

EVALUATION OF SUCCESSFUL MOBILE BANKING INFORMATION SYSTEM AT BANK SYARIAH INDONESIA**RA Nurlinda^{1*}, Eka Bertuah²**^{1,2}*Faculty of Economics and Business, Esa Unggul University***Corresponding author: Lindasan424@gmail.com*

ABSTRACT

This study aims to determine what factors influence the success of the BSI Mobile banking application using the Delone and Mclean Information System Model. The variables used in this study are system quality, information quality, service quality, use, user satisfaction, and net benefit. This research was conducted on BSI customers who have done banking transactions using Mobile banking and have been BSI customers for the past year. The sample used is as many as 200 respondents with a sampling technique that is purposive sampling. This type of research is causal associative and the method used in this study is the Partial Least Square (PLS) method. Based on the results of research, information quality and service quality have a positive effect on user activity, system quality and information quality have a positive effect on user satisfaction, service quality does not affect user satisfaction, user activity has a positive effect on user satisfaction, user activity and user satisfaction have a positive effect on user benefits (net benefits). The results of this study are expected to help Bank Syariah Indonesia in improving the information system on Mobile banking so that it can provide satisfaction to BSI customers

Keywords: System Quality; Information Quality; Service Quality; User Activity; User Satisfaction; Net Benefits.

*Received: November 27th 2021**Accepted for Publication: December 12nd 2022***BACKGROUND**

The rapid development of information technology has a global impact on banking. One of the impacts is the introduction of Mobile banking. Through mobile banking, banks try to provide fast, easy, convenient, anywhere and anytime services for customers to carry out financial transactions safely. With mobile banking, banks can improve the quality of their services while reducing service costs (Zhou et al., 2010). Mobile banking is a facility of banks in this modern era that follows the development of technology and communication. The services contained in mobile banking include payments, transfers, history, and so on. The use of mobile banking services on cellular phones allows customers to more easily carry out their banking activities without the limitations of space and time. With the Mobile Banking service, it is expected to provide convenience and benefits for customers in accessing the bank without having to come directly to the bank. (Kurniawan et al., 2017). Offering banking services through Mobile banking has been done a lot in electronic media as well as by offering it directly to customers at the time of setting up a savings account. However, not many customers use Mobile banking in conducting their financial transactions. This is because there are several obstacles, such as a lack of knowledge

about the convenience and benefits of mobile banking services and there are still many customers who prefer to use transactions manually by coming directly to the bank to queue. (Fitrianisa et al., 2020)

Several studies have been conducted to identify the aspects that lead to the success of information technology systems. One of the well-known studies is the research conducted by DeLone, WH, and McLean (1992). From this information system success model, it can be explained that system quality and information quality affect user satisfaction. In the next model development, DeLone, WH, and Mclean, (2003) added one measurement of information system success, namely service quality. From the new development of this success model, it can be explained that system quality, information quality, and service quality affect user satisfaction. Research on testing the DeLone & McLean success model has been conducted including by Tam and Carlos (2016), Cho, (2015), Stefanovic (2016), and Mudzana, T., & Maharaj, (2017)

The novelty of this research is to include the variables of the Delone and Mclean information system success models to form an effective M-Banking information system model. In addition, this research was conducted because, first, the results of the research were different. This means this indicates a research gap. Thus, it is necessary to conduct empirical testing of the D&M success model on different objects. The two BSI Banks are still new to the public because they are a merger of Mandiri Syariah Bank (BSM), BRI Syariah Bank (BRIS), and BNI Syariah Bank (BNIS). Based on the description above, the purpose of this study is to determine the effect of system quality, information quality, and service quality on user activity and user satisfaction, determine the effect of user activity on user satisfaction and then determine the effect of user activity and user satisfaction on individual net benefits.

THEORY OVERVIEW

System Quality is the overall system performance, both on the capabilities of the hardware, software, policies, until the procedure of the information system that provides information for the user's needs. (DeLone, WH, and McLean, 1992). The indicators consist of ease of use, reliability, response time, and flexibility. (DeLone, WH, and McLean, 2003). Information Quality is the output of the use of information systems by users, focusing on the quality of information produced by the system and its usefulness for users. (Sudirman & Atmosphere, 2018). The indicators used consist of completeness, relevance, accuracy, timeliness, and format information (DeLone, WH, and McLean, 2003). Service Quality is a service obtained by users from information system managers (Marlina, 2017). The indicators consist of assurance, empathy, and responsiveness (DeLone, WH, and McLean, 2003).

