

THE INFLUENCE OF BANK IMAGE ON LOYALTY MODERATED BY SATISFACTION

Budhi Haryanto*, **Santi Budiman****

Abstract

This study aimed to examine the effect of image, customer satisfaction, and the interaction between image and satisfaction to customer loyalty, convenience sample was taken of 250 bank customers in Surakarta, Central Java. Hierarchical multiple linear regression analysis was used to accommodate the relationship between observed variables. The results showed that bank's customer loyalty can be explained by the moderating role of satisfaction in behavioral processes. In particular, the results show that the image of banks has a positive effect on loyalty, satisfaction negatively affects loyalty, and interaction of satisfaction and image also negatively affect customer loyalty. This study does not consistent with previous studies; however, it reveals the implications of the study related to the theoretical and practical aspects.

Keywords: Loyalty, Image Bank, Satisfaction

*Faculty of Economic and Business, Sebelas Maret University, Jl Ir. Sutami no. 36A, Kentingan, Jebres, Surakarta (57126), HP.08122801653

**STIE Isti Ekātana Upaweda Yogyakarta, Jl. Hayam Wuruk No. 20 Yogyakarta 55212, HP.0816681169

1 Introduction

Brand loyalty is an issue that is still interesting to study, because the literature review indicates the concept is still diverse, which is associated with the decision variables that affect the formation of loyalty (See Too et.al, 2000; Thurau, et.al, 2002). Diversity that occurs, possibly due to each of these studies relied on research design, which is limited in scope. This in turn has implications for the generalization of the model is limited. These conditions provide an opportunity to design a model that is relevant to the object and the setting under study.

In this study, the concept is constructed based on three observations of variables, namely customer loyalty, image, and satisfaction. Loyalty is the intention to commit the bank, preference or tendency to select the bank, the intention to trade again, the intention to resistance on better alternatives, intention to tolerate the price, and intention to recommend to others. This understanding was adopted from the concept proposed by Brunner et al. (2008) which is used to explain consumer loyalty to the company's rail service. In the banking context, the notion is relevant to explain the behavior of loyalty to the bank, because by understanding this concept can provide insight related to the efforts that should be done by the bank to improve customer loyalty, from the aspect of commitment, attitudes, and intentions of possible customers likely to re-save, resistance to better alternatives, tolerance to the bank, to recommend to others, and repeated transactions.

Furthermore, image is considered importantly by customers in affecting consumer loyalty to the bank. In general, this variable is defined as the perception of quality associated with the brand name (Aaker and Keller, 1990; Keller 1993). In the banking context, image is the perception of quality associated with the name of the bank, the customer is always stored in memory. In terms of loyalty, literature review indicates that the image is suspected as decision variable either directly or indirectly influences on loyalty (See Abdullah et al., 2000; Bigne et al., 2001; Zins, 2001; Park et al, 2004). The direct influence is shown by a direct relationship between image and loyalty, while the indirect influence is indicated by the presence of satisfaction variables that mediate the relationship of two variables. In this study, the image is a variable that is proposed as a variable affecting loyalty, and also proposed as a variable that interacts with the satisfaction in affecting loyalty.

Satisfaction is the last variable in this study used by customers as an important consideration in forming the loyalty to the bank. Satisfaction is the cognitive process of comparison between the performance and desired expectations in transacting the product. This process continuously adds and updates in forming the perceived satisfaction, which in turn can form a cumulative satisfaction (Cronin et al., 2000). Previous study indicated that from cumulative satisfaction in turn can form consumer loyalty toward the product or particular brand (see Zeithaml et al, 1996; Bergeron, 2004; Karatepe et.al., 2005; Brunner et al., 2008). In this study, besides the main effect between satisfaction and loyalty, it also proposed interaction

effect between image and satisfaction in the process of forming loyalty. The phenomenon described is the satisfaction which is considered importantly by customers that moderate the influence of bank image on loyalty.

2 Literature review

The problem of this study focused on the relation of three variables namely bank loyalty, bank image, and satisfaction. Therefore, the discussion of the relationship of these three variables can provide a theoretical understanding in formulating the hypothesis. Thus, the hypotheses can be accounted from the theoretical aspect. Here is the discussion that followed the formulation of the hypotheses.

