

SERVICE QUALITY PARAMETERS BASED ON VASS XPRESS APPLICATION THAT AFFECT CUSTOMER SATISFACTION IN DETERMINING CUSTOMER LOYALTY IN COVID-19 PANDEMIC PERIOD (CASE STUDY IN SURAKARTA RESIDENCY)

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Abstract: The aim of this research was to recognize the direct and indirect influence between quality of service and customer loyalty through customer satisfaction. The study employed three (3) variables, namely: quality of service, customer satisfaction, and customer loyalty. This study applied quantitative approach as well as using the PATH analysis method. The population of this study was Vass Xpress customers in Surakarta, all samples are taken as population and there were 58 respondents, sampling method conducted with saturated sample technique. The result of the research indicated that service quality had positive and significant influence either directly or indirectly to customer loyalty through customer satisfaction.

Keywords: *service quality, customer satisfaction, customer loyalty, path analysis, apps vass xpress*

1. Introduction

There have been changes in many sectors due to the Covid-19 pandemic, ranging from cultural, social, educational, and business including changes that occur in the shipping sector. The new norm are applied to all citizen in order to avoid the transmission of this virus. One of them is social distancing (Meilina et al., 2019).

In logistics term, the division of market is categorized into two (2) segments, B2B (*business to Business*) and B2C (*business to Customer*) (Pramudita, 2020). One of the shipping services companies is CV. Vass Xpress. The digital Startup, which is engaged in shipping industry, began operating in May 2019, the emergence of digital innovations in logistics is driven by the desire to provide solutions offered to Small and Medium Enterprise (SME) in Indonesia (Co-Founder Vass Xpress).

Referring to BPS data (Central Statistic Agency) as quoted by Katadata that in the year 2018 there were about 64.2 million business units spread across Indonesia. This SME's growth was ultimately followed by the emergence of demand for short-medium-range services. Therefore Vass Xpress established to offer door to door delivery service in short intermediate distance in Surakarta area (Solo, Boyolali, Klaten, Sukoharjo, Karanganyar, Sragen, etc.) With *same day* service (reach destination in the same day). Supported by

professional human resources, Vass Xpress is able to assist SMEs in delivering their products to other companies or consumers (source: CV. Vass Xpress).

According to Parasuraman et al in (Hirata, 2019) (Ismail & Yunan, 2015) (Prakasha & Mohanty, 2013), quality of service is a gap between perceived and expected performance by the costumer (Ghotbabadi et al., 2015). SERVQUAL was presented by them in order to measure the SQ. There are five (5) instruments of SERVQUAL, namely: tangibles, reliability, responsiveness, assurance and empathy

Berry et al., (1988) in (Johns et al., 2004) and (Cristobal et al., 2007) stated there were some causes why company needed to take service quality into consideration as an essential issue. First, the higher service quality caused higher costumer pleasure, then service quality and customer satisfaction had an impact on customer loyalty. Second, the loyal costumers who bought the product repeatedly, tended to buy additional service and would promote the product through word of mouth voluntarily, in comparison with short-time costumer.(Setiawan & Sayuti, 2017).

Costumer satisfaction is defined as a output of comparing between expectations of the costumer and his/her succeeding service quality performance that are perceived by the costumer (Bitner & Zeithaml, 2003; Angelova & Zekiri, 2011; Cahill, Goldsby, Knemeyer & Wallenburg, 2010) (Otsetova, 2017) (Adnin Nasution et al., 2018). Boselie et al., (2002) argued that the effective and positive pleasure of the costumer could be reached by evaluation of comprehensive evaluation of a lot of facets (Setiawan & Sayuti, 2017).

Kotler (2005) said that loyalty meant a willingness of the costumers to repurchase due to the commitment to set trademark for service provider(Adnin Nasution et al., 2018). Decreasing marketing costs, operational cost, and rising sales are some options to make the yield of the company grow up. While loyal customer is an advantage to reduce a cost because they are already familiar with the service/ product, so they don't need prior information any more. That's why services providers are pondering for strategy on how to increase customer loyalty. For insuring customer loyalty and limiting switching actions, service providers have to be able to fulfill costumer needs and demand in the future and offer them before others (Otsetova, 2017) (Между et al., 2019).

