Mobile Banking as a Business Strategy: Customer Lifestyle Segmentation and Factors Affecting User Loyalty
(Case Study at Bank Mandiri, Indonesia)

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Abstract:- The purpose of this research is to study the mobile banking strategy used by Bank Mandiri financial institutions. Since several years ago, financial institutions have adopted mobile banking technology as a service to their customers. This study analyzes how the segmentation of Bank Mandiri mobile banking users is based on lifestyle and analyzes the effect of service quality on customer satisfaction and customer loyalty. This study analyzes how the segmentation of Bank Mandiri mobile banking users is based on lifestyle and analyzes the effect of service quality on customer satisfaction and customer loyalty. The population in this study are Bank Mandiri customers who use mobile banking services. Sampling using simple random sampling with a sample size of 270 respondents. The analysis technique used in this research is SPSS for descriptive testing and Structural Equation Modeling (SEM) for hypothesis testing. The results of the descriptive test in this study indicate that an indulgence lifestyle is the most important thing for customers in creating loyalty to Bank Mandiri mobile banking. The results of hypothesis testing in this study indicate that: (1) Service quality affects customer satisfaction, (2) customer satisfaction affects customer loyalty, (3) service quality affects customer loyalty, (4) service quality and customer satisfaction simultaneously affect customer loyalty, (5) customer satisfaction cannot be a mediating variable, where service quality is proven to have a direct effect on customer loyalty without going through customer satisfaction as a mediating variable.

Keyword:- Mobile Banking Strategy, Lifestyle, Segmentation, Service Quality, Customer Satisfaction, Customer Loyalty.

I. INTRODUCTION

The growing trend of internet users with the presence of smartphones can be a consideration for banking companies to develop services which tailored to the development of people's lifestyles(Kurniawan, 2013). Along with the changing lifestyle of customers in this mobile era, banks are not only benefiting from the traditional way, but also by providing mobile banking services (Lim, 2008).

Technological developments have opened up new markets for more efficient products and services for the banking industry. Banks have changed from paper-based banking solutions to banking with online systems, mobile banking, and others with the latest technology, also to meet customer expectations by offering convenient banking services (Bharti, 2016).

Mobile banking is a means of mobile terminals where users can perform financial transactions such as checking balances, paying bills anywhere, and anytime.Mobile banking is a system that allows customers to access banking facilities via devices such as smartphones or tablets.With the high growth in penetration of smartphone devices, banks are aware that smartphone devices have very high and profitable commercial opportunities, especially considering offline office operating costs and pressures in the financial services industry(Yu, Li, & Chantatub, 2015). The benefits of using mobile banking are not only felt by banking companies but also other industry services that are widely involved (Lim, 2008).

Mobile banking is a facility provided by banks because they see the needs of the people who are increasingly conducting business transactions. Mobile banking presents an opportunity for banks to maintain the existence of their technology-savvy customer base by offering added value and innovative services (Tiwari & Buse, 2007). Mobile banking is one of the banking self-services that use the internet, which is a breakthrough in banking information services via wireless that has been preceded by ATM (automated teller machines), telephone, and internet banking in supporting banking activities (Shaikh, 2014).

The results of a digital banking survey in Indonesia (PWC, 2018), found that the loyalty of digital banking users in Indonesia is the result of a customer experience which satisfied with the digital banking services used. Many researchers have looked at the variables that influence a person's intention to continue to use mobile banking. Security is one of the dominant factors that influence someone to use mobile banking (Singh & Srivastava, 2018; Nasri, 2011; Ramavhona & Mokwena, 2016; Sihotang, 2016; Susanto, Lee, Zo, & Ciganek, 2013). Other researchers, Ramavhona

and Mokwena (2016) and Nasri (2011) added that the convenience factor influences a person to use mobile banking. The social factor attribute also affects the use of mobile banking (Ahmed & Phin, 2016).

There have been many studies on m-commerce, but there are still few studies that discuss consumer segmentation of mobile banking which is related to the customer relationship management (CRM) perspective (Sangle & Awasthi, 2011). This study attempts to add the literature on mobile banking user segmentation and factors that influence customer loyalty. This research was conducted at Bank Mandiri, one of Indonesia's leading banks. In 2019, Bank Mandiri recorded that the number of mobile banking service users reached 2.51 million customers, increasing 98.6% from the previous year of 1.26 million customers (Kontan, 2019). Based on the description above and the conceptual framework, this study aims to see: (1) The effect of service quality on customer satisfaction, (2) effect of customer satisfaction on customer loyalty, (3) effect of service quality on customer loyalty, (4) simultaneous influence of service quality and customer satisfaction on customer loyalty, and (5) the indirect effect of service quality on customer loyalty through customer satisfaction as a mediating variable.