2.1 Consumer's loyalty

Literature review indicates a different concepts of loyalty (See Leverin and Liljander, 2006; Brunner et al., 2008). First, loyalty is conceptualized as the degree of consumer desire to buy back the product, so in this context the high loyalty towards the brand is one of the greatest assets that must be maintained by the company (Leverin and Liljander, 2006). In this regard, the efforts made and focused on marketing is to retain customers, and this became an important priority to have attention more rather than gaining new customers. This effort of maintaining customer in turn led to the concept of marketing relationship. This concept is based on an understanding that the effort spent to find new customers is relatively more expensive but it also takes a relatively longer than retain existing customers, especially the extra cost for aggressive promotions and costs to other marketing mix. Conversely, to retain existing customers, the company just needs to concentrate on improving services to its customers consistently.

Second, customer loyalty conceptualized as an emotional commitment to buy back the brand consistently in the future (Oliver, 1999). This behavior is characterized by the purchase of products or services with the same brand over and over or purchase the same brand, which is not affected by situational influences and marketing efforts made by competitors, which aimed to change consumer attitudes.

In the context of the commitment, customer is expected to repeat purchase toward the same product, despite the influence of situations and a variety of marketing efforts that can potentially cause displacement of consumer action (Oliver, 1999). Thus, high commitment is always built by marketers to establish a loyal customer through marketing efforts, which aimed to maintain the closeness and nurturing relationships that already exist between customers and service providers.

Third, loyalty is conceptualized as behaviors and attitudes (Brunner, 2008). As a behavior, loyal

customers will be expressed in the form of repeat purchase while the attitude of loyalty are grouped into four phases namely cognitive loyalty, affective loyalty, conative loyalty, and action loyalty.

Cognitive loyalty is a loyalty based on brand beliefs. In this case, the intensity of attention to customer information associated with a brand can be said that customers are loyal to their brand. Furthermore, affective loyalty shows customer preferences toward brands that are needed. This preference is based on some satisfying experiences which in turn led to the attitude of love. The key to successful marketers are making policies that are geared to build customer satisfaction. Meanwhile, conative loyalty implies a commitment to buy back a brand. In this context, customers feel more attached to the company rather than affective loyalty is just like the brand. Finally, action loyalty is a form of intent that immediately transformed into a readiness to buy.

Thus, as a form of behavioral, loyalty is measured using the possibility of buying loyalty, the possibility of choosing in the long run, or the behavior in choosing brands. Meanwhile, as a form of attitudes, brand loyalty is conceptualized as a preference or emotional commitment subsequently measured with the intention of buy back the product, resistance to better alternatives, price tolerance, and intention to recommend a brand (See Yi and La, 2004).

2.2 Bank image

This variable is defined as the perception of quality associated with the brand name (Aaker and Keller, 1990). At the corporate level, the image is defined as the perception of an organization which is shown as links contained in consumer memory (Keller, 1993). Relation to perceptions of quality, consumers perceive the image, by way of linking quality with brand names. The quality of the brand in question is a form of quality assurance, reliability, responsiveness, empathy, and tangibility (Parasuraman et al, 1991).

In the context of banking services, quality insurance is defined as the knowledge, friendliness of employees, as well as the ability to spontaneously carry out tasks that can guarantee good performance, so this can lead to customer trust and confidence in the banks. Meanwhile, reliability is the ability of banks to provide the promised service accurately and reliably. In this case, the performance shall be in accordance with customer expectations of timeliness and the same service to all customers without any errors.

Furthermore, responsiveness is a policy to assist and provide fast service to customers (Parasuraman et al, 1991). Next is the empathy that is defined as a form of attention that is individualized or personalized to the customer and trying to understand the customer desires. Finally, tangibility is a form of physical infrastructure is reliable, as well as the circumstances

surrounding environment as proof of services rendered by providers.

In terms of loyalty, literature review indicates that the image has an indirect influence, but rather mediated by satisfaction (Bloemer and Reuter, 1997), while others indicate that there is significant influence between image and loyalty (Andreassen and Lindestat, 1998), and several other studies replicate these findings using the service as an objects of studies to explain the relationship between image and loyalty (Abdullah et al., 2000; Bigne et al., 2001; Zins, 2001; Park et al., 2004). Based on the mixed views on the relationship between image and loyalty, then in the context of banking, image bank is expected to have a positive relationship with customer loyalty towards the bank. The proposed phenomenon is, the higher perception of the image of the customer against the Bank Jateng, the higher loyalty to the bank. Thus, the first hypothesis can be formulated as follows.

