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Article

Effects of service quality and customer satisfaction on loyalty of bank customers

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MANAGEMENT | RESEARCH ARTICLE

Effects of service quality and customer satisfaction on loyalty of bank customers

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Abstract: Service quality and customer satisfaction are parts of factors that influence customer loyalty to bank services. Both are necessary to be fulfilled in order to gain customer loyalty, which in turn maintaining organization survival in the long term. This study aims to (1) examine how service quality influenced customer loyalty; (2) how customers' satisfaction influenced their loyalty to the bank; and (3) examine simultaneous effects of service quality and customer satisfaction on customer loyalty. This study used a survey research design, and respondents were selected purposively from a population of Bank organization in Indonesia. Data were analyzed employing path analysis and One-Way Analysis of Variance. Results indicate that service quality did not have significant effects on customer loyalty, but it provided significant effects on customer satisfaction followed by influencing customer loyalty. Service quality had indirect effects on customer loyalty through customer satisfaction. Further studies are expected to examine the model of relationships with other variables.

Subjects: Personnel Selection, Assessment, and Human Resource Management; Business, Management and Accounting; Cultural Studies

Keywords: service quality; customer satisfaction; customer loyalty

1. Introduction

Quality banking management is necessary in order to achieve goals effectively and efficiently. In the era of global competition recently, organizations are required to be able to improve their



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Achmad Supriyanto research interest in Management Science, Organizational Change Management, Total Quality Management, Organizational Culture, and Organizational Merger. He conducted research projects in educational management area, and published several articles in indexed international journals

Bambang Budi Wiyono interest research in Human Resource Development in Organization, measurement and evaluation. He conducted research projects in educational management, leadership and supervision. Published several articles in indexed international journals.

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PUBLIC INTEREST STATEMENT

Customer loyalty to Bank services should be maintained in order to make the Bank organization survive globally in the long term. Service quality and customer satisfaction are parts of the factors to be explored to find how they influence the customer loyalty. The two factors were found to influence the level of customer loyalty. However, this loyalty is gained through customer satisfaction first.

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performance through quality improvement. This can be done through fulfilling customer needs (Demirbag, Koh et al., 2006; Demirbag, Tatoglu et al., 2006; Imran et al., 2018; Jong et al., 2019; Sinha et al., 2016). The key to surviving in a global market is to focus on service quality for customers (Cristea & Mocuta, 2018).

Several previous studies have stated that there is a relationship between customer satisfaction and services provided by an organization (Anderson & Mittal, 2000; Brocato et al., 2012; Heinonen & Strandvik, 2015; Novokreshchenova et al., 2016; Schneider et al., 2005). Customer satisfaction is one of the factors that influences customer loyalty to organizations (Harazneh et al., 2020). While customer loyalty indirectly contributes to enhancing organizational performance (Ahmed Al-Maamari & Abdulrab, 2017). The issue of customer satisfaction is prominent to many organizations (Anderson & Mittal, 2000; Schneider et al., 2005; Smith et al., 1999). Organizations can claim success when customer satisfaction is attained.

Research related to service quality and customer satisfaction has been widely carried out in management studies for more than 30 years both in banking and education organizations (Chin Wei & Sri Ramalu, 2011). Research conducted by Shanka (2012), for example, found that there was a positive relationship between service quality and customer satisfaction in the banking sector. In this study, it was also found that customer satisfaction can lead to high commitment and loyalty to banking services. Customers will tend to be loyal if the bank is trustworthy, committed to service, reliable and efficient in communicating with customers, and is able to solve problems properly (Coelho & Henseler, 2012; Flint et al., 2011; Hennig-Thurau et al., 2002; Mascarenhas et al., 2006; Ndubisi, 2007Vivek et al., 2012). Based on further investigation, the service quality then affects customer loyalty (Binsar Kristian & Panjaitan, 2014). Such a finding supports results of previous studies that found employee loyalty is significantly related to service quality. This in turn influences customer satisfaction, loyalty, and finally leads to increasing profitability (Yee et al., 2010).

Other findings indicated that service quality affects customer loyalty and the level of employee relationship quality did not significantly influence customer loyalty (Nyadzayo & Khajehzadeh, 2016; Rauyruen & Miller, 2007). Trust, commitment, communication, and conflict handling are the variables that have significant effects and predict a high proportion of variance in customer loyalty (Ndubisi, 2007). The relationship between these variables shows that the effect of service quality on customer loyalty is tentative indefinite and remains controversial. Thus, it has to be tested in further studies. Service quality refers to the level of service quality provided by the organization to customers. Service quality leads to focused evaluation that describes customer perceptions of certain service dimensions. The service dimensions being tested consist of (1) tangibility such as property, buildings and employees; (2) reliability that means appropriate and consistent services; (3) responsiveness showing the spontaneous responses in providing services; (4) assurance or ability to build customers' confidence; (5) empathy, being systematic, and reliable communication (2011, 1988).

