Analysis of Service Quality, Satisfaction, and Loyalty of Customers Using BRI Mobile Banking in Surabaya

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Abstract. *This article discusses customer loyalty as the dependent variable, service quality of mobile banking as an independent variable, and satisfaction with using mobile banking as a moderating variable. This research was conducted by distributing online questionnaires using Google Form, then distributed to all BRI bank customers who use mobile banking. 650 responses were obtained, then 250 were selected for analysis. The statistical method used to test the hypothesis is multiple regression analysis (MRA) using SPSS. The results of the analysis show that customer loyalty is obtained from service quality and customer satisfaction. However, Service quality has no indirect significant effect on loyalty through satisfaction.*
Keywords: *Customer loyalty, Service quality, Satisfaction, Mobile banking*

1. INTRODUCTION

The number of mobile banking users is increasing from year to year. This growth has the potential to increase, in line with the tendency of bank services to increasingly focus on digital banking (Rury Febria Alber, 2017). This is because the mobile banking service has attractive features, and is comfortable to use, and makes it easy for customers to make financial transactions, such as inter-bank transfers, credit card payments, electricity payments, telephone payments, cell phone bill payments, insurance payments, payments internet, airline ticket payments and virtual accounts. In addition, the increasing number of online businesses (online shops) as well as the increasing types and numbers of smartphones have contributed to the growth of transactions through mobile banking. To ensure that customer perceptions have a positive impact on banking services, banks must care about customer concerns regarding the quality of banking services (Lee & Chung, 2009). Garrity, EJ, Glassberg, B., Kim, YJ, Sanders, GL, & Shin, SK (2005) revealed that the quality of electronic services is influenced by factors such as speed of access, ease of use, reliability, system features, efficiency, ease of navigation, privacy. , and the visual appeal of a mobile banking website. From some of the references stated above, there are several factors that must be considered in order to improve the quality of mobile banking services. The causal relationship between service quality, customer satisfaction and customer loyalty is also analyzed to develop an effective marketing strategy (Lee & Chung, 2009; Merrilees, McKenzie, & Miller, 2007).

Based on this background, research will be conducted on the influence of mobile banking service quality, customer satisfaction using mobile banking, and customer loyalty to perceived services. This study uses google form as a medium in distributing questionnaires. The questionnaire was distributed to all BRI bank customers who use mobile banking, then 250 respondents were selected to be analyzed, the results of the analysis are expected to be useful for BRI Bank and researchers in the future.

2. LITERATURE REVIEW

2.1 Service Quality

Banks do not have to compete in traditional banking services, but have also expanded the scope of competition to mobile banking services (Gonzalez et al., 2008). Traditional banking services are no longer a priority for banking services to customers, but must also expand the scope of competition to mobile banking services (Gonzalez et al., 2008). In an effort to prevent customers from running to other banks, the bank

introduced mobile banking to customers. It is hoped that the bank can maintain a competitive service quality in the future (Jenkins, 2007). Vanpariya and Ganguly (2010) examined that service quality has a positive impact on customer satisfaction, positive word of mouth and loyalty. Zeithaml et al. (2000) developed E-SERVQUAL to measure service quality, and identified seven dimensions of service quality: efficiency, reliability, compliance, privacy, responsiveness, compensation and contracts. Masoud, Emad (2017) examines that indicators of the quality of mobile banking services are ease of use, privacy, design and cost effectiveness which have a significant impact on customers' adoption of E-Banking services.

2.2 Satisfaction

Asad (2016) discusses ease of use (Website Intelligence, and Ease of Transaction), and Website Navigation (Ease and Speed of Navigation, and Efficient Search Engines) are priority factors that affect Customer Satisfaction in the Internet Banking System. Tam, C., & Oliveira, T. (2016) found that the education of m-banking service providers to customers can improve service quality and have a positive impact on customer satisfaction. C.-C. Liang and W. Pei-Ching. (2015) revealed in their research that the factors of Communication, Reliability, and Privacy have an important role in customer satisfaction. Alber, Rury Febria (2017) explained that, the increasing perception of customer satisfaction, the more loyal customers are to the bank. Tam and Oliveira (2016) in their research revealed that building positive relationships with customers can increase satisfaction and intention to use m-banking services.

