

What Drives Initial Trust in Using Mobile Banking Apps.

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Abstract

Despite the popularity of Bank Central Asia (BCA) mobile banking apps among its customers, it seems that the used of some features of the apps such as payment, transfer and etc., is still relatively low. Lack of trust has been identified to be one of the causes. Some of these customers may not have previous experience and not yet feel assured to use the features offer by the mobile banking apps. The purpose of this paper is to determine the factors (such as information quality, service quality, and system quality) influencing initial trust in using BCA's mobile banking apps. This research adopts three dimensions of the IS success D&M model to examine initial trust of the non-active users BCA's mobile banking. Data were collected from a total of 202 respondents using questionnaires. Multiple linear regression is used to test the research hypothesis. This study found service quality and system quality positively and significantly affect initial trust, while information quality is found insignificantly affect initial trust.

Keywords

Initial Trust, Mobile Banking Information Quality, Service Quality, System Quality

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Introduction

In today's rapid advancement of technology, the digital revolution is always attempting to launch new features to enhance customer experience. One of the Banking digital evolution in Indonesia is mobile banking smartphone-based apps. Sharma and Al-Muharrami (2018) revealed some of the main benefits of using mobile banking are saving time and cost, providing swift access in transactions, data security enhancement services, increasing efficient services, and facilitating access and make purchases of products and services. PricewaterhouseCoopers Indonesia (PwC, 2018) analyzed the growth of Smartphone users in Indonesia and found the trend is slightly increased from 2012 to 2016. As well as the digital banking usage survey in Indonesia, mobile banking smartphone-based apps is the primacy element of digital strategy by 86%, followed by internet banking users, by 68%. Based on these facts, Indonesia's digital banking technology will have enormous potential in the future and is encouraging Banking industry to create innovation in mobile services (IFC, 2010). BCA (Bank Central Asia) is one of the biggest commercial banks in Indonesia, launched the innovation in its mobile services in March 2019, opening saving bank account simply by using BCA mobile banking application. This new feature received positive response from the public. It has more than 450,000 new account registrations since its launched, then grew in the following year by more than 1,6 million new account registrations and it is contributed by more than 48% of total bank account growth (BCA, 2019-2020). Despite the popularity of the opening account using BCA's Mobile Banking, the usage of mobile banking as the payment service is still low. Based on APJII (Asosiasi Penyelenggara Jasa Internet Indonesia, 2020), ATM transfer usage percentage is 13,4% which is still higher than mobile banking usage percentage of 5,7%. It is also reported on internet content access that the level of access to banking services was very small. Therefore, BCA should implement strategy to gain trust among Indonesian society at large and their older customers to use BCA mobile banking to obtain the benefits from the channel. Prior studies regarding online trust were conducted using technology acceptance model (TAM) (Ho, Wo, Lee, and Pham, 2020), innovation diffusion theory (IDT) (Mallat, 2007), the unified theory of acceptance and use of technology (UTAUT) (Baabdullah, Alalwan, Rana, Kizgin, and Patil, 2019), part of the information system success (the ISS) model and additional variables (Zhou, 2011), elaboration likelihood model (ELM) (Yi, Yoon, Davis, and Lee, 2013; Zhou, 2012) and electronic word of mouth (eWOM) (Shankar, Jebarajakirthy, & Ashaduzzaman, 2020) investigate the mobile banking adoption. This research draw information quality, system quality, and service quality from the D&M ISS (Information System Success) model.

Literature Review

Initial trust

The urgency of trust has been broadly acknowledged by the scholars and practitioners. It has been studied substantially in many fields of research disciplines (McKnight, Carter, Thatcher, and Clay, 2011). McKnight et al. (2011) proposed three points of attributes of trust model in technology as follows: functionality, helpfulness, and reliability. In online commerce realm context, consumer will be overwhelmed by the complexity of information, uncertainty, and risk (perceived risk). Initial trust is indispensable in reducing consumer anxiety (Grabner, 2002). Initial trust or early trust can be interpreted as the first-time meeting or interaction among parties (McKnight et al. 2011). Due to characteristics of trust in the early stage may be fragile, by studying, it would reinforce the foundation that support trust. Hence, the institution must work harder to get a trustworthy reputation (McKnight et al, 2011). It has been proven from initial trust related studies that the factors affecting initial trust are structural assurance (Zhou, 2011; Sun et al. 2017), the quality of information (Kim et al. 2004; Gao et al, 2015; Talwar, 2020; Zhou, 2012), trust propensity (Zhou, 2011), system quality, service quality, perceived asset specificity (Gao and Waechter, 2015). Trust and experience will affect the inclination to use mobile banking apps since trust will diminish the uncertainty and risks in the transactions (Sun et al, 2017).