Organizations need a capacity to get many customers in order to survive or exist. Excellent services, responding customers' demands can directly increase satisfaction. This is an indicator of satisfaction level to the services' quality. This can be measured by assessing their purchase and consumption experience on particular products, services, brands, and company name (Johnson, 2015).

Satisfied customers tell us about the quality of the organizations. On the other hand, unsatisfied customers remind the organizations to have low performance (Kotler, 2006). shows that there are several factors which potentially affect customer satisfaction upon the banking sector including good relations between banks and customers and trust. Loyal customers are those who use organizations' services continuously. They show loyalty, commitment, and being proud of using the services. Customer loyalty can be measured based on these as indicators (Binsar Kristian & Panjaitan, 2014; Jiang & Zhang, 2016). Banking organizations must obtain customer loyalty to ensure their existence within a global market (Ayodele, 2016).

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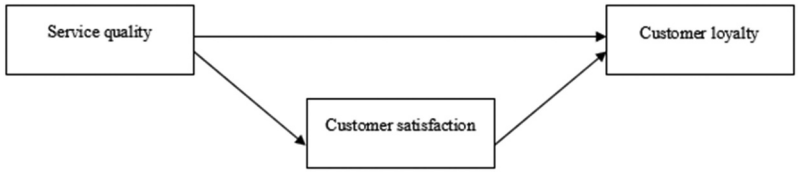

Figure 1. Theoretical model of the effect of service quality on customer satisfaction and customer loyalty.

Customer loyalty fostered by organizations results in increased customer satisfaction. According to Ariff et al. (2013) ensuring that customers remain loyal, it must be ensured that they are satisfied with the provided services. This is supported by previous studies that customer satisfaction has a positive and significant effects on customer loyalty (Amin, 2016).

Customer satisfaction is able to increase customer loyalty in banking organizations (Shanka, 2012). Service quality and customer satisfaction are important antecedents of customer loyalty. While the customer satisfaction mediates effects of service quality on customer loyalty (Ngo & Nguyen, 2016).

It is predicted that service quality and customer satisfaction will have effects on customer loyalty as depicted by a theoretical model in Figure 1.

Compared to previous studies, the current research model is focused on relationships and effects of service quality and customer satisfaction on customer loyalty. The subjects of the study are the schools and bank organizations that have been involved in merging program. Meanwhile, a previous study explored how specified banks and school organisations merged their organizations.

Indicators of the survey instrument were developed from the research variables including service quality dimensions constructed of *tangibility* (5 items), *reliability* (4 items), *responsiveness* (3 items), *assurance* (3 items), and empathy (2 items). Dimensions of customer satisfaction consist of attitude (3 items), happiness (3 items), and customer satisfaction (4 items). Customer loyalty dimensions are developed based on variables: cognitive (4 items), affection (3 items), conative (3 items), and action (3 items).

Based on these studies and research is still open in the field of bank payments (Abdullah & Naved Khan, 2021), the researchers tested the proposed research model: (1) service quality and its effects on customer satisfaction; (2) customer satisfaction and its effects on customer loyalty; and (3) simultaneous effects of service quality and customer satisfaction on customer loyalty to banking services.

2. Method

This study uses a quantitative approach with a survey design. It is aimed to test the proposed theoretical model (Figure 1) exploring effects of service quality on customer satisfaction and customer loyalty. Population of this study are customers of banking services in Malang City and Surabaya City, East Java Province, Indonesia. Purposive random sampling technique was used to select the sample of customers whose positions as principals, teachers, and school administrative staff. Questionnaires were administered to these respondents. There were 1190 respondents who returned the questionnaire consisting of principals (78), teachers (1017), and school administrative staff (95). The figures of the sample were selected from a population of Malang City (276), Surabaya City (914), the biggest city in east java, Indonesia. The sample involved in this study was obtained from Malang Elementary School (60) and Surabaya Elementary School (48). As shown in Figure 1, gender of respondents consists of female (915) and male (275). In terms of education level, there were high school graduates (14), Diploma (42), S-1/Undergraduate (974), S-2/Postgraduate (143), and S-3/Higher Degree graduates (7). Data were collected using a questionnaire. The developed items of the questionnaire are listed in the grid matrix in Table 1.