2.3 Loyalty

Shahriari, Shahrzad (2014) revealed that customer loyalty is obtained from service quality, trust, habit, and satisfaction. Kirakosyan and Danita (2014) concluded that to gain customer loyalty, banks need to make a paradigm shift in customer service management procedures. Dimensions of informational content / quality, reliability, Web site design, efficiency, Ease of use, security / privacy, service completion, and accountability on service quality variables have a positive impact on customer loyalty (Naser Asgari et al., 2014). Repurchase, Extended Purchase, and Recommendation are indicators of customer loyalty C.-C. Liang and W. Pei-Ching. (2015). Giovanis A., Athanasopoulou P., & Tsoukatos E. (2015) explain that there are two types of customer loyalty: attitudinal loyalty and behavioral loyalty.

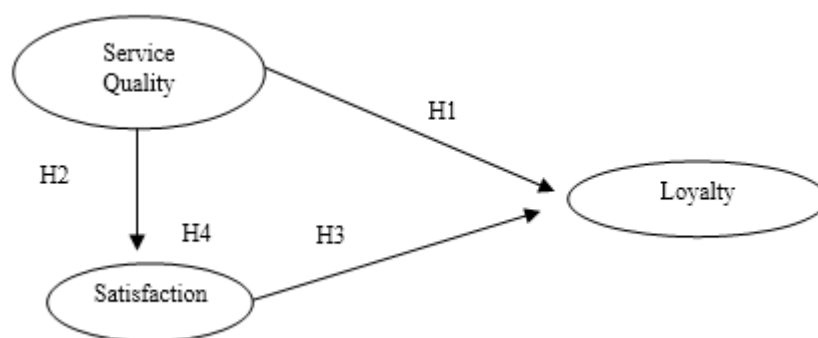## 3. RESEARCH METHODS
3.1 Research Framework

Figure 1. Conceptual Framework

The causal relationship between service quality, customer satisfaction and customer loyalty has a positive impact on the development of service marketing (Lee K.C., & Chung N., 2009). Service quality can affect customer loyalty indirectly through satisfaction (C.-C. Liang and W. Pei-Ching, 2015). Alber, Rury Febria (2017) explained that, the increasing perception of customer satisfaction, the more loyal customers are to the bank. Based on the research that has been done previously, in this study there are three variables that are the focus of the study, namely Service Quality as an independent variable, Satisfaction as an intervening variable and Loyalty as the dependent variable.

Based on Figure 1, and the existing background, the hypothesis of this study is:

H1. Quality of mobile banking services has a significant effect on customer loyalty.

H2. The quality of mobile banking services has a significant effect on customer satisfaction.

H3. Satisfaction using mobile banking has a significant effect on customer loyalty.

H4. Service quality has an indirect significant effect on loyalty through customer satisfaction.

3.2 Sample and data collection

This study uses 250 BRI bank customers as respondents in this study. The survey is distributed using a google form. The first sampling is convenience sampling, namely the sampling technique based on the ease of sampling based on the time available, location, availability of respondents and the population that the researcher met at BRI bank. The second sampling is purposive sampling, which is taking samples with certain conditions (m-banking user respondents). A multi-item scale was used to measure research variables with items rated on a 5-point Likert type scale ranging from "strongly disagree" (1) to "strongly agree" (5) (Charles K et al, 2016). The questionnaire contains statements categorized based on variables. Respondents were asked to fill out an online questionnaire by choosing from a set of answers based on their opinion about m-banking. The answer to each statement contains a Likert scale, can be seen in table 1.