Hypothesis 1: The higher the bank's image, the higher the customer loyalty towards the bank.

2.3 Satisfaction

Literature review indicates that satisfaction is estimated to influence loyalty, if the customer is able to evaluate the quality of the brand (Zins, 2001). Thus, evaluation of customer satisfaction is the result obtained from the efforts made by comparing between expectation and reality in the purchase of the brand (see Zeithaml et al, 1996; Bergeron, 2004; Karatepe et al., 2005). Therefore, the result of the evaluation is that satisfaction is an affective response in terms of the experience of expectation disconfirmation, which is a form of cognitive processes. Based on the results of this evaluation, customer then will compare with initial expectations in deciding the purchases of the product. Moreover, disconfirmation is said to be positive if the performance is higher than

expectations, and vice versa, disconfirmation is said to be negative if the performance is lower than expectations. These expectations as the initial experience was then used to determine the quality brands that connoted by the customer.

Satisfaction is considered important to investigate because previous studies indicated a significant relationship between satisfaction and loyalty (see Cronin et al., 2000; Brunner et al, 2008). This can happen because a satisfied customer is expected to repeat or continue to use a brand. The phenomenon proposed in this study is, the higher the customer satisfaction, the higher the customer loyalty towards the bank. Thus, the following is the formulation of the second hypothesis.

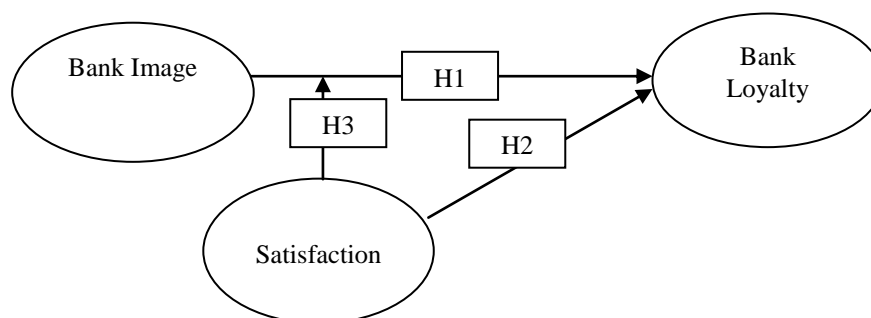
Hypothesis 2: The higher the customer satisfaction of banking services, the higher loyalty to the bank.

In relation with the image, the literature review indicated the patterns of diverse relationships between satisfaction, image, and loyalty depends on the object of research (Abdullah et al., 2000; Bigne et al., 2001; Zins, 2001; Park et al. , 2004). In this study, in addition to main effects, interaction effects are also proposed. In this case, satisfaction is proposed as moderating variables that influence bank image on loyalty. A phenomenon described is the higher the satisfaction, further strengthening the influence of image on loyalty (see Brunner et al., 2008). Thus, the following is the third hypothesis is formulated.

Hypothesis 3: The higher the customer satisfaction of banking services, further strengthening the bank's image influences on loyalty to the bank.

Based on the hypothesis formulated, the following is a research model that explains the relationship between variables in a comprehensive manner.

Figure 1. Research model



3 Methodology

Samples taken from customers who intend to loyal to the Bank Jateng, which is domiciled in Surakarta. Loyalty is a form of commitment which is embodied in the form of an intention to continue trading in the same bank, a commitment to reject a better

alternative, and an intention to recommend to others. Samples were taken in the amount of 250 respondents, using convenience techniques. Implementation is conducted by approaching to the customers who intend to remain loyal to the Bank. Furthermore, respondents were administered a questionnaire that collected immediately after complete filling it up.

Through this way, it is expected to increase the response rate of success in collecting the questionnaires (Assael, 1998).

In associated with a selected statistical tool, this study used Multiple Linear Regression. It is intended to explain the relationship between variables as hypothesized (Newman, 2000). Meanwhile, to support the truth of the quality of the data obtained, this study uses factor analysis and reliability testing, in an attempt to explain the ability of research instruments in implementing the measuring function, and internal consistency of those instruments.

