

The Effect of Service Quality and Customer Satisfaction on Customer Loyalty: A Study of Grabcar Services in Jakarta

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ABSTRACT

In recent years online-based transport modes have become popular in Jakarta. These ride hailing applications (apps) provide many benefits. The purpose of this research is to determine the effect of their quality of service on customer satisfaction and their impact on customer loyalty. Correlations analysis and SPSS are used to analyse data obtained from questionnaires distributed to 100 GrabCar users in Jakarta. A simple random sampling technique was employed to recruit the respondents. The results of this research showed that service quality has a positive and significant impact on customer satisfaction and has a positive but not significant impact on customer loyalty. This study can be used to help online based transportation apps develop a better strategy to improve the quality of their service by boosting customer satisfaction which in turn will increase customer loyalty.

Keywords: Customer satisfaction, customer loyalty, grabcar, ride hailing apps, service quality

INTRODUCTION

In Jakarta, road transportation consists of motorcycles, buses, cars and localised forms of transport, such as *angkots* (public

mini-buses) and *bajaj* (public three-wheeled covered motorcycles). The Department of Transport, Jakarta report in 2015 showed the number of cars and motorcycles are increasing steadily at 8.09% and 9.14% respectively. The number of motorcycles and cars in Jakarta was 13.9 million and 3.4 million respectively in 2015. In general, the motor vehicle industry as a whole grows at 8.75% annually.

The increase in the number of motorcycles and cars are due to Jakarta's

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population density and the lack of decent public transportation. Buses, *bajaj*, and taxis lack comfort, and service quality, and therefore people in Jakarta prefer private vehicles. According to Department of Transport, Jakarta, there were 27,079 taxis in Jakarta in 2014 but it decreased in 2015 to 24,368. Meanwhile, the number of four-wheel vehicles in Jakarta is steadily increasing.

Traditional public transport has been affected by the development of ride hailing apps (using smartphone application) technology. People no longer need to wait on the side of the road to hail a taxi; instead they can book a taxi using their smartphone. These enabled ride hailing apps to emerge and quickly became a solution to residents of Jakarta. Heru Sutadi, Executive Director of Indonesia ICT Institute, stated that ride hailing services are appealing because of the ease with which you can book your transport. Additionally, compared with conventional transport system, these ride hailing services would fetch you at your desired location without you having to wait at public location. The growing demand for these ride hailing services have led to their growing popularity. In Jakarta, Uber, Grab, and Go-Jek are the most active offering two-wheel vehicles (motorcycles, known locally as *ojek*) and four-wheel vehicles which consist of multi-purpose vehicles (MPVs), family cars, or