There are four indicators of Custome Loyalty, first, the costumer is prone to repurchase the product. Second, tend to recommend the service to other peopleThird, they're tolerant with rising price and there is trend of making cross purchases (Chieh et al., 2011).

Like other logistics service companies, realizing the quality of service as needed and desired by customers is not easy in practice. Some common problems that are still dealt by Vass Xpress customers are as follows:

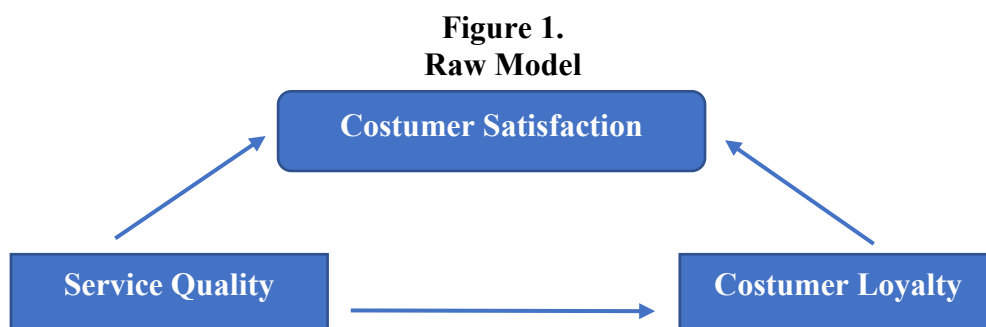
1. Package are not sent in time.
2. Slow Pick-up
3. Packages fall on the trip so that customer receives them in damaged condition.
4. Package delivered is damaged due to improper arrangement.

(source : Vass Xpress)

2. Research Methods

2.1 Research model and hypothesis

This study operates three (3) variables, namely service quality (X), customer satisfaction (Y) and customer loyalty (Z). The research conducted on research objects, which means this study discusses about all of aspects in CV. Vass Xpress which operates the basis of the application, namely service application features, employee services, service quality etc. The model used in this study is as follows :



Based on the above framework, it can be taken hypothesis as follows:

H₁: Quality of service has a positive and significant influence to customer satisfaction.

H₂: Quality of service and customer satisfaction have positive and significant influence for customer loyalty.

H₃. Quality of service has positive influence on loyalty service through customer satisfaction.

The data in this study were collected by using questionnaire that is shared to Vass Xpress customers. Data analysis techniques used PATH analyst method. This method was used to know the influence between the variables. Research location was at CV. Vass Xpress, which is located in Surakarta resident. Vass Xpress is a company engaged in the shipping service

and is a start-up company that has been existed for a year, so hopefully this research would serve as a pilot project for other regions to develop and use similar applications for logistics delivery services.

The type of data used in this research is the primary data that was directly obtained from the respondents. Data were scored using a Likert scale and processed using SPSS version 26. The population in this research were customers who used Vass Xpress goods delivery service in Surakarta's area. The sampling method used was the probability sampling method using the saturated sample technique. It means all populations in this study were considered as respondents.

3. Research and discussion results

3.1 Respondents characteristics

Research object is the customers of Vass Xpress. To obtain the data, researchers conducted a questionnaire distributed to all respondents. The method used is probability sampling method with sampling saturated technique. Total sample that filled out the questionnaire was 58 respondents consisting of 40.4% women and 59.6% men. With a range of age 21-30 years at 52.6%, aged 31-40 years at 40.4%, while the rest are under 20 years old. Market segmentation of Vass Xpress customer is SME business, so all respondents are traders by profession.

Based on the demographic data of the respondents, which is mostly 21-30 years old shows a very significant change in business area. . If we look back two decades ago, most of the traders were dominated by people who were over 30 years old, this may be caused by wide access to reach market, access to capital /loan with more flexible requirements. The most important thing is the change in perspective towards the profession of traders who were not a dream profession previously, but today the millennials are interested in running their own business. Research conducted by Otsetova (2017) explained that calculation scale and questionnaire material based on research that has been done before with some modifications given that although the variables and data processing techniques are linear with this study, but the object under study is different.