Based on the measurement, this study used a Likert scale consisting of five points an answer that starts from 1 (strongly disagree) to 5 (strongly agree). This is because the variables are observable behavioral variables in the form of individual cognitive responses to the phenomenon under study (Lynch, 1982; 1999).¹

Customer loyalty is the first behavioral variables which is conceptualized as a form of commitment to the customer in terms of repeat purchase, make purchases in the long run, does not intend to move banks, tend to stick with the bank, intend to loyal to the bank, resistance to a better alternative, tolerant against the bank, and intend to recommend to others. The second behavioral variable is the perception about the bank's image, which is conceptualized as a reputable bank, friendliness of service, social awareness, social responsibility, the good name of the bank, and speed of service. Customer satisfaction is the last variable which is conceptualized as the level of customer satisfaction with the service counter, service of other employees, bank performance, bank facilities, and bank infrastructure.

4 Results

To understand the generalization ability of the model, the following is an explanation of the profile of customers that is used as a respondent. Customer profile is explained by the variables gender, age, education, income (See Table 1). In terms of gender, there is a proportionate balance between male and female customers (mean 1.50). In terms of the lowest age is 19 years and the highest is 55 years, while the average age of respondents is about 32 years (mean 32.34). Furthermore, from the educational side, the lowest is passed the senior high school, and the highest is a post graduate degree, and most of the respondents are educated scholar (mean 1.645).

In terms of employment, it can be explained that the work of the respondents are varied as government employees, private employees, military, entrepreneurs, and other work that identified some of them are workers, peasants, and students. Most of the respondents' occupations are private employees (mean 2.25). Finally, in terms of income, it can be classified into 4 groups namely the group of respondents who earn a million dollars or less, the next is an income between 1.1 million to 2.5 million dollars, then the group who earn between 2.51 million and 4 million, between 4.1 to 5.5 million, and the last is the group whose income is 5.51 million and above. Most of their income ranges from 1.1 million to 2.5 million (mean 1.99).

Overall, results of descriptive statistics indicated that the customer's profile underlying the testing of this study were men and women, mostly aged around 32 years, educated scholar, owned a job as private employees, and earned between 1 million to 2.5 million a month. This gives insight to the Bank Jateng in an effort to create marketing programs directed to its customers so that they can contribute effectively and efficiently. In addition, this study is also expected to provide an understanding of the generalization ability of the model designed in this study, hence if it is applied in different contexts, no refraction occurred on the way interpreting the results, due to differences in respondent profiles underlying the research conducted.

Before interpreting the test results obtained, first presentation is the results of testing the validity and reliability of data. Test validity can be seen from the loading values obtained. The results show that there are several items that must be removed. This is due to the inability of these items in explaining the constructs to be measured. Thus in this study, there are five items used to measure loyalty, 4 items used to measure the service, and five items used to measure the image of the bank (see Table 2). To provide assurance of the validity of the results of this reduction, previously performed testing of goodness-of-fit model as seen from the value of KMO is .789 (cut off = .50) and Bartlett's test value of 1675,903 to the significance of .000 (See Appendix 1). It can be concluded that the reduction factor has met the eligibility criteria to be accurately interpreted.

¹ Several behavioral studies that support this argument: Rao and Monroe (1988), Tellis (1988), Simonson *et al.* (1988), Meyers-Levy (1989), Burke and Edell (1989), Fazio *et al.* (1989), Hoyer and Brown (1990), Chattopadhyay and Basu (1990), Kirmani (1990), Chattopadhyay and Nedungadi (1992), Heckler and Childers (1992), Richardson *et al.* (1994), Kim *et al.* (1998), Laczniak *et al.* (1989), Dawar and Pillutla (2000).