The scale of the instrument fulfilled the validity and reliability criteria with a validity loading value of 0.3932 indicating all items are valid. As for the reliability using Cronbach's Alpha (α) obtained the value of 0.985 explaining the reliability criteria is fulfilled. Thus, it can be used as reliable scales to measure the research variables. Data were analyzed using path analysis and One-Way Analysis of Variance (ANOVA), assisted by statistical software as well as IBM SPSS Statistics 26 and AMOS 24 versions.

3. Results

3.1. Effects of service quality and customer satisfaction on customer loyalty

The null hypothesis of the model set is "There is no difference between the model and the data used in the field" (H_0). If the value of chi-square/DF <5 (Wheaton et al., 1977), then H_0 is not rejected. This means that there is no difference between the model formed and the data used in the field. In addition to the chi-square/DF value because the research sample is large, in determining whether the model is fit or not the data needs to be accompanied by other indices of accuracy, including CFI (Comparative Fit Index); TLI (Tucker-Lewis Index); PCFI (Parsimony Comparative Fit Index); and RMSEA (Root Mean Square of Error Approximation); so that even though based on chi-square/DF H_0 is rejected, the model is still considered appropriate if other criteria meet. The criteria for drawing conclusions for each index are presented in Table 2.

3.2. Final model with *measurement error*

The final model of the effect of service quality and customer satisfaction on customer loyalty is presented in Figure 2. Referring to this figure, it is known that the value on the path of service quality to customer satisfaction is 0.96; the value on the path of customer satisfaction to customer loyalty is 1.14; and the value on the path of service quality to customer loyalty of −0.26.

Based on measurements of direct, indirect, and total effects, it can be seen that the one that has a direct effect on customer satisfaction is service quality (the largest value is 0.957 rounded to 0.96) and the one that has a direct effect on customer loyalty is customer satisfaction (the largest value is 1,140 rounded to 1.14). Meanwhile, the direct effect of service quality on customer loyalty is negative or minus, so it can be stated that service quality has no direct effect on customer loyalty (the largest value is 1.091). More details, can be seen in Table 3.

Ideally, based on these measurement results, if you want to increase customer satisfaction, you need good service quality as well. For example, by providing excellent service, completing existing facilities, responding to customer complaints quickly, and so on. Likewise with increased customer loyalty which can be pursued by increasing customer satisfaction. Overall, from the final model it can be concluded that service quality has a positive and significant impact on customer satisfaction; customer satisfaction has a positive and significant effect on customer loyalty; and service quality does not have a positive and significant effect on customer loyalty. This statement is supported by the measurement results of the Regression Weight (can be seen in Appendix 1) and Standardized Regression Weight (can be seen in Attachment 2).

Referring to the Regression Weight table in Appendix 1, it is known that the indicators that form latent variables can be said to be significant (Unpaired symbol:") seems to be missing with a CR that is higher than the t table (t ≥ 2.021 at 0.05 probability). For example, on the QServ □ SQ12 line the value CR is 11.733 with a probability ≤0.001, so it can be said that the SQ12 indicator is significant in forming the service quality variable. It is the same for the Csatisfy ➔ CS12 and CLoyal ➔ CL12 lines. The CR values obtained are 38.884 and 36.376, respectively, with a probability of ≤0.001, so that it can be stated that the CS12 indicator is significant in forming the customer satisfaction variable, as well as the CL12 indicator is significant in forming the customer loyalty variable.

The Standardized Regression Weight table in Appendix 2 shows the level of influence of the predictor variable on the criterion variable, with the following conditions. The simple rule is that if the estimated value does not show a negative sign, then the relationship between variables is positive. For example,

Table 1. Research instrument grid

Variable	Indicator	Item	Symbol
Service quality	1.*Tangibility*	a. Completeness of property	SQ11 SQ12
		b. The grandeur of the building	SQ13 SQ14
		c. Employee appearance	SQ15
	2. *Reliability*	a. Service accuracy	SQ21 SQ22
		b. Consistency of service	SQ23
		a. The accuracy of service information	SQ24
	3. *Responsiveness*	a. Response speed in responding	SQ31
		b. Ethics in service	SQ32
		c. Simplicity/ease of service	SQ33
	4. *Assurance*	a. Giving customer trust	SQ41
		a. Ability to provide warranty	SQ42
		c. Providing security to customers	SQ43
	5. *Empathy*	a. Concern	SQ51
		b. Individual attention to customers.	SQ52
Customer satisfaction	1. Customer attitude	a. customer attitude towards the product	CS11
		b. customer attitudes towards the organization's brand	CS12
		c. Attitudes of customers to organizational service	CS13
	2. Customer happiness	a. security services	CS21
		b. Reassuring service	CS22
		c. Pleasant service	CS23
	3. Customer Satisfaction	a. Service stability	CS31
		b. Harmonious relationship	CS32
		c. Trust in each other	CS33
		d. Communication in service	CS34
Customer loyalty	1. *Cognitive Loyalty*	a. Rational to the organization	CL11
		b. Rating is better than others	CL12
		c. The frequency increases	CL13
		d. Long time	CL14
	2. *Affective Loyalty*	a. Pride in being a customer	CL21
		b. Commitment to the organization	CL22