3.2 Validity and reliability test

The questionnaire is proper if it passes the validity and reliability test. The

Table 1.
Validity test
Correlations

		Service Quality	Costumer Satisfaction	Costumer Loyalty
Service Quality	Pearson Correlation	1	.752**	.759**
	Sig. (2-tailed)		0,000	0,000
	N	58	58	58
Costumer Satisfaction	Pearson Correlation	.752**	1	.734**
	Sig. (2-tailed)	0,000		0,000
	N	58	58	58
Costumer Loyalty	Pearson Correlation	.759**	.734**	1
	Sig. (2-tailed)	0,000	0,000	
	N	58	58	58

requirement to be valid is if $r\text{-count} > r\text{-table}$

Source: processed primary data, 2020

After a validity test using Pearson correlation with a significance rate of 5% for a two-tailed test, the results show that all variables in this study are valid. It is proven that the result of $r\text{Count}$ is bigger than $r\text{table}$ (0.2609).

Case Processing Summary			
		N	%
Cases	Valid	58	100.0
	Excluded ^a	0	.0
	Total	58	100.0
a. Listwise deletion based on all variables in the procedure.			

Table 2.
Reliability test

Reliability Statistics	
Cronbach's Alpha	N of Items
.966	33

Source: processed primary data, 2020

The results of the reliability test showed that Cronbach's Alpha was 0.966. It can be concluded that all variables are reliable, because the Cronbach's Alpha value > 0.06 (See table 2).

3.3 Test Path regression 1

Table 3
Test Path regression 1
Coefficients^a

odel				Stand ardized Coefficients	t	Sig.
				Beta		
	(Constant)	7,844	1,218		6,438	0,000
	Service Quality	0,115	0,014	0,75 2	8,529	0,000
a. Dependent Variable: Costumer Satisfaction						

Source: processed primary data, 2020

Referring to table 3, path 1 regression coefficient it can be seen that the significance value of service quality is 0.000 less than 0.05, then this shows that the service quality variable has a positive and significant effect on customer satisfaction at a significance level of 95%.

Based on the calculation of 1 regression above, it can be illustrated through the following models (Figure 2):

Figure 2.
Model of Test Path regression 1



Table 4.
Model summary 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752 ^a	0,565	0,557	1,484
a. Predictors: (Constant), Service Quality				

Source: processed primary data, 2020

Table 5.
Test Path regression 2
Coefficients^a

Model				Standard dized Coefficients	t	Sig.
				Beta		
1	(Constant)	3,621	1,611		2,248	0,029
	Service Quality	0,079	0,021	0,475	3,857	0,000
	Costumer Satisfaction	0,410	0,134	0,377	3,064	0,003
a. Dependent Variable: Costumer Loyalty						

The value of the R square contained in table 4 summarized in the first regression path test is 0.565. This shows that the contribution of service quality to customer satisfaction is 56.5%, while the remaining 43.5% is influenced by other variables outside the model. Value $e = \sqrt{(1 - 0.565)} = 0.6595$, this calculation is obtained from the formula $e1 = \sqrt{(1 - R \text{ Square})}$.

Source: processed primary data, 2020

3.4 Test Path regression 2

Referring to table 6 in the path 2 regression coefficient, it can be seen the significance value of service quality (X) is 0,000 and the significance value of customer satisfaction (Y) is 0.003, the significance value of the two variables is smaller than 0.05. This shows the quality of service and positive and significant customer satisfaction on customer loyalty.