II. LITERATURE REVIEW

A. Mobile Banking
Smartphones tend to develop as a means of payment everywhere (Wilcox, 2009). Smartphones, which were initially used exclusively as a tool for making voice calls, are also being used as a means of financial transactions now (Eurostat, 2009). Although offline-based customer service is still needed, banks have other ways to serve customers, one of which is by providing mobile banking services (Govender & Sihlali, 2014). Mobile banking is defined as activities that carry out the banking business with the help of smartphone devices that include mobile accounting, mobile brokerage, and mobile financial information (Georgi F. Pinkl, J., 2005). Mobile banking can also be seen as an interaction where customers connect to the bank via mobile devices such as cell phones, smartphones, or personal digital assistants (PDAs) (Laukkanen & Kiviniemi, 2010).

B. Lifestyle
Lifestyle can be used as a way of looking at segmentations that are differentiated based on how to spend time in activities, beliefs, and socio-economics (Lamb et al., 2002). The term lifestyle comes from the fields of psychology and sociology, referring to a person's way of life. The term lifestyle usually used to describe the lifestyle and mobility of a particular class (Lin et al., 2012). Lifestyle describes the activities, interests, and opinions of individuals who interact with their environment (Kotler & Bloom, 2002). According to Widjaja (2002), matters related to lifestyle needs are: luxury, indulgence, self-image, and admired.

C. Service Quality
Service quality means the producer's efforts to meet customer needs and desires as well as delivering accuracy following customer expectations. Lovelock and Wirtz (2010) state that service quality is the level of excellence expected and control over that level of excellence is to meet consumer desires. According to Chase (2006), service quality is a combination of internet-based quality which consists of efficiency, compliance, system availability, and privacy.

D. Satisfaction
Kotler and Keller (2016) define satisfaction as "a person's feelings of pleasure or disappointment that result from comparing a product or service's perceived performance (or outcome) to expectations". Customer expectations play an essential role in the evaluation and satisfaction of service quality. Customer satisfaction is created through quality, service, and value (Kotler & Bloom, 2002). If the performance or experience that the goods or services produce is not as expected, the customer will feel dissatisfied. If it meets expectations, the customer will be satisfied. Moreover, if it exceeds expectations, customers will be very satisfied or happy (Kotler & Keller, 2016).

E. Loyalty
Loyalty is the desire of consumers to re-buy a product or re-use a brand and will not buy or use products or services from other companies. Griffin (2002) states that loyalty is shown by behaviour, as evidenced by routine purchases, based on the decision-making unit. According to Kartajaya (2003), loyalty is a manifestation of the fundamental human need to have, support, get a sense of security and build attachments, and create emotional attachments. A loyal customer is not only a buyer who makes repeat purchases but also maintains a positive attitude towards the service provider.

F. Framework
Bank Mandiri provides mobile banking services to meet customer needs as an alternative medium for conducting financial transactions. In planning a marketing strategy, Bank Mandiri implements a segmentation strategy based on the customer's lifestyle. Variable descriptive testing was conducted on the respondent's profile, lifestyle, and customer loyalty. This study also analyzes the relationship between service quality, customer satisfaction, and customer loyalty as the goal of planning an effective marketing strategy using structural equation modelling (SEM) applications to examine the relationship between these variables.

G. Hypothesis
- H1: Service quality affects customer satisfaction
- H2: Customer satisfaction affects customer loyalty
- H3: Service quality affects customer loyalty
- H4: Service quality and customer satisfaction simultaneously affect customer loyalty
- H5: Service quality has an indirect effect on customer loyalty through customer satisfaction as a mediating variable

III.   RESEARCH METHODOLOGY

This study uses descriptive analysis to see the responses of respondents in answering questions using the SPSS 16.0 program and inferential analysis using the SEM method with the Lisrel 8.70 program to answer the hypothesis test and see the relationship between the variables. The criteria in this study are Bank Mandiri customers who use Bank Mandiri mobile banking. The population of this research is the customers of Bank Mandiri in Jakarta, Indonesia. Due to the unknown population size in this study, the sampling was carried out using the multiplication method proposed by Hair et al. (2010), Bentler and Chou (1987), as well as Schumacker and Lomax (1996), where the number of indicators is multiplied by ten so that the number of samples in this study is $27 \times 10 = 270$ respondents. The sampling technique in this study is non-probability sampling. The research approach used is quantitative. The research type is a survey with a descriptive-analytical method. Data collection was done by filling out a questionnaire. The items in the questionnaire were measured using a 5 Likert scale ranging from 1, which means "strongly disagree" to 5, which means "strongly agree".