Mobile Banking adoption

Mobile Banking is the evolution of internet banking. popular among banking customers. Mobile banking itself can be defined as banking transaction activities through mobile application such as transferring money, checking balances, making investments, and paying bills via mobile phones (Singh & Sinha, 2016). Mobile banking provides the benefits for customers in its simple and handy financial transaction. They can execute financial transaction through their mobile phone at anytime and anywhere even when they are busy. However, they will obtain these benefits if only they trust the service (Chung and Kwon, 2009). Despite the benefits that would be obtain by the customers, the adoption of all features of mobile banking apps in Indonesia is still low.

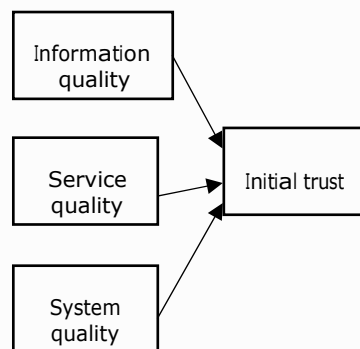
The Information System Success Model (The ISS)

DeLone and McLean (1992) proposed The ISS Model which then updated in 2003. Published in 1992, D&M IS proposed as a framework to guide some awareness and structure for conceptualizing and operationalizing the IS success. Hereafter, hundreds of journals made use of the model regarding revolution in IS practices, mainly because of the growth of e-commerce (Delone & McLean, 2003). D&M IS model has been found as a beneficial structure in arranging the measurement of the IS success (Petter et al. 2008).

Theoretical Framework

Theoretical framework of this study is drawn from three items of the ISS model: information quality, system quality, and service quality that relate to initial trust (Gao et al. 2015).

Information quality reflects the relevance, sufficiency, accuracy, timeliness (Gao and Waechter, 2015; Talwar et al. 2020; Zhou, 2011; Yi et al. 2013) newness, clarity, consistency (Talwar et al. 2020),



Theoretical Framework

useful, comprehensive (Yi et al. 2013). Mobile banking should give the good quality of information to the user when doing transaction, because they feel uncertainty whether the payment has been processed and confirmed or not. if there is tardiness of information, then users will doubt whether the service provider could provide quality service. It would lead to users to make a transaction more than once. If information provided inadequate, inaccurate, irrelevant, and out-of-date, users' trust on mobile banking apps will decrease.

H1. Information quality significantly and positively affects initial trust.

Service quality relates to the capability of a systems to provide responsive, assured, reliable, and dependable service (Gao and Waechter, 2015). Reliable and timely service could stimulate the formation of initial trust for using mobile payment for non-adopter customers. Service quality affect customers' initial trust to use mobile apps for shopping. Another study showed that service quality has significant effect on initial trust in mobile-based services. (Talwar, 2020). Unreliable and slow response services will decrease trust because it rises doubt on the ability, integrity, and benevolence of service provider. Therefore, service quality could affect customer trust. (Gao and Waechter, 2015).

H2. Service quality significantly and positively affects initial trust.

The quality of a system reflects the access speed, the ease-of-use, the navigation and the visual appeal (Zhou, 2011; Zhou et al. 2012 Sarkar et al. 2020), convenience, functionality, and other system metrics (Koo et al, 2013). The small screen and the uncomfortable input on mobile terminals are an obstacle for the customer to acquire the information with mobile banking. The service

provider should design an interface with powerful navigation, clear layout, and prompt responses. System with poor interface design would make customer feel that service provider lacks of the ability, integrity, credibility, and benevolence to provide good quality services.

H3. System quality significantly and positively affects initial trust.

Methodology

The unit of analysis is individual, where the object is the perception of the respondents about their experienced on initial trust, information quality, service quality, and system quality of BCA mobile banking apps. Data was collected from 202 respondent from BCA branches across Java. Questionnaires is design using Likert Type Scale and distributed using Google Form. Measurement adapted from of Kim et al. 2004; Gao & Waechter, 2015; Zhou, 2011; Susanto et al. 2013.