Table 1
Likert Scale

CATEGORY	Scale
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly agree	5

3.3 Data analysis method

The collected data were analyzed using multiple regression analysis (MRA) approach using SPSS. Multiple regression analysis is used to examine the effect of service quality variables on customer satisfaction, customer satisfaction on loyalty, and the indirect effect of service quality on loyalty through customer satisfaction. Validity and reliability tests are also used in this study, aiming to test the feasibility and reliability of the test equipment. This study also analyzes the demographics of respondents, to determine the percentage of mobile banking users, based on age, gender, education status, Internet banking usage frequency and profession.

4. RESULTS AND DISCUSSION

4.1 Validity

The results of the validity test show how much accuracy the statements in the questionnaire can be used as a measuring tool. There are a total of 17 statement items (6 Service Quality statement items, 6 Satisfaction statement items, and 5 Loyalty statement items) that have been tested on 50 respondents. Statistical results can be said to be valid if the significance value <0.05. The results of the validity test can be seen in table 2.

Table 2
Validity Result

No	Variable	Indicator	Item	Pearson Correlation	Sig	Result
1.	Service Quality	Responsiveness	KL1	0, 872	0,00	Valid
		System quality	KL2	0, 879	0,00	Valid
		Security	KL3	0, 927	0,00	Valid
		Benefits outweigh costs	KL4	0, 893	0,00	Valid
		Fulfill customer needs	KL5	0, 804	0,00	Valid
		Transaction convenience	KL6	0. 872	0,00	Valid
2.	Satisfaction	Low Cost	KN1	0,818	0,00	Valid
		Comfortness	KN2	0, 915	0,00	Valid
		Ease of use	KN3	0,780	0,00	Valid
		Satisfaction of use	KN4	0,859	0,00	Valid
		User friendly	KN5	0,809	0,00	Valid
		Satisfied with the transaction process	KN6	0,896	0,00	Valid
3.	Loyality	Continuance intentions	LY1	0,790	0,00	Valid
		Intention to use	LY2	0,894	0,00	Valid
		Intention to change	LY3	0,903	0,00	Valid
		Recommendation	LY4	0,936	0,00	Valid
		Behavioral loyalty	LY5	0,893	0,00	Valid

4.2 Reliability

The reliability test is a measurement that shows the extent to which the measurement is unbiased or error-free across time (Sekaran, 2010: 157). The reliability test can be declared reliable by comparing the Cronbach alpha value of the test results for each variable> 0.6. Table 3 is the result of the variable reliability test used in this study.

Table 3
Reliability Result

No	Variable	Number of statements	Cronbach Alpha	Status
1.	Service Quality	6	0,936	Reliable
2.	Satisfaction	6	0,919	Reliable
3.	Loyality	5	0,929	Reliable

4.3 Findings

Table 4 shows the demographics of 250 respondents, such as gender, age group, education status, Internet banking usage frequency and profession.

Table 4
Demography of respondents

Variable	Options	Number of respondents	Percentage
Gender	Male	94	38%
	Female	156	62%
Age (years)	19-25 thn	30	12%
	26-35 thn	124	50%
	36-45 thn	60	24%
	> 45 thn	36	14%
Educational status	Secondary	6	2%
	Diploma	29	12%
	First degree	207	83%
	Masters	8	3%
Internet banking usage frequency	1 – 4 times a week	50	20%
	5 – 8 times a week	50	20%
	9 – 12 times a week	37	15%
	> 12 times a week	113	45%
Profession	Employee	193	77%
	Government employees	36	14%
	Entrepreneur	19	8%
	Not yet working	2	1%

4.4 Multiple Regression Analysis (MRA)

The following is a description of the results of the hypothesis testing in this study, where H1. Quality of mobile banking services has a significant effect on customer loyalty; H2. Quality of mobile banking services has a significant effect on customer satisfaction; H3. Satisfaction using mobile banking has a significant effect on customer loyalty; H4. Service quality has an indirect significant effect on loyalty through customer satisfaction.