Table 1. Profile of respondents

| Variable | N | Minimum | Maximum | Mean | Std Deviation | Measurement |
|------------|-----|---------|---------|-------|---------------|---|
| Gender | 250 | 1 | 2 | 1,50 | 0,51 | 1: Male 2: Female |
| Age | 250 | 19 | 55 | 32,34 | 9,776 | Year |
| Education | 250 | 1 | 3 | 1,645 | 0,651 | 1: < high school 2: Bachelor 3: post graduate |
| Occupation | 250 | 1 | 5 | 2,25 | 1,643 | 1: Employees of government 2: Private Employees 3: ABRI 4: Entrepreneurs 5: Other |
| Income | 250 | 1 | 5 | 1,99 | 0,646 | 1: < 1 million 2 : 1,1million - 2,5 million 3: 2,51 million – 4 million 4: 4,1 million –5,5 million 5: > 5,51 million |

Source: Results of processed data in 2010

Table 2. Results of test validity and reliability

| Variable | Loading Factor | Cronbach' Alpha |
|--|----------------|-----------------|
| Customer loyalty | | |
| - Commitment to transact long-term | .644 | .7808 |
| - Commitment to not move | .644 | |
| - Resistance to other banks | .552 | |
| - Intend to continue saving | .798 | |
| - Intention to recommend | .699 | |
| Satisfaction | | |
| - Satisfaction with the service transaction | .619 | .7661 |
| - Satisfaction with the product | .639 | |
| - Satisfaction with the space | .738 | |
| - Satisfaction with the queuing system | .769 | |
| Image perception | | |
| - The positive perception of the bank's name | .670 | .8285 |
| - The positive perception of ownership | .697 | |
| - The positive perceptions of service | .742 | |
| - The positive perception of social concern | .686 | |
| - The positive perception of the bank's reputation | .824 | |

Sources: Appendix 2 and Appendix 3

Further reliability test results can be seen from the values obtained Cronbach'Alpha that each construct has a value > 0.6 (see Table 2). This indicates that each construct has a relatively high internal consistency. Thus, it can be said that the items used to measure the constructs that have measured relatively good reliability. In short, the validity and reliability testing results indicate that the quality of the data collected can be accounted for righteousness. Thus, the data obtained has met the eligibility criteria to be analyzed using statistical methods chosen. The following is a discussion of the results obtained by hypothesis testing.

Hypothesis testing is done using multiple regression analysis model with EGARCH (Exponential Generalized Auto-Regressive

Conditional Heteroscedasticity). This method was chosen because there are problems of heteroscedasticity, which are auto regressive. Therefore, to accommodate it is done by entering a variance into the model in an effort to reduce the influence which affects the prediction results which are not effective and efficient. This can be explained through heteroscedasticity test results that indicate no significant relationship between the residual in regression testing in step 1 ($\beta = -.107510$; SE = -1.699157; prob. = .0905) (See Appendix 6), as well as regression testing in step 2 ($\beta = .002953$; SE = .046369; prob. = .9631) (See Appendix 7).

Before interpreting the regression results, first to be analyzed is the role of moderation in the model. This can be explained through a two step regression

test results, which indicate that the value of ΔF -statistic was significant (ΔF -statistic = 3.724902, prob. = 0.01) (See Table 3). This explains that the regression model of step 2 is significantly better than the regression model step 1. It can be concluded that the process of formation of loyalty from the object being observed is a relatively complex phenomenon. Customers not only consider the image and satisfaction in the form of loyalty, but also consider satisfaction as a variable that can moderate the influence of image on loyalty. Here is the interpretation of the results of the regression testing phase 2.

4.1 The relationship between bank image and loyalty

The test results indicate a significant and positive relationship, thus supported Hypothesis 1 ($\beta = 0.195945$, SE: 3.841865; prob. <.01). This means that the higher the positive image the higher the bank's customer loyalty. This phenomenon can occur because customers use the bank's image as an important variable to decide his intention to loyal to a bank. Thus, important variables which are considered to establish a good image are the name of the bank, ownership, speed of service, and social responsibility.

Significant results indicate support for the regularity of the phenomenon that shows patterns of a positive relationship between bank image and loyalty, as proposed in previous studies (See Abdullah et al., 2000; Bigne et al., 2001; Zins, 2001; Park et al., 2004). However, this concept still needs further testing in different contexts. This is necessary so that the external validity of the hypothesized concept can be improved.

For practitioners, these findings may provide insight about the need for vigilance to build banking performance through increased customer loyalty, because through this loyalty which in turn is expected to form the customer's commitment to keep re-saving, resistant to competitors who offer more attractive, and also the willingness of customers to recommend the bank to others. All of this can be achieved through the creation of stimuli which capable to build a positive image of the bank's customers through the good name of the bank, build a good name of bank ownership, build a good service, and build a good social responsibility.