The Goodness of Measures is tested using Cronbach' Alpha Criterion for reliability, and Pearson Product Moment for checking the validity of the instrument. Hypothesis is tested using Multiple Linear Regression Analysis.

Findings and Discussion

202 questionnaires were return and completed and was used for further analysis. Before hypothesis is tested, the instrument is tested to assured its reliability and validity. The results of testing for the goodness of measures found that the instrument was reliable and valid. Hypothesis is further tested using multiple linear regression, where the independent variable are information quality, service quality, and system quality; and initial trust entered as the dependent variable. The result of multiple linear regression shows in the following tables (Table 1,2, and 3).

Table 1.

Model Summary

Model	R	R ²	Adjstd R ²	Std.Error of the Estimate
1	.831 ^a	.691	.696	1.19417

a. Predictors Information, Service, System

Table 2.

ANOVA

Model		Sum of Squares	df	Mean Squares	F	Sig.
1	Regression	631.034	3	210.345	147.502	.000 ^b
	Residual	282.357	198	1.426		
	Total	913.391	201			

a. Dependent Variable: Initial Trust

b. Predictors: (Constant), Information, Service, System

Table 1 and 2 revealed that the regression model is fit, and variation of all the three independent variables could explained the variation of the dependent variable by 69.6 percent and the value of F is significant at 1 percent. Table 3 shows the t test for the three coefficients and found out information quality insignificantly affect initial trust. Service quality and system quality significantly affect initial trust. It could conclude that the first hypothesis is rejected, and the second and the third hypothesis is accepted. Findings shows that information quality is not affecting the initial trust of BCA's mobile banking. Information quality is an indicator of the success of a system to produce good information (Paggi et al, 2021). The most common dimensions of information quality are: accuracy, completeness, relevance, content needs, and timeliness (DeLone and McLean, 2003). Those are used in plentiful previous research regarding m-banking (Chung and Kwon, 2004; Zhou, 2011; Koo et al. 2013), internet banking (Susanto et al, 2013; Koo et al. 2013), and m-payment (Gao and Waechter, 2015). One reason that could explain this insignificantly of information quality is that most Indonesian has low reading skill level (Solihin (2020), and they acknowledge and believes BCA is one of the most reputable commercial Bank in Indonesia which makes them not

pay attention to the detailed of information provided. Despite this finding is not corresponding with the previous research, BCA should continuously provide accurate, complete, relevant, and up-to-date information.

Table 3.
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	2.345	.0451		2.244	.026
Information Service	.073	.056	.074	1.303	.194
System	.521	.100	.392	5.236	.000
	.539	.084	.435	6.385	.000

Service quality and system quality found to affect initial trust significantly. These two findings are consistent with previous research (Gao and Waechter, 2015). Service quality is defined as the capability of a system to provide and deliver reliable, responsive, assured, and dependable service (Gao & Waechter, 2015). Service quality is positively affecting initial trust and this finding is consistent with Gao and Waechter (2015). BCA must continue to provide a dependable service in order the customers feel safer and confidence in using its mobile banking. The quality of a system represents the access speed, the ease-of-use, the navigation, and the attractiveness of user interface (Zhou, 2011; Zhou et al, 2012 Sarkar et al, 2020), convenience, functionality, and other system metrics (Koo et al, 2013). This study found that users often seem having difficulty to operate the new application because of its complicated visual. In this context, system quality has a role in developing user's initial trust. With a good system quality, users can transact in mobile banking with swift access, attractive and user-friendly interface. This will improve their initial trust. Thus, BCA must increase the system quality by creating the innovative visual appearance to its mobile banking.

Conclusion

Mobile banking is the evolution service of internet banking. However, its utilization is still low. Initial trust has a significant role in driving customers willingness to use the mobile banking apps. BCA is one of the most reputable commercial Bank in Indonesia. Even though, there are still many BCA's customers unwilling to use BCA's mobile banking apps. This research determined factors that could influence initial trust of BCA' customers to use mobile banking apps. Service quality and system quality significantly influence initial trust. The findings in line with previous study in the context of m-payment (Gao & Waechter, 2015). However, information quality insignificantly influences initial trust. This study has some limitations. First, data obtained mostly from BCA branches in Java. Future research should include data from all branches in Indonesia. Second, this study did not include perceived cost that may influence initial trust in Indonesia. The cost is usually for purchasing credit for internet usage. Future research can explore this dimension. Third, this study only focusses on the non-active BCA's mobile banking in all age, mostly in young-adult age. Future research should also include elderly as the respondents.