Table 5
Coefficients Service Quality To Satisfaction
Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	2,071	,655		3,161	,002		
KL	,926	,025	,919	36,631	,000	1,000	1,000

a. Dependent Variable: KN

Table 6
Coefficients Service Quality, Satisfaction to Loyalty

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	,350	,755		,463	,644		
	KL	,389	,072	,430	5,374	,000	,156	6,410
	KN	,410	,072	,457	5,710	,000	,156	6,410

a. Dependent Variable: LY

Table 7
Coefficient of determination Service quality to Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,919[a]	,844	,843	1,32490

a. Predictors: (Constant), KL

Table 8
Coefficient of determination Service quality, Satisfaction to Loyalty

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,868[a]	,754	,752	1,49711

a. Predictors: (Constant), PUAS, KULA

The statistical results of this study (table 6) show that, independently service quality has a significant effect on loyalty with a sig <0.05, This supports the research of Lee & Chung, (2009); Merrilees, McKenzie, & Miller (2007); and Shahriari, Shahrzad (2014). Service quality, trust, habits, and satisfaction have a significant relationship with customer loyalty (Shahriari, Shahrzad, 2014). The results of the coefficient of determination (R^2) in table 8, show that service quality and satisfaction play a role in loyalty by 75.4%. The statistical results of this study (table 5) show that, service quality has a significant effect on satisfaction with a sig <0.05, This supports the research of Isabelle B., Lova R., & Line R. (2016); C.-C. Liang and W. Pei-Ching. (2015); Charles k., Ayo A. A. O. O. J. Adewoye I. O., & Eweoya (2016); and Geeta S., Surendra M. (2014). The results of the coefficient of determination (R^2) in table 7, show that service quality plays a role in satisfaction by 84.4%. The statistical results of this study (table 4.7) show that independently satisfaction has a significant effect on loyalty with a sig <0.05. This supports the research of Isabelle B., Lova R. & Line R. (2016); C.-C. Liang and W. Pei-Ching. (2015); Shahriari, Shahrzad. (2014); and Alber, Rury Febria (2017). Alber, Rury Febria (2017) explains that customer satisfaction has a positive effect on loyalty, the increasing perception of customer satisfaction, the more loyal customers are to the bank. The results of the coefficient of determination (R^2) in table 7, show that service quality and satisfaction play a role in loyalty by 75.4%. The statistical results of this study (table 6) show that, Service Quality (β 0.919 * β 0.457 <Beta 0.430) has no indirect effect on loyalty through satisfaction. This study does not support the research of C.-C. Liang and W. Pei-Ching. (2015), where in his research, service quality has a positive but indirect effect on customer loyalty through customer satisfaction. So it can be concluded that, Satisfaction is not an intervening variable, but an independent variable on loyalty.

4.5 Discussion and implications

The results of this study can be used as a reference for BRI Bank Managerial decision making in the future development of mobile banking. Where, customer responses in the category of Service Quality (Fulfill customer needs, Security, Responsiveness and Benefits outweigh costs), the category of Customer satisfaction (User friendly, Low Cost, Ease of use, and Satisfaction of use) can affect customer loyalty. Based on the research results, that service quality does not have a direct impact on loyalty through satisfaction. Thus, satisfaction is not an intervening variable, but as an independent variable. It can be concluded that customer satisfaction using m-banking is a major factor in increasing customer loyalty. This research is expected to contribute to decision makers at BRI Bank, and it is hoped that future researchers can examine research variables based on demographics and supporting factors in the variables.

CONCLUSION

This study analyzed 250 mobile banking users of PT. Bank Rakyat Indonesia (Persero) Tbk in Surabaya, based on customer perceptions of Service Quality, Customer Satisfaction and Loyalty. The results of the analysis show that 62% of mobile banking users are female and 38% are male, 50% are dominated by ages 26-35, 83% are dominated by S1 education, 77% are dominated by private employees, and dominated by usage> 12 times as much as 45%. The observed relationship between Service Quality, Satisfaction, and Customer Loyalty of mobile banking users has revealed that: Service quality has a direct significant effect on customer satisfaction; Customer satisfaction has a significant direct effect on customer loyalty; Service quality has a significant direct effect on customer loyalty; and Customer satisfaction cannot be used as an intervening variable between Service Quality and Loyalty

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