(*Continued*)

Table1. (*Continued*)

Variable	Indicator	Item	Symbol
		a. Feeling of belonging to an organization	CL23
	3.*Conative Loyalty*	a. Keep abreast of organizational developments	CL31
		b. Willing a lot for the organization	CL32
		c. Wish you success in joining the organization	CL33
	4.*Action Loyalty*	a. Increased frequency of participating in organizational activities	CL41
		b. Has a long time for organization	CL42
		a. Demonstrate self-success to the organization.	CL43

on the QServ ➔ CSatisfy line, the value is 0.957, which means that the relationship between service quality variables and customer satisfaction is positive and has a strong influence. Unlike in the case with QServ ➔ CLoyal which resulted in a value of −0.257. That is, the relationship between the variable service quality and customer loyalty can be said to be negative or if it is based on the level of strength, it can be stated that there is a weak influence of service quality on customer loyalty.

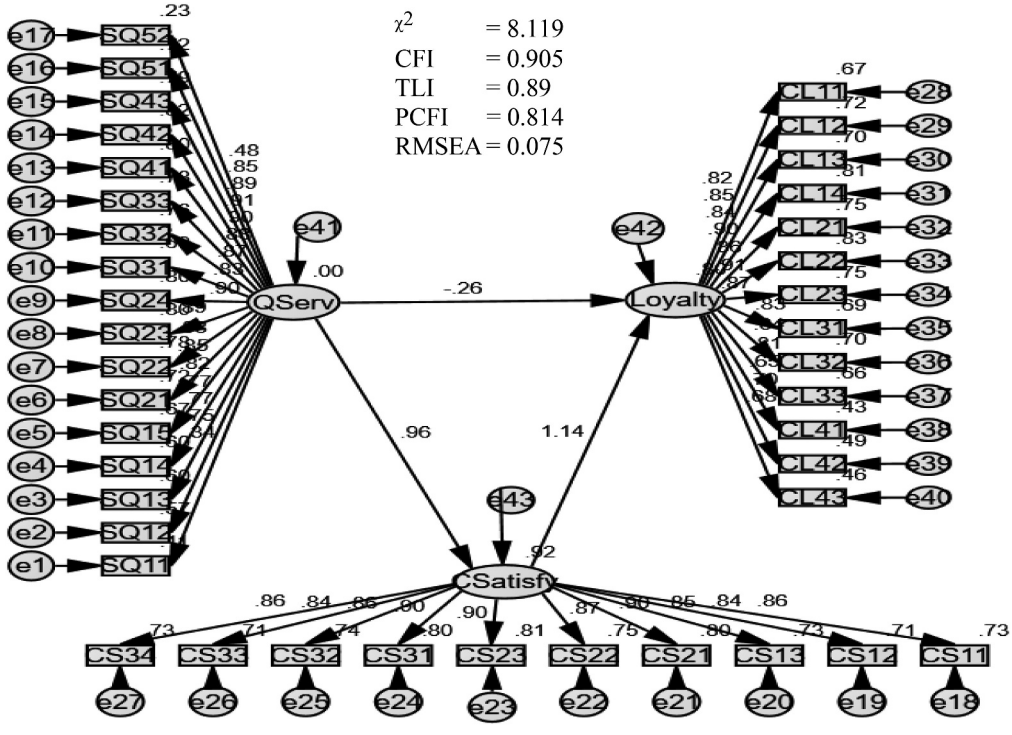

Figure 2. Final model the influence of service quality and customer satisfaction on customer loyalty with measurement error.

Table 2. Criteria for data interpretation

Index	Criteria	Conclusion
CFI (McDonald & Marsh, 1990)	0–1	*Poor to Good fit*
TLI (Bentler & Bonett, 1980)	0–1	*Poor to Good fit*
PCFI (James et al., 1982)	>0.06	*Good fit*
RMSEA (Browne & Cudeck, 1993)	≤0.05	*Close fit*
	0.05 ≥ RMSEA ≤ 0.08	*Good fit*

Although the estimation of latent factor loading and indicators (as presented in Appendix 1) shows significance, accuracy of the model and the data still needs to be checked. In this analysis several indicators are used as summarized in Table 4.