4.2 The relationship between satisfaction and loyalty

The test results indicate significant results that support hypothesis 2, but do show a reversed pattern ($\beta = -0.229891$, SE = -4.425418; prob. <.01). This explains a phenomenon that the higher customer satisfaction, the lower the loyalty to the bank. This phenomenon can occur probably caused by the potential variable of references from external agencies where the clients worked. This variable is expected to be able to direct customers to remain loyal to the Bank Jateng. Thus, the phenomenon occurred was that although the lower the customer satisfaction, if the higher the influence of reference then the higher the loyalty towards the bank.

The test results obtained provide an understanding of the need for vigilance from banks to build up the recommendations of the agencies associated with the customer, which can be done in the form of good cooperation with external agencies as a partner bank, so that the agencies are willing to provide recommendations to customers to remain loyal.

Table 3. Multiple linear regression test results with the dependent variable Loyalty

| Independent Variable | Step 1 | Step 2 |
|-------------------------------|-----------------------------|-----------------------------|
| | Coefficient | Coefficient |
| - SQR (Garch) | 1.832155*** (3.346369) | 1.533767*** (3.568860) |
| - Constant | -1.479634*** (-3.888263) | -1.212336*** (-4.330350) |
| - Bank Image | .168348*** (3.344059) | .195945*** (3.841865) |
| - Satisfaction | -.094761*** (-2.109701) | -.229891*** (-4.425418) |
| - Image*Satisfaction | - | -0.210094*** (-6.293410) |
| R-squared | .356350 | .385332 |
| Adjusted R-squared | .356350 | .364928 |
| Durbin-Watson stat | 2.327877 | 2.478357 |
| F-statistik | 20.69378*** | 18.88523*** |
| Prob (F-stat) | .000000 | .000000 |
| ΔF -statistic | 3.724902*** | |
| Prob (ΔF -statistic) | .01 | |

Note: *** sign < .01; ** sign < .05; * sign < .10

Source: Appendix 4 and Appendix 5

The pattern indicates a negative relationship is reversed the result of the regularity of the phenomenon as it has been observed in previous studies, which showed a positive relationship between satisfaction and loyalty (see Cronin et al., 2000; Brunner et al., 2008). This inconsistency requires further testing in different contexts. It is necessary to provide an explanation for the external validity of the hypothesized concepts. In addition, the indication for the presence of the reference variables that influence behavioral processes in the formation of loyalty requires further testing, so in the future it should be able to produce models capable to explain the phenomenon well.

4.3 The relationship between image bank, customer satisfaction, and loyalty

Test results on the effect of interaction indicates a significant and negative relationship ($\beta = -0.210094$, $SE = -6.293410$; prob. $<.01$). Significant test results indicate that hypothesis 3 supported, whereas a negative relationship patterns showed a reversed pattern of relationships from the concept that hypothesized. This explains that the higher the customer satisfaction further weakened the influence of image banks on loyalty. Such a phenomenon can occur may be caused by factors that enabled reference to direct customers to loyal to the bank, despite the perceived low satisfaction.

The pattern of negative relationships obtained in this study indicate inconsistencies result as has been done in previous studies (Abdullah et al., 2000; Bigne et al., 2001; Zins, 2001; Park et al., 2004). This requires further testing in the context that is relevant to the hypothesized phenomenon, so that the results obtained can be explained by either theory. It is also advisable to examine the role of reference in influencing the formation of loyalty. This is necessary so that in the future may develop behavioral models capable to explain the phenomenon of loyalty formation process as well.

Practically, these findings provide insight to the bank of the efforts should be made to increase loyalty, through image and satisfaction. The thing to note is the possibility of the presence of reference that influence the formation of loyalty. Thus, it can be suggested that in order to enhance customer loyalty to the bank, it takes effort to build brand image, but it is also advisable to establish good cooperation with external agencies authorized to provide references to its employees that are willing to loyal to the bank. In terms of satisfaction, it is recommended to the bank should not have to exploit the service excessively, because the customer does not feel the satisfaction with the quality of services provided by the bank that ultimately negative effect on loyalty.