IV.   RESULTS AND ANALYSIS

Based on the data collected, the following results were obtained:

1. The Largest Customer of Bank Mandiri Mobile Banking Users

Based on the results of the descriptive test using the SPSS program, the results show that majority of Bank Mandiri mobile banking users are male at 51%. The largest Bank Mandiri mobile banking users in this study were married (61%) aged 17-30 years (63%), had an undergraduate degree (92%) and had an income of 5-10 million rupiahs per month (52%). The majority of Bank Mandiri mobile banking users work as employees (91%) with the length of time using Bank Mandiri mobile banking between 3-6 years (43%).

2. Characteristics of Loyal Mobile Banking Users

The majority of Bank Mandiri loyal mobile banking users are male (45%) and married (56%). Loyal customers are mostly aged 17-30 years (57%) have an undergraduate degree (84%) with an income of 5-10 million rupiahs per month (46%). The majority of loyal customers work as employees (83%) with a length of time using Bank Mandiri mobile banking between 3-6 years (40%).

3. Segmentation of Mobile Banking Users Based on Lifestyle

In the segmentation based on customer lifestyles, the results show that the indulgence for Bank Mandiri mobile banking users has the most massive total score compared to other lifestyles with a score of 4.30. In contrast, self-image has a score of 4.29, followed by luxury with a score of 4.28, and admired with a score of 4.23. This result shows that indulgence is the most crucial thing in creating loyalty for Bank Mandiri mobile banking users.

4. Effect of Service Quality on Customer Satisfaction and Customer Loyalty

The data analysis tool used in this study to test the hypothesis is a full model using SEM which is operated through the Lisrel 8.70 program. Based on the full model, the Standardized model and the T-Value model are obtained, with the processing results in Figure 1 and Figure 2. Furthermore, the results of the suitability test for the Goodness of Fit Index model can be seen in Table I.
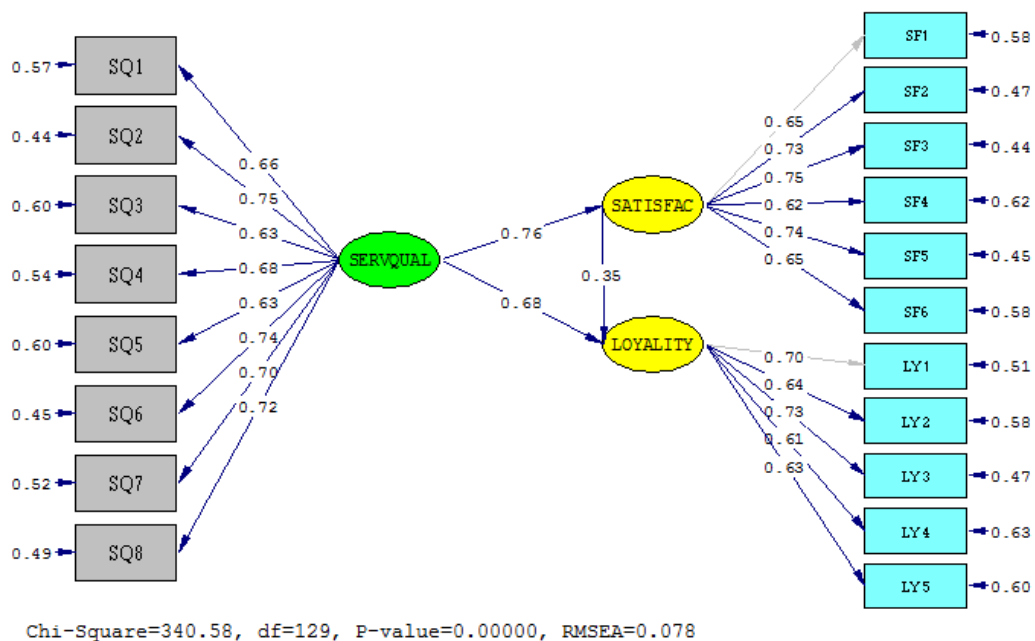