References

- Asosiasi Penyelenggara Jasa Internet Indonesia. (2020). Laporan Survei Internet APJII 2019-020 (Q2). Indonesia Survey Center. https://www.infotek.id/licenses/survey_apjii_2020/Survei_APJII_2019-2020_Q2.pdf Accessed 21 Mar 2020
- Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (M-Banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, 44, 38-

52. doi:10.1016/j.ijinfomgt.2018.09.002
- Bidarra, S., Leiva, M., Cabanillas, L. (2013). Analysis and modeling of the determinants of mobile banking acceptance. *The International Journal of Management Science and Information Technology (IJMSIT)* 1923-0273, 1-27
- Chuda Prasad Dhakal, "Interpreting the Basic Outputs (SPSS) of Multiple Linear Regression". (2019). *International Journal of Science and Research (IJSR)*, Volume 8 Issue 6, 1448 - 1452
- Dave, H. B., Singh, D., & Bansal, H. O. (2020). Multiple linear regression-based impact analysis of impedance network design on life expectancy of DC-link capacitor in q-ZSI fed motor drive. *Engineering Science and Technology, an International Journal*. doi:10.1016/j.jestch.2020.06.004
- Delone, William & McLean, Ephraim. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information Systems Research*. 3. 60-95. 10.1287/isre.3.1.60.
- Du, Z., Hu, Y., & Buttar, N. A. (2020). Analysis of mechanical properties for tea stem using grey relational analysis coupled with multiple linear regression. *Scientia Horticulturae*, 260, 108886. doi:10.1016/j.scienta.2019.108886
- Gao, L., & Waechter, K. A. (2015). Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation. *Information Systems Frontiers*, 19(3), 525-548. doi:10.1007/s10796-015-9611-0
- Grabner-Kraeuter, S. (2002). The Role of Consumers' Trust in Online-Shopping. *Journal of Business Ethics* 39, 43-50 <https://doi.org/10.1023/A:1016323815802>
- Ho, J. C., Wu, C.-G., Lee, C.-S., & Pham, T.-T. T. (2020). Factors affecting the behavioral intention to adopt mobile banking: An international comparison. *Technology in Society*, 63, 101360. doi:10.1016/j.techsoc.2020.101360
- Horacio Paggi, Javier Soriano, Juan A. Lara, Ernesto Damiani. (2021). Towards the definition of an information quality metric for information fusion models. *Computer & Electrical Engineering*, Volume 89, 106907. doi:10.1016/j.compeleceng.2020.106907
- IFC. (2010). Mobile Banking in Indonesia: Assessing the Market Potential for Mobile Technology to Extend Banking to the Unbanked and Underbanked. International Finance Corporation World Bank Group. <https://www.ifc.org/wps/wcm/connect/16cc33cf-f3d5-44bc-b439ead8991cbcc4/Mobile%2BBanking%2BFinal%2BReport.pdf?MOD=AJPERES&CVID=j1FGbYr> Accessed 05 Apr 2020
- Kim, H., Xu, Y., & Koh, J. (2004). A Comparison of Online Trust Building Factors between Potential Customers and Repeat Customers. *J. Assoc. Inf. Syst.*, 5, 13.
- Koo, C. & Wati, Y. & Chung, Namho. (2013). A study of mobile and internet banking service: Applying for IS success model. *Asia Pacific Journal of Information Systems*. 23. 65-86.
- Mallat, N. (2007), "Exploring consumer adoption of mobile payments – a qualitative study", *The Journal of Strategic Information Systems*, Vol. 16 No. 4, pp. 413-32.
- Mcknight, D. H., Carter, M., Thatcher, J. B., & Clay, P. F. (2011). Trust in a specific technology. *ACM Transactions on Management Information Systems*, 2(2), 1-5. doi:10.1145/1985347.1985353
- Namho Chung & Soon Jae Kwon (2009) Effect of trust level on mobile banking satisfaction: a multigroup analysis of information system success instruments, *Behaviour & Information Technology*, 28:6, 549-562, DOI:10.1080/01449290802506562
- Petter, S., DeLone, W., & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems*, 17(3), 236-263. doi:10.1057/ejis.2008.15
- PT BANK CENTRAL ASIA TBK. (2019). Navigating Change. Laporan Tahunan. <https://www.bca.co.id/-/media/Files/Report/Tahunan/20200311-AR-BCA19-INA.ashx> Accessed 21 Mar 2020
- PT BANK CENTRAL ASIA TBK. (2020). Beyond Uncertainties: Managing the Next Normal. Laporan Tahunan. <https://www.bca.co.id/-/media/Files/Report/Tahunan/20210319-FA-SR-BCA-2020-INA-ENG-MEDIUM> Accessed 21 Mar 2020
- Sarkar, S., Chauhan, S., & Khare, A. (2020). A meta-analysis of antecedents and consequences of trust in mobile commerce. *International Journal of Information Management*, 50, 286-301. doi:10.1016/j.ijinfomgt.2019.08.008
- Shankar, A., Jebarajakirthy, C., & Ashaduzzaman, M. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? *Journal of Retailing and Consumer*

