Other two IVs also have the influence on Continuance Intension are Habit and Price Saving Orientation.

4 CONCLUSION AND SUGGESTION

The result reveals that of the eight IVs, only three (Trust, Hedonic Motivation, and Price Saving Orientation) are having positive and significant influence on Continuance I. Of the two moderating variables, only Gender moderates Trust towards Continuance Intention, and Age do not have any moderating effect. Hence it can be concluded that Trust is the only variable which makes 'ABC' the most favored digital banking application in Indonesia. Bank ABC must ensure that the

security system is updated periodically so the safety and security of online banking transactions are fully protected against all categories of threat. Bank ABC must also ensure that the customers are completely satisfied with the use of 'ABC' making them use it frequently for all their financial needs, hence it becomes a habit among the customers. Bank ABC may also think about providing higher amount of cash back or points that can be redeemed for all the transactions customers make using 'ABC'. Minimizing the administration fee may also influence positively as customers considered Price Saving Orientation as an influencing factor.

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