5 Conclusion

In summary, that customer loyalty can be enhanced through the creation of a good image of banks. This image can be enhanced by making the marketing stimuli such as building a good name of the bank, the good name of ownership, speed of service, and concern for social problems. Through this effort, the bank is expected to improve the performance of an optimal service.

Furthermore, the pattern of negative relationships between satisfaction and loyalty requires caution to interpret the phenomenon. It is likely that there is a potential variable reference from external agencies. That affects the process of formation of loyalty, so that although the lower the satisfaction, if the higher reference then the higher the loyalty. The same thing occurs in the interaction effect that explains that the lower the satisfaction, further strengthening the bank's image influence on loyalty. These finding require further clarification related to the presence of external reference variable, which is capable to encourage customers to remain loyal to the bank.

Based on the findings obtained, the study is expected to provide a theoretical understanding of the concepts being tested. Test results are reversed, so it requires a theoretical study in order not to bias to the hypothesized theory that is universal. Thus, this study is expected to be used as a reference for developing theories that are relevant in the field of behavioral.

Methodologically, this study developed measurement instruments that are relevant to the object being observed. There are several things that need to be observed that there are some items that are not able to explain the measured constructs, among others, the desire for long-term deal and the customer wishes to continue to use other products on the construct of loyalty, in addition to satisfaction with overall service, ATMs, parking areas, and security in satisfaction. This requires a critical assessment in the future, so these items can be further developed to be relevant to the construct measured.

Practically, this study provides an understanding of the need for designing marketing stimuli that can enhance the image of banks, among others, by keeping the bank's good name and ownership, speed of service, and social responsibility. Associated with the satisfaction that have a negative impact on loyalty requires prudence to observe because the possibilities inherent reference variable that acts as an intervening variable that potentially affects loyalty. In this regard, it is recommended that banks build up cooperation with external agencies to be willing to provide references to clients in order to increase the desire for loyalty.

Although these studies have limitations due to the limitations in scope of research methods, but the testing procedures are rigid built not expected to

reduce the degree of confidence in the results obtained.

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Appendix 1. KMO and Bartlett's test

| | | |
|---|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .789 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1675.903 |
| | Df | 91 |
| | Sig. | .000 |

Appendix 2. Rotated component matrix

| | Components | | |
|----|------------|------|------|
| | 1 | 2 | 3 |
| L2 | | .644 | |
| L3 | | .644 | |
| L5 | | .552 | |
| L6 | | .798 | |
| L7 | | .699 | |
| S1 | | | .619 |
| S3 | | | .639 |
| S5 | | | .738 |
| S6 | | | .769 |
| C1 | .670 | | |
| C2 | .697 | | |
| C3 | .742 | | |
| C4 | .686 | | |
| C5 | .824 | | |

Note: Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 5 iterations

Appendix 3. Reliability test

| Construct | Items | Cronbach's Alpha |
|-------------|-------|------------------|
| Loyalty | 5 | .7808 |
| Satisfactor | 4 | .7661 |
| Image | 5 | .8285 |

Appendix 4. Linier multiple regression test step 1

Dependent Variable: LOYALTY

Method: ML – ARCH

Date: 11/05/11 Time: 02:03

Sample: 1 250

Included observations: 250

Convergence achieved after 42 iterations

| | Coefficient | Std. Error | z-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| SQR(GARCH) | 1.832155 | 0.547505 | 3.346369 | 0.0008 |
| C | -1.479634 | 0.380539 | -3.888263 | 0.0001 |
| CITRA | 0.168348 | 0.050343 | 3.344059 | 0.0008 |
| SATISF | -0.094761 | 0.044917 | -2.109701 | 0.0349 |
| Variance Equation | | | | |
| C | -0.013836 | 0.044117 | -0.313617 | 0.7538 |
| RES /SQR[GARCH](1) | 0.018018 | 0.057526 | 0.313205 | 0.7541 |
| RES/SQR[GARCH](1) | 0.110372 | 0.043952 | 2.511160 | 0.0120 |
| EGARCH(1) | 0.994967 | 0.015400 | 64.60711 | 0.0000 |
| R-squared | 0.374445 | Mean dependent var | | 1.32E-06 |
| Adjusted R-squared | 0.356350 | S.D. dependent var | | 1.000000 |
| S.E. of regression | 0.802278 | Akaike info criterion | | 2.261370 |
| Sum squared resid | 155.7631 | Schwarz criterion | | 2.374057 |
| Log likelihood | -274.6713 | F-statistic | | 20.69378 |
| Durbin-Watson stat | 2.327877 | Prob(F-statistic) | | 0.000000 |