The summary of the fit model in Table 3 shows that in overall, the accuracy of the model with the observed data can be interpreted as not fit (poor fit), with $^{x}2/DF = 8.119$ or >5. However, the values of CFI and TLI are high (CFI = 0.905; TLI = 0.895) or close to the value of "1", meaning that the criteria of quality for the measurement model that has been achieved can be described as strong. PCFI = 0.814 > 0.06, meaning that the model developed is simple because it had a high fit index. The RMSEA value is in the range of 0.05–0.08, indicating that the model is able to explain the observed data correctly. Based on this description, it can be concluded that the final research model already has a high prediction for the phenomena to be studied.

4. Discusion

Based on results of the analysis, it is evident that there is no direct effects of service quality on customer loyalty; (2) service quality had direct effects on customer satisfaction, (3) customer satisfaction provides significant direct efects on customer loyalty to the bank services; and (3) while service quality only provides indirect effects on customer loyalty through the customer satisfaction experienced by customers. The findings then contributed to answering differences and controversial conclusions in previous research that service quality influenced customer loyalty (Binsar Kristian & Panjaitan, 2014; Harazneh et al., 2020; Yee et al., 2010).

The results of this study indicate that it has supported previous research which states that service quality has no effect on customer loyalty, but through customer satisfaction as an intermediary. In other words, service quality does not have a direct effect on customer loyalty, where

Table 3. Measurement of the final model direct, indirect, and total effect

Standardized Direct Effects			
	QServ	CSatisfy	CLoyal
CSatisfy	,957	,000	,000
CLoyal	-,257	1,140	,000
Standardized Indirect Effects			
	QServ	CSatisfy	CLoyal
CSatisfy	,000	,000	,000
CLoyal	1,091	,000	,000
Standardized Total Effects			
	QServ	CSatisfy	CLoyal
CSatisfy	,957	,000	,000
CLoyal	,834	1,140	,000

Source: Research data, processed.

Information

QServ: Quality service

CSatisfy: Customer satisfaction

CLoyal: Customer loyalty

Table 4. Fit model summary

CMIN					
Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	123	5983.656	737	.000	8.119
Saturated model	860	.000	0		
Independence model	40	56,300.159	820	.000	68.659
Baseline Comparisons					
Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.894	.882	.906	.895	.905
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000
Parsimony-Adjusted Measures					
Model	PRATIO		PNFI	PCFI	
Default model	.899		.803	.814	
Saturated model	.000		.000	.000	
Independence model	1.000		.000	.000	
RMSEA					
Model	RMSEA	LO 90	HI 90	PCLOSE	
Default model	.075	.073	.077	.000	
Independence model	.231	.229	.233	.000	

previous research was conducted in various fields, such as industry, culinary, internet, and aviation. Likewise, with service quality which has a direct effect on customer satisfaction, and customer satisfaction has a direct effect on customer loyalty (Amin, 2016; Hapsari et al., 2017; Kasiri et al., 2017; Kuo et al., 2011; Pakurár et al., 2019; Ribbink et al., 2004; Siddiqi, 2011).

The results of research, which states that there is a direct effect of service quality on customer loyalty, automatically suggests an increase in service quality to increase customer satisfaction as well as customer loyalty. In general, increasing service quality begins with building internal loyalty or employee loyalty first. Allegedly, by creating internal loyalty, employees can improve their service to customers, so that customers are satisfied and will be loyal to the industry or service provider (Indimas & Fachira, 2017; Yee et al., 2010) and also religious aspects (Alsaad et al., 2020).

In contrast to the results, which state the opposite, increased customer loyalty is done separately from improving the service quality. Increasing service quality is carried out to increase customer satisfaction; then, customer satisfaction is increased to increase customer loyalty. In other words, customers who are satisfied with the service will not necessarily be loyal. However, loyal customers are certainly satisfied with the services provided. Regarding the measurement dimensions used in the three variables, both service quality, customer satisfaction, and customer loyalty, the indicators in it are significant to form each of the dimensions of these variables. As for the model being tested, although the dimensions of the customer satisfaction variable indicate poor fit (as explained above), the dimensions of the service quality and customer loyalty variables indicate a good fit model, which means that there is a match between the models built and the data used in the field.