User Activity (Actual Use) is how often users use the information system. (Wagiman et al., 2014). The indicators consist of frequency of use and daily use (DeLone, WH, and McLean,

2003). User Satisfaction is the response and feedback given by the user after using the information system. The user's attitude towards the information system is a subjective criterion of how well the level of user satisfaction with the desired system is (Urbach and Muller, 2012). The indicators consist of Efficiency, Effectiveness, and Satisfaction (DeLone, WH, and McLean, 2003). Net Benefit is the impact of the existence and use of information systems on the quality of performance both individually (Freeze et al., 2010). The choice of what impact to measure depends on the system being evaluated and the research objectives. The indicators consist of Improve Knowledge, Reduce Information Search time, and Productivity (DeLone, WH, and McLean, 2003).

Hypothesis

- H₁: System Quality has a positive effect on User Activity
- H₂: Information Quality has a positive effect on User Activity
- H₃: Service Quality has a positive effect on User Activity
- H₄: System Quality has a positive effect on User Satisfaction
- H₅: Information Quality has a positive effect on User Satisfaction
- H₆: Service Quality has a positive influence on User Satisfaction
- H₇: User Activity has a positive effect on User Satisfaction
- H₈: User Activity has a positive effect on Net Benefits
- H⁸: Use has a positive effect on Net Benefit
- H₉: User Satisfaction has a positive effect on Net Benefits

RESEARCH METHODS

The design of this research uses a causal research design by looking at the relationship between system quality, information quality, service quality, and user activity on the satisfaction of Islamic Bank M-Banking users. Then it is continued by looking at the relationship through User Activities and User Satisfaction to the benefits felt by customers on the use of M-Banking carried out by customers. The method used in this research is a survey, where data is taken from a sample that is a member of the population, carried out using questionnaires and statistical software to see and measure the observed variables through respondents' answers.

The population in this study are all Indonesian Sharia Bank customers who are in the Greater Jakarta area and have routinely made transactions in the last five months. The number of samples is determined based on Hair et.al (2014) which states that the appropriate sample size for SEM is between 100-200 samples, based on these considerations, the number of samples is set at 200 respondents. The sampling technique uses *judgmental (purposive)* techniques, namely, sampling that uses criteria, namely customers who are actively conducting transactions using M-Banking Bank Syariah Indonesia, is in the Greater Jakarta area, and routinely make transactions in the last five months.

The data analysis technique used in this research is the *Structural Equation Model* (SEM) technique with the *Partial Least Square* method. SEM according to Jöreskog et al., (2016) is a multivariate statistical technique that combines aspects of multiple regression (which aims to test dependent relationships) and factor analysis (which presents unmeasured concepts factors with multiple variables) that can be used to estimate a series of variables. Dependent relationships that mutually influence each other. While the *Structural Equation Model- Partial Least Square* (SEM-PLS) is a causal modeling approach to maximize variables from endogenous (dependent) variables that can be explained by exogenous (independent) variables.

RESEARCH RESULT

Research Results The number of questionnaires sent as many as 200 obtained results with the demographics of the respondents showing the largest characteristics in the female gender, undergraduate education, age range between 17 – 26 years, with private employees, have been customers for less than 1 year with a monthly income of less than 5,000,000 and already married.

Measurement of Outer Model

A validity test is done by calculating convergent validity. Convergent validity is known through the value of Loading Factor and Average Variance Extracted (AVE). An instrument is said to meet the convergent validity test if it has a Loading Factor above 0.7 and an Average Variance Extracted (AVE) above 0.5. Based on the results of calculations from 28 indicators, 4 indicators produce a loading factor value of less than 0.7, and all variables produce an Average Variance Extracted (AVE) value greater than 0.5

Reliability measurement using composite reliability test criteria and Cronbach’s Alpha value is greater than 0.7, then the construction is declared reliable. Based on the results of the calculation of the value of Cronbach’s alpha and composite reliability has a value above 0.7. This means that it can be concluded that the variables tested are reliable so that structural model testing can be carried out. The conclusion of the outer model test is as follows:

Table 1: AVE, Cronbach’s Alpha and Composite Reliability

	Average Variance Extracted (AVE)	Cronbach’s Alpha	Composite Reliability
System Quality	0.619	0.846	0.890
Information Quality	0.575	0.752	0.843
Service Quality	0.667	0.749	0.857
Use	0.639	0.812	0.876
User Satisfaction	0.589	0.825	0.877
Net Benefits	0.562	0.740	0.837

Source: Data processed, 2021

Inner Model Measurement

Measuring the predictive ability of the model, which describes the relationship between the evaluated latent variables, can be seen using the coefficient of determination (R^2)

Table 2: R Square

	R Square	R Square Adjusted
Net Benefit	0,621	0,618
Use	0,639	0,634
User Satisfaction	0,662	0,655

Source: Data processed, 2021

The three R-square values are categorized as moderate according to the criteria (high, moderate, low). That is, the variables in the model have a considerable influence on the affected variables than other factors originating from outside the model.

Decision-making on the acceptance of the hypothesis in this study was carried out with the provisions of the t-table value of the two-tail tests for a significance of 0.05. Testing the hypothesis by looking at the value of the Path Coefficient calculation on the inner model test. The hypothesis is said to be accepted if the statistical T value is greater than T table 1.96 (α 5%).

Table 4: Hypothesis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Value
Information Quality -> Use	0,344	0,343	0,069	5,023	0,000
Information Quality -> User Satisfaction	0,274	0,273	0,064	4,297	0,000
Serve Quality -> Use	0,318	0,316	0,073	4,349	0,000
Serve Quality -> User Satisfaction	0,086	0,085	0,072	1,198	0,232
System Quality -> Use	0,250	0,254	0,066	3,767	0,000
System Quality -> User Satisfaction	0,275	0,280	0,077	3,570	0,000
Use -> Net Benefit	0,209	0,197	0,086	2,422	0,016
Use -> User Satisfaction	0,294	0,292	0,080	3,692	0,000
User Satisfaction -> Net Benefit	0,621	0,634	0,080	7,754	0,000

Source: Data processed, 2021

Based on the results of the calculations above, the structural model can be as follows:

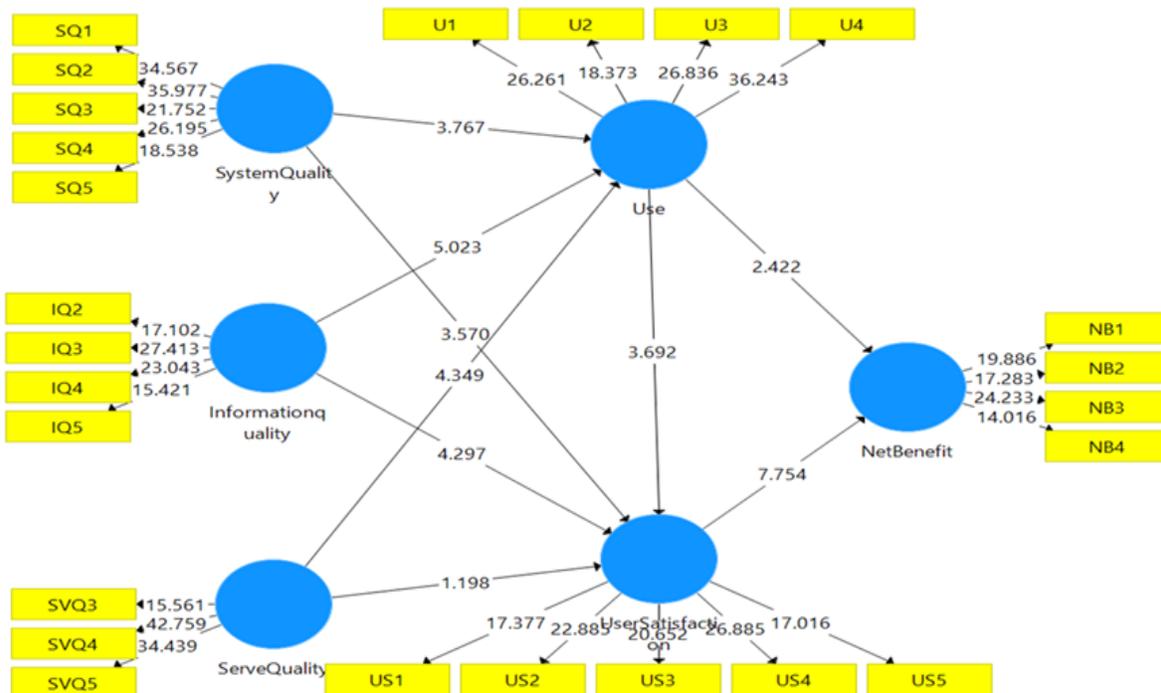


Figure 1 Structural Model

Decision-making on the acceptance of the hypothesis in this study was carried out with the provisions of the t-table value of the two-tail test for a significance of 0.05. Testing the hypothesis by looking at the value of the Path Coefficient calculation on the inner model test. The hypothesis is said to be accepted if the statistical T value is greater than T table 1.96 (α 5%). Here are the results of his research.