Appendix 5. Linier multiple regression step 2

Dependent Variable: LOYALTY

Method: ML – ARCH

Date: 11/05/11 Time: 02:02

Sample: 1 250

Included observations: 250

Convergence achieved after 85 iterations

| | Coefficient | Std. Error | z-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| SQR(GARCH) | 1.533767 | 0.429764 | 3.568860 | 0.0004 |
| C | -1.212336 | 0.279963 | -4.330350 | 0.0000 |
| CITRA | 0.195945 | 0.051003 | 3.841865 | 0.0001 |
| SATISF | -0.229891 | 0.051948 | -4.425418 | 0.0000 |
| CITRA*SATISF | -0.210094 | 0.033383 | -6.293410 | 0.0000 |
| Variance Equation | | | | |
| C | -0.054808 | 0.065667 | -0.834633 | 0.4039 |
| RES /SQR[GARCH](1) | 0.066249 | 0.078068 | 0.848613 | 0.3961 |
| RES/SQR[GARCH](1) | 0.151856 | 0.062004 | 2.449155 | 0.0143 |
| EGARCH(1) | 0.989040 | 0.018235 | 54.23753 | 0.0000 |
| R-squared | 0.385332 | Mean dependent var | | 1.32E-06 |
| Adjusted R-squared | 0.364928 | S.D. dependent var | | 1.000000 |
| S.E. of regression | 0.796914 | Akaike info criterion | | 2.191512 |
| Sum squared resid | 153.0522 | Schwarz criterion | | 2.318285 |
| Log likelihood | -264.9390 | F-statistic | | 18.88523 |
| Durbin-Watson stat | 2.478357 | Prob(F-statistic) | | 0.000000 |

Appendix 6. Heteroscedasticity test (model 1)

ARCH Test:

| | | | |
|---------------|----------|-------------|----------|
| F-statistic | 2.887133 | Probability | 0.090549 |
| Obs*R-squared | 2.876883 | Probability | 0.089860 |

Test Equation:

Dependent Variable: STD_RESID^2

Method: Least Squares

Date: 11/05/11 Time: 02:06

Sample(adjusted): 2 250

Included observations: 249 after adjusting endpoints

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 1.049863 | 0.103524 | 10.14129 | 0.0000 |
| STD_RESID^2(-1) | -0.107510 | 0.063273 | -1.699157 | 0.0905 |
| R-squared | 0.011554 | Mean dependent var | | 0.947881 |
| Adjusted R-squared | 0.007552 | S.D. dependent var | | 1.336066 |
| S.E. of regression | 1.331011 | Akaike info criterion | | 3.417754 |
| Sum squared resid | 437.5829 | Schwarz criterion | | 3.446007 |
| Log likelihood | -423.5104 | F-statistic | | 2.887133 |
| Durbin-Watson stat | 2.012928 | Prob(F-statistic) | | 0.090549 |

Appendix 7. Heteroscedasticity test (model 2)

ARCH Test:

| | | | |
|---------------|----------|-------------|----------|
| F-statistic | 0.002150 | Probability | 0.963054 |
| Obs*R-squared | 0.002167 | Probability | 0.962867 |

Test Equation:

Dependent Variable: STD_RESID^2

Method: Least Squares

Date: 11/05/11 Time: 02:12

Sample(adjusted): 2 250

Included observations: 249 after adjusting endpoints

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| C | 0.959349 | 0.124502 | 7.705492 | 0.0000 |
| STD_RESID^2(-1) | 0.002952 | 0.063656 | 0.046369 | 0.9631 |
| R-squared | 0.000009 | Mean dependent var | | 0.962194 |
| Adjusted R-squared | -0.004040 | S.D. dependent var | | 1.706014 |
| S.E. of regression | 1.709456 | Akaike info criterion | | 3.918227 |
| Sum squared resid | 721.7934 | Schwarz criterion | | 3.946480 |
| Log likelihood | -485.8193 | F-statistic | | 0.002150 |
| Durbin-Watson stat | 1.997897 | Prob(F-statistic) | | 0.963054 |