Chi-Square=340.58, df=129, P-value=0.00000, RMSEA=0.078

Fig 1:- Basic *Model* based on Standardized Values

Chi-Square=340.58, df=129, P-value=0.00000, RMSEA=0.078
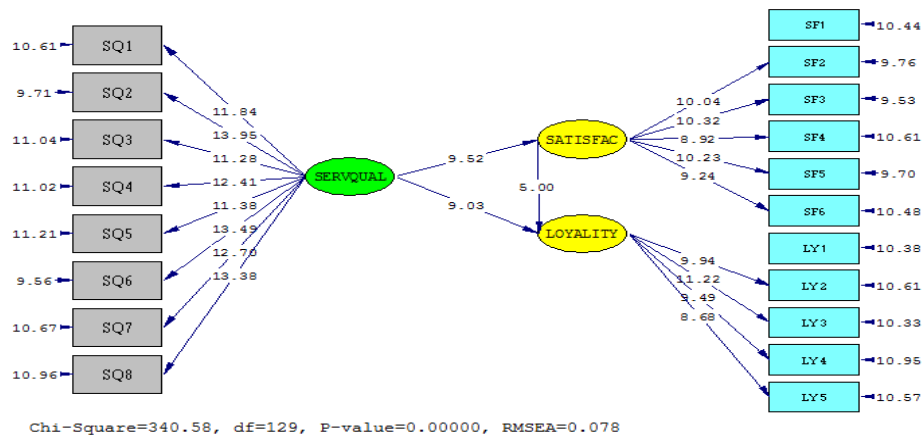
Fig 2:- Basic Model based on T-Value

GoF Indicator	Expected Size	Estimated Results	Conclusion
Absolute Fit Size			
GFI	GFI >0,9	0.88	Marginal Fit
RMSEA	RMSEA < 0,08	0.078	Good Fit
NNFI	NNFI >0,90	0.96	Good Fit
NFI	NFI > 0,90	0.96	Good Fit
AGFI	AGFI > 0,90	0.83	Marginal Fit
RFI	RFI > 0,90	0.94	Good Fit
IFI	IFI > 0,90	0.97	Good Fit
CFI	CFI > 0,90	0.97	Good Fit

Table 1:- Size of model suitability

Based on Table 1, it can be seen that there are six conformity measures obtained that have a good model fit index (Good Fit), while those with a marginal fit model suitability index are only GFI and AGFI. Thus, the overall model is declared good and can be used for further analysis.

Measurement Model		Factor weight coefficient	T-value calculated	t-table	Test Results (t > 1.96)
Latent Variables	Dimension				
Servqual	SQ1	0.66	10.84	1.96	Significant
	SQ2	0.75	13.95	1.96	Significant
	SQ3	0.63	11.28	1.96	Significant
	SQ4	0.68	12.41	1.96	Significant
	SQ5	0.63	11.38	1.96	Significant
	SQ6	0.74	13.49	1.96	Significant
	SQ7	0.70	12.70	1.96	Significant
	SQ8	0.72	13.38	1.96	Significant
Satisfaction	SF1	0.65	default	1.96	Significant
	SF2	0.73	10.04	1.96	Significant
	SF3	0.75	10.32	1.96	Significant
	SF4	0.62	8.92	1.96	Significant
	SF5	0.74	10.23	1.96	Significant
	SF6	0.65	9.24	1.96	Significant
Loyalty	LY1	0.70	default	1.96	Significant
	LY2	0.64	9.94	1.96	Significant
	LY3	0.73	11.22	1.96	Significant
	LY4	0.61	9.49	1.96	Significant
	LY5	0.63	8.68	1.96	Significant

Table 2:- Structural Measurement Model ; Source: The results of data processing with Lisrel 8.70

Based on the results in Table 2, it can be seen that:
- The value of the regression coefficient (factor weight) resulting from the latent variable servqual to dimensions SQ1 to SQ8 is more significant than 0.50 with a t-value greater than 1.96 at a significance level of 5%, it can be said that the dimensions SQ1 to SQ8 are all valid and significant to be used as an indicator of the latent variable servqual so that it will be used in further analysis.
- The value of the regression coefficient (factor weight) resulting from the latent variable satisfaction todimensions SF1 to SF6 is more significant than 0.50 with a t-value greater than 1.96 at a significance level of 5%, it can be said that the dimensions SF1 to SF6 are all valid and significant to be used as an indicator of the latent variable satisfaction so that it will be used in further analysis.
- The value of the regression coefficient (factor weight) resulting from the latent variable loyalty to dimensions LY1 to LY5 is more significant than 0.50 with a t-value greater than 1.96 at a significance level of 5%, it can be said that the dimensions LY1 to LY5 are all valid and significant to be used as an indicator of the latent variable loyalty so that it will be used in further analysis.
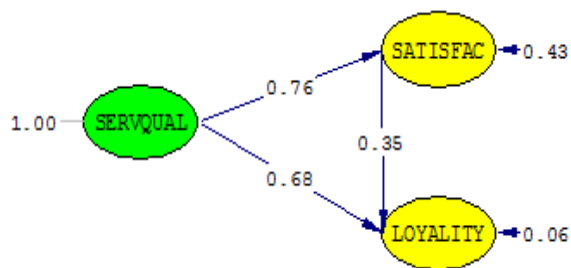

Fig 3:- Structural Model

Based on the results in Figure 3, multiple regression equations can be arranged for the following construct variables:

Satisfaction **=0.76 Servqual, $R^2 = 0.57$**………....... (1)
Loyalty **=0.68 Servqual + 0.35 Satisfaction, $R^2 = 0.94$**……................… (2)

Based on structural equation 1, it can be seen that the direct influence of the servqual variable on satisfaction is $(0.76 \times 0.76) = 0.5776$ or 57.76%.

Based on structural equation 2, it can be seen that the direct influence of the servqual variable on loyalty is $0.68 \times 0.68 = 0.4624$ or 46.24%, while the direct effect of the satisfaction variable on loyalty is $0.35 \times 0.35 = 0.1225$ or 12.25%.

Measurement Equation						
Endogenous Latent Variables	Exogenous/Endogenous Latent Variables	Path Coefficient (Standardized)	Standard Error (SE)	t-count	t-table	Test Results (t-count> 1.96)
Satisfaction (Partial)	Servqual	0.76	0.080	9.52	1.96	H1 Significant
Loyalty (Partial)	Satisfaction	0.35	0.070	5.00	1.96	H2 Significant
	Servqual	0.68	0.075	9.03	1.96	H3 Significant
Endogenous Latent Variables	Exogenous Latent Variables	Coefficient of Determination (R^2)	Impact Weight	f-count	f-table	Test Results (f-count > f-table)
Loyalty (Simultaneous)	Servqual + Satisfaction	0.94	R= $\sqrt{R^2}$ = $\sqrt{(0.94)}$ = 0.97	2091.5	3.02	H4 Significant

Table 3:- Hypothesis Test Results

Notes:
f-table =3.03 at a = 5% and free degrees db1=k=2 and db2=n-k-1=270-2-1=267
t-table = 1.97 at a =5% with 2-sided test and free degrees db=n-k-1=270-2-1=267
f-countcalculated from the formula: $(R2/k) / ([1-R2]/[n-k-1])$

Furthermore, the effect of the servqual and satisfaction variable together to loyalty is 94%; other factors influence the remaining 6%.

In detail, the influence together (Full Mediating):
- Direct (c) = SQ→LY=0.68x0.68 = 0.4624.
- Indirect (C') = SQ→SF→LY = 0.76 x 0.35 = 0.2660.

The value of the indirect effect at C' = 0.2660 is lower than the direct effect at c = 0.4624, indicating that satisfaction is not a mediating variable of servqual and loyalty. This result proves that H5 is rejected, meaning that servqual is proven to have a direct effect on loyalty without going through satisfaction as a mediating variable.

There are five hypotheses tested in the study. From five hypotheses, based on the test results in table 3, it can be concluded that all hypotheses are accepted because they are proven to have a significant effect on customer loyalty, except for H5 which is proven to be rejected. The table above concludes that the hypotheses H1, H2, H3, and H4 are proven to affect customer loyalty, both partially and simultaneously (jointly), but H5 is rejected. Customer satisfaction cannot be a mediating variable, where servquality is proven to have a direct effect on customer loyalty without going through customer satisfaction as a mediating variable.

V. CONCLUSION

The conclusion of the descriptive test results in this study shows that in the lifestyle segmentation, indulgence is considered the most important in creating loyalty to Bank Mandiri mobile banking users. The results of hypothesis testing in this study: First, service quality has a significant and positive effect on customer satisfaction, meaning that the better service quality, the better the customer satisfaction. Second, customer satisfaction has a positive and significant effect on customer loyalty, meaning that better customer satisfaction, the better customer loyalty. Third, service quality has a significant and positive effect on customer satisfaction, meaning that the better service quality, the better the customer satisfaction. Fourth, service quality and customer satisfaction together have a significant and positive effect on customer loyalty, meaning that better service quality and customer satisfaction are carried out simultaneously, better customer loyalty is. Fifth, it is proven that customer satisfaction cannot be a mediating variable between service quality and customer loyalty, meaning that service quality is proven to have a direct effect on customer loyalty without going through customer satisfaction as a mediating variable.

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