Table 6
Model Summary 2

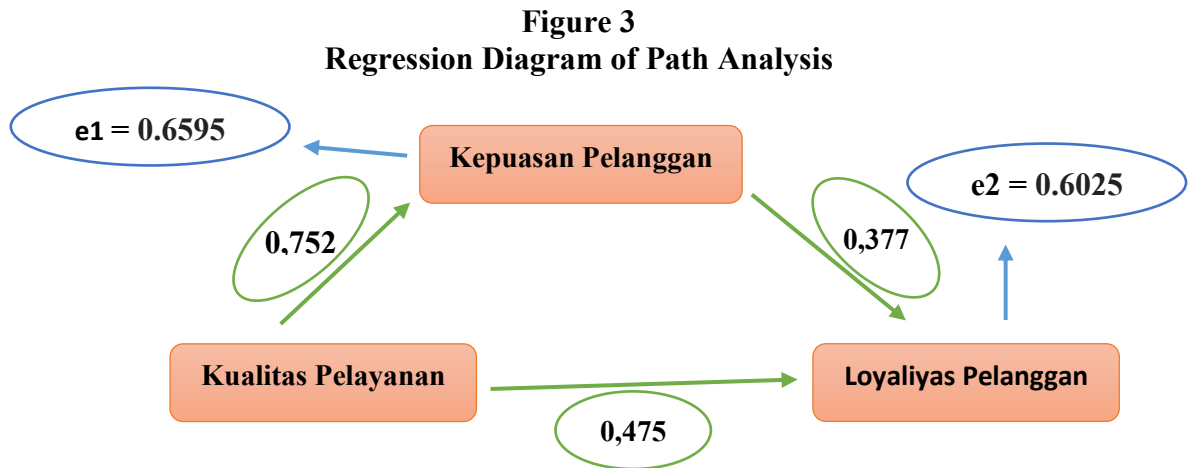
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798 ^a	0,637	0,624	1,487
a. Predictors: (Constant), Costumer Satisfaction, Service Quality				

Source : processed primary data, 2020

The value of R square in table 6 of the summary is 0.637. This shows that the contribution given by the variable service quality and customer satisfaction is 63.7%, while

the remaining 36.3% is approved by other variables outside the model. Value $e = \sqrt{1 - 0.637} = 0.602$, this calculation is obtained from the formula $e1 = \sqrt{1 - R \text{ Square}}$.

Diagram of the research model Regression path 1 and 2 can be discussed as shown in Figure 3, as follows:



3.5 PATH Analysis Test

Table 7.
Direct relation

Variable relation	Direct effect
Service quality - Costumer satisfaction	0.752
Costumer satisfaction - Costumer loyalty	0.377
Service quality - Costumer loyalty	0.475

Source: processed primary data, 2020

Table 8.
Indirect relation

Variable relation	Effect	Sobel test
Service quality - Costumer satisfaction - Costumer loyalty	$(0.752) \times (0.377) = 0.284$	3,1052

Source: processed primary data, 2020

Table 9.
Total Effect

Variable	direct	indirect	total
Service quality - Costumer satisfaction	0.752	0	0.752
Costumer satisfaction - Costumer loyalty	0.377	0	0.377
Service quality - Costumer loyalty	0.475	0.284	0.759

Source: processed primary data, 2020

Table 10.
Hypotheses Result

Variable	Original sample (o)	T statistic	P value	R square
Service quality - Costumer satisfaction	0.752	8,529	0.000	0.565
Costumer satisfaction - Costumer loyalty	0.377	3,064	0.000	0.637
Service quality - Costumer loyalty	0.475	3,857	0.003	

To see direct and indirect effect of customer satisfaction to service loyalty through customer satisfaction using The Sobel Test with a significance level of 95% with a two-sided test, the Z-count was obtained at 3.1052, in which value is greater than the Z-table (1.96). This proves that there is a direct and indirect and positive influence between service quality on customer loyalty through customer satisfaction.

4. Conclusion

Based on the research results above, all hypotheses can be accepted. The results of this study provide the following conclusions:

1. This study shows that service quality has a significance level of $0,000 < 0.05$ on customer satisfaction, which means that service quality has a positive and significant impact on customer satisfaction.
2. This study shows that service quality has a significance level of $0,000 < 0.05$ to customer loyalty, while customer satisfaction has a significance level of $0.003 < 0.05$ to customer loyalty. This means that service quality and customer satisfaction have a positive and significant impact on customer loyalty.
3. This study shows that by using path analysis the results obtained there are direct and indirect effects between service quality on customer loyalty through customer satisfaction as an intervening variable, as evidenced by The Sobel Test, the Zzcount value is obtained 3.1052. This number is greater than the z-table (1.96). This means that service quality affects customer loyalty positively and significantly through customer satisfaction

In other words, the higher standard of quality provided by the service provider, the more customers feel satisfied to the product/services offered, and it can also grow customer loyalty.

Based on the results of the study in the field, digital innovation that was done by Vass Xpress gave impacts on customer satisfaction. Considering of the pandemic under Covid-19, digital innovation strongly affects customers in deciding which products from which service providers to use. Furthermore, the easy-to-use and compelling application are also an added value that enable Vass Xpress satisfies its costumer.

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