Points that need to be underlined are the dimensions of service quality variables, which include tangibility, reliability, responsiveness, assurance, and empathy, as stated by Parasuraman et al. (1988). In this study, four dimensions are made, where for the empathy dimension, the indicators composing it are combined with the dimensions of assurance and responsiveness. This is done to anticipate the occurrence of unidentified variables in path analysis. Apart from that, it is known that the four dimensions represent

and are significant in shaping the service quality variable. As seen in the results of model testing for service quality variables, both correlation, and hierarchy, it shows that the model is in the good fit category, and the overall indicators that compose it are declared significant. This means that there is no difference between the model and the data used for field observations. In line with the results of research conducted by Ghotbabadi et al. (2015) concluded that, in general, the hierarchical model is the most suitable model to measure customer perceptions regarding service quality.

Although service quality has many versions apart from the five dimensions previously mentioned, these five dimensions are deemed suitable for application in the banking industry (Siddiqi, 2011; Sureshchandar et al., 2002).dan Khan and Fasih (2014) stated that all dimensions in service quality are shown to be significantly correlated with customer satisfaction. However, from the five dimensions, those that have a significant effect on customer satisfaction are tangibility, assurance, and empathy. As for the other two dimensions, namely reliability, and responsiveness, it is known that they are not significant (Indimas & Fachira, 2017). In contrast to the research results, Kant and Jaiswal (2017) stated that the responsiveness dimension has the strongest influence on customer satisfaction. This statement is supported by Shanka (2012), it is not only responsiveness that has the most significant effect (the highest significant value), but also the empathy dimension, followed by tangibility, assurance, then reliability.

Based on this description, it can be concluded that customers will tend to increase their satisfaction if the five dimensions of service quality are also enhanced by the banking industry. Customer satisfaction in some literature is caused by (1) a good relationship between the bank and customers, (2) the growth of trust between the bank and the customer, (3) the physical appearance of employees, (4) customer access to the bank, and (5) services rendered (Bhat et al., 2018; Ozatac et al., 2016; Yilmaz et al., 2018). Paul et al. (2016) in detail states, in the private banking sector, the factors that are proven to be related to overall customer satisfaction include (1) understanding of product, (2) response to customers' needs, (3) fast service, (4) providing solutions to customers' problems, (5) connecting with the right person or according to customers' needs, and (6) banking efforts to reduce queue duration.

Meanwhile, in the public bank sector, it is known that only two factors determine customer satisfaction, specifically the understanding of the banking sector towards bank products and fast service.

As previously stated, customer satisfaction becomes a mediator in the influence of service quality on customer loyalty. On the other hand, customer satisfaction is considered to have a positive and significant impact on customer loyalty (Amin, 2016; Hapsari et al., 2017; Kasiri et al., 2017; Kuo et al., 2011; Pakurár et al., 2019; Ribbink et al., 2004; Siddiqi, 2011). The results of research conducted by Tabrani et al. (2018), the commitment and intimacy built by the bank with customers are proven to have a significant effect on customer loyalty. Added by Bhat et al. (2018) Customer trust, satisfaction, and commitment are known to have a significant effect on customer loyalty.

Regarding the perception of the three variables in this study based on gender, it was concluded that there were no differences in perceptions of service quality, customer satisfaction, and customer loyalty among male and female respondents. However, when viewed from the mean plot, it is known that men have a higher average than women regarding the perception of customer loyalty. As for the perception of service quality and customer satisfaction, the mean plots of this study indicate that the average woman is higher than that of men. Inversely proportional to the results of this study, previous research conducted by Vanniarajan and Manimaran (2008) that male customers earn a higher average than females regarding the perception of service quality. In more detail, male customers give high urgency scores on the dimensions of reliability, effectiveness, and assurance. Meanwhile, female customers emphasize service quality on the aspects of price and convenience. Added by Zalatar (2012) states that there is a difference in the percentage of the urgency of the five dimensions that make up service quality, where men are known to give the highest importance score on the reliability dimension, while women give the highest importance score on the empathy dimension.

When viewed in terms of work (position), latest education level, and age, the results of this study indicate that there are differences in perceptions regarding service quality, customer satisfaction and customer loyalty based on these variances. This statement is confirmed by the existing mean plots, where from the mean plots it is known that (1) respondents with the position of principal have a higher perception than the position of School Administrative Personnel; (2) respondents with a higher education level are proven to have a higher perception than those with secondary education; and (3) young respondents tend to have higher perceptions than older ones. This is in line with research conducted by Murari (2018) shows that there are significant differences by occupation, last education, and age, especially in the urgency of responsiveness and assurance, likewise, with the speed of tangibility. As for differences based on gender, it is known that they are significant to the urgency of the empathy and assurance dimensions.