Table 5: Hypothesis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Value
Information Quality -> Use	0,344	0,343	0,069	5,023	0,000
Information Quality -> User Satisfaction	0,274	0,273	0,064	4,297	0,000
Serve Quality -> Use	0,318	0,316	0,073	4,349	0,000
Serve Quality -> User Satisfaction	0,086	0,085	0,072	1,198	0,232
System Quality -> Use	0,250	0,254	0,066	3,767	0,000
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Use -> Net Benefit	0,209	0,197	0,086	2,422	0,016
Use -> User Satisfaction	0,294	0,292	0,080	3,692	0,000
User Satisfaction -> Net Benefit	0,621	0,634	0,080	7,754	0,000

Source: Data processed, 2021

In this study, some results show that the quality of the system, the quality of information, and the quality of satisfaction have a positive influence on user activity. This explains that the better the quality of the system, the quality of information, and the quality of service, the more user activities will increase in using Bank Syariah Indonesia (BSI) M-Banking. Mobile banking

BSI continues to innovate by creating beyond banking services for Mobile banking. Customers feel that by having BSI Mobile banking, customers can carry out various activities such as opening an online account, distributing ZISWAF, purchasing gold, applying for financing, seeing prayer times, and performing various other banking activities. In addition, customers feel that the information on BSI's M-Banking system is very accurate and error-free. BSI customers can use M-Banking to get complete information about accounts such as balances, transfers, and portfolios and also help customers to get information about ATM locations and the existence of BSI branches throughout Indonesia. In addition, BSI M-Banking provides various services according to customer needs such as transfers, QRIS transactions, paying tickets, bill payments, insurance, BPJS, e-commerce purchases, including Islamic services which are an advantage as a sharia bank. The results of this study also show that the quality of the system, the quality of information, and user activities have a positive influence on user satisfaction. This explains that the better the quality of the system, the quality of information, and user activities, the more user satisfaction will be in using Bank Syariah Indonesia (BSI) M-Banking. Customers are satisfied with the complete features available in M-Banking BSI can help customers perform banking transactions anywhere and anytime. With the ease of using BSI M-Banking that customers feel, their ability to operate the system available on BSI's Mobile banking will increase, not only the customer's ability to use the system but also the ability to physically access the internet and mobile phones. Furthermore, customers are also satisfied with the quality of BSI M-Banking information because it provides very accurate and error-free information and has complete features that make it easier for them to carry out banking transactions and other activities. This means that customer satisfaction is not influenced by service quality but is more influenced by other factors such as system quality and service quality.

The results of this study also indicate that user activity and user satisfaction affect the perceived benefits of BSI m-Banking users. This means that the better the user activity and the higher the satisfaction felt by the user, the more the benefits felt by the customer will increase. The benefits that are most felt by customers when using BSI m-Banking are faster banking transactions without having to queue at tellers or ATMs. BSI M-Banking can be accessed by customers anytime and anywhere via smartphone devices, both Android and iOS.

CONCLUSION

Based on the research results obtained by researchers, it can be concluded that system quality, information quality, and service quality have a positive influence on user activity, this means that the better the system quality, information quality, and service quality, the more user activity will increase. M-Banking Islamic Bank Indonesia. System quality, information quality, and user activity have a positive influence on user satisfaction, this means that if the quality of the system,

information quality, and Bank Syariah Indonesia M-Banking user activity are improved it will increase user satisfaction, but service quality has no effect on user satisfaction. This means that the quality of service at M-Banking Syariah Bank Indonesia has not been able to provide satisfaction to users. User activity and user satisfaction have a positive effect on the perceived benefits of individuals. This can be interpreted if the better user activity and the increasing user satisfaction will increase the benefits that will be obtained by customers.

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