- Services, 52, 101920. doi:10.1016/j.jretconser.2019.101920
- Sharma, S. K., & Al-Muharrami, S. (2018). Mobile Banking Adoption: Key Challenges and Opportunities and Implications for a Developing Country. *Emerging Markets from a Multidisciplinary Perspective*, 75–86. doi:10.1007/978-3-319-75013-2_7
- Singh, N., & Sinha, N. (2020). How perceived trust mediates merchant's intention to use a mobile wallet technology. *Journal of Retailing and Consumer Services*, 52, 101894. doi:10.1016/j.jretconser.2019.101894
- Solihin, L. (2020). Indonesia must urgently tackle poor childhood literacy levels. <https://asia.nikkei.com/Opinion/Indonesia-must-urgently-tackle-poor-childhood-literacy-levels> Accessed June 2021
- Sun, B., Sun, C., Liu, C., & Gui, C. (2017). Research on Initial Trust Model of Mobile Banking Users. *Atlantis Press, Vol 7 (1)*, 13-20. doi:10.2991/jrarc.2017.7.1.2
- Susanto, A., Lee, H., Zo, H., & Ciganek, A. P. (2013). User acceptance of Internet banking in Indonesia: initial trust formation. *Information Development*, 29(4), 309–322. doi:10.1177/0266666912467449
- Talwar, S., Dhir, A., Khalil, A., Mohan, G., & Islam, A. K. M. N. (2020). Point of adoption and beyond. Initial trust and mobile-payment continuation intention. *Journal of Retailing and Consumer Services*, 55, 102086. doi:10.1016/j.jretconser.2020.102086
- Tarunajaya, C. (2018). Pwc survey: Digital Banking in Indonesia 2018. PricewaterhouseCoopers Indonesia. <https://www.pwc.com/id/en/publications/assets/financialservices/digital-banking-survey-2018-pwcid.pdf> Accessed 02 Apr 2020
- Towards the definition of an information quality metric for information fusion models. *Computers & Electrical Engineering*. Volume 89.106907 doi:10.1016/j.compeleceng.2020.106907
- Uyanık, G. K., & Güler, N. (2013). A Study on Multiple Linear Regression Analysis. *Procedia - Social and Behavioral Sciences*, 106, 234–240. doi:10.1016/j.sbspro.2013.12.027
- William H. DeLone & Ephraim R. McLean (2003) The DeLone and McLean Model of Information Systems Success: A Ten-Year Update, *Journal of Management Information Systems*, 19:4, 9-30, DOI: [10.1080/07421222.2003.11045748](https://doi.org/10.1080/07421222.2003.11045748)
- Yi, M. Y., Yoon, J. J., Davis, J. M., & Lee, T. (2013). Untangling the antecedents of initial trust in Web-based health information: The roles of argument quality, source expertise, and user perceptions of information quality and risk. *Decision Support Systems*, 55(1), 284–295. doi:10.1016/j.dss.2013.01.029
- Zhou, T. (2012). Understanding users' initial trust in mobile banking: An elaboration likelihood perspective. *Computers in Human Behavior*, 28(4), 1518–1525. doi:10.1016/j.chb.2012.03.021
- [Zhou, T.](#) (2011), "An empirical examination of initial trust in mobile banking", *Internet Research*, Vol. 21 No. 5, pp. 527-540. <https://doi.org/10.1108/10662241111176353>