This research needs to be continued with different themes to fill the existing gaps. Several themes that need further research are to examine the variable of human resources commitment, strength of the relationship between the bank service quality and customers, trust, and customer commitment to customer loyalty, e-commerce, business and managerial in global organizations (Alsaad et al., 2021).

5. Conclusion

Various researches have been implemented to examine the relations between service quality, customer satisfaction, and its effects on customer loyalty. However, the findings are still confusing for most researchers addressing unpredictable factors could influence the relationships among the research variables as well as service quality effects on customer loyalty, and how other variables that are assumed moderating each impacts on customer satisfaction and customer loyalty. This research adds to the theory, and contribute to the development school and bank organizations in implementing merging programs. Specifically, the findings provide valuable measures on how school and bank organization leaders or managers enhance organization performance, empower their members effectively through providing them with high job satisfaction, and increased loyalty to their jobs. Therefore, this research was generated and resulted in the following conclusions. First, service quality influenced customer satisfaction. Second, customer satisfaction results in increased customer loyalty. Third, service quality has no direct effects on customer loyalty. Based on these conclusions, the researchers provide recommendations (1) the bank management needs to focus more on maximum service quality so that customer satisfaction is always maintained and customer loyalty can be increased; and (2) other researchers can launch further research to examine the commitment, strength of the relationship between the bank service quality and customers, trust, and customer commitment to customer loyalty, e-commerce, business and managerial in global organizations, and its impacts on the banking profitability.

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Appendix 1. Weight regression model for path analysis with error measurement

			Estimate	S.E.	C.R.	P	Label
CSatisfy	<—-	QServ	5.426	.454	11.952	***	par_40
CLoyal	<—-	QServ	−1.471	.409	−3.599	***	par_38
CLoyal	<—-	CSatisfy	1.149	.075	15.263	***	par_39
SQ11	<—-	QServ	1.000				
SQ12	<—-	QServ	5.217	.445	11.733	***	par_1
SQ13	<—-	QServ	5.185	.439	11.803	***	par_2
SQ14	<—-	QServ	5.274	.447	11.798	***	par_3
SQ15	<—-	QServ	5.422	.454	11.933	***	par_4
SQ21	<—-	QServ	5.765	.480	11.998	***	par_5
SQ22	<—-	QServ	5.897	.488	12.088	***	par_6
SQ23	<—-	QServ	5.982	.494	12.107	***	par_7
SQ24	<—-	QServ	5.870	.485	12.112	***	par_8
SQ31	<—-	QServ	5.949	.497	11.966	***	par_9
SQ32	<—-	QServ	6.032	.500	12.064	***	par_10
SQ33	<—-	QServ	5.979	.495	12.081	***	par_11
SQ41	<—-	QServ	6.033	.498	12.114	***	par_12
SQ42	<—-	QServ	5.963	.491	12.137	***	par_13
SQ43	<—-	QServ	6.043	.499	12.098	***	par_14
SQ51	<—-	QServ	5.852	.487	12.011	***	par_15
SQ52	<—-	QServ	2.750	.268	10.247	***	par_16
CS11	<—-	CSatisfy	1.000				
CS12	<—-	CSatisfy	1.014	.026	38.884	***	par_17
CS13	<—-	CSatisfy	1.049	.026	39.778	***	par_18
CS21	<—-	CSatisfy	1.065	.024	43.606	***	par_19
CS22	<—-	CSatisfy	1.031	.025	40.766	***	par_20
CS23	<—-	CSatisfy	1.048	.024	43.822	***	par_21
CS31	<—-	CSatisfy	1.054	.024	43.529	***	par_22
CS32	<—-	CSatisfy	1.029	.026	40.084	***	par_23
CS33	<—-	CSatisfy	1.047	.027	38.823	***	par_24
CS34	<—-	CSatisfy	1.054	.026	39.966	***	par_25
CL11	<—-	CLoyal	1.000				
CL12	<—-	CLoyal	1.050	.029	36.376	***	par_26
CL13	<—-	CLoyal	1.046	.029	35.547	***	par_27
CL14	<—-	CLoyal	1.042	.026	39.833	***	par_28
CL21	<—-	CLoyal	1.058	.028	37.433	***	par_29
CL22	<—-	CLoyal	1.099	.027	40.914	***	par_30
CL23	<—-	CLoyal	1.106	.029	37.608	***	par_31
CL31	<—-	CLoyal	1.070	.030	35.146	***	par_32
CL32	<—-	CLoyal	1.041	.029	35.565	***	par_33
CL33	<—-	CLoyal	1.056	.031	33.952	***	par_34
CL41	<—-	CLoyal	1.042	.041	25.172	***	par_35
CL42	<—-	CLoyal	1.067	.039	27.620	***	par_36
CL43	<—-	CLoyal	1.054	.040	26.431	***	par_37

Appendix 2. Standardized regression weight final model with error measurement

			Estimate
CSatisfy	<—-	QServ	.957
CLoyal	<—-	QServ	−.257
CLoyal	<—-	CSatisfy	1.140
SQ11	<—-	QServ	.339
SQ12	<—-	QServ	.752
SQ13	<—-	QServ	.774
SQ14	<—-	QServ	.773
SQ15	<—-	QServ	.820
SQ21	<—-	QServ	.846
SQ22	<—-	QServ	.885
SQ23	<—-	QServ	.894
SQ24	<—-	QServ	.896
SQ31	<—-	QServ	.833
SQ32	<—-	QServ	.874
SQ33	<—-	QServ	.882
SQ41	<—-	QServ	.897
SQ42	<—-	QServ	.908
SQ43	<—-	QServ	.890
SQ51	<—-	QServ	.851
SQ52	<—-	QServ	.476
CS11	<—-	CSatisfy	.856
CS12	<—-	CSatisfy	.844
CS13	<—-	CSatisfy	.855
CS21	<—-	CSatisfy	.896
CS22	<—-	CSatisfy	.866
CS23	<—-	CSatisfy	.898
CS31	<—-	CSatisfy	.895
CS32	<—-	CSatisfy	.858
CS33	<—-	CSatisfy	.844
CS34	<—-	CSatisfy	.857
CL11	<—-	CLoyal	.821
CL12	<—-	CLoyal	.849
CL13	<—-	CLoyal	.837
CL14	<—-	CLoyal	.897
CL21	<—-	CLoyal	.864
CL22	<—-	CLoyal	.911
CL23	<—-	CLoyal	.867
CL31	<—-	CLoyal	.831
CL32	<—-	CLoyal	.837
CL33	<—-	CLoyal	.812
CL41	<—-	CLoyal	.654
CL42	<—-	CLoyal	.702
CL43	<—-	CLoyal	.679

Appendix 3. Instrument validity

	Correlation	
		Total
SQ11	Pearson Correlation	.327**
SQ12	Pearson Correlation	.746**
SQ13	Pearson Correlation	.768**
SQ14	Pearson Correlation	.770**
SQ15	Pearson Correlation	.784**
SQ21	Pearson Correlation	.820**
SQ22	Pearson Correlation	.852**
SQ23	Pearson Correlation	.863**
SQ24	Pearson Correlation	.866**
SQ31	Pearson Correlation	.814**
SQ32	Pearson Correlation	.825**
SQ33	Pearson Correlation	.837**
SQ41	Pearson Correlation	.864**
SQ42	Pearson Correlation	.877**
SQ43	Pearson Correlation	.852**
SQ51	Pearson Correlation	.820**
SQ52	Pearson Correlation	.502**
CS11	Pearson Correlation	.845**
CS12	Pearson Correlation	.846**
CS13	Pearson Correlation	.831**
CS21	Pearson Correlation	.867**
CS22	Pearson Correlation	.845**
CS23	Pearson Correlation	.867**
CS31	Pearson Correlation	.872**
CS32	Pearson Correlation	.855**
CS33	Pearson Correlation	.829**
CS34	Pearson Correlation	.851**
CL11	Pearson Correlation	.834**
CL12	Pearson Correlation	.811**
CL13	Pearson Correlation	.802**
CL14	Pearson Correlation	.875**
CL21	Pearson Correlation	.842**
CL22	Pearson Correlation	.856**
CL23	Pearson Correlation	.800**
CL31	Pearson Correlation	.779**
CL32	Pearson Correlation	.809**
CL33	Pearson Correlation	.777**
CL41	Pearson Correlation	.593**
CL42	Pearson Correlation	.645**
CL43	Pearson Correlation	.622**
Total	Pearson Correlation	1

Appendix 4. Instrument reliability

Reliability statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.985	.985	40

Appendix 5. Normality test result

Tests of normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
QServe	**.129**	1190	.000	.864	1190	.000
Satisf	**.196**	1190	.000	.842	1190	.000
CLoyalty	**.129**	1190	.000	.893	1190	.000

a. Lilliefors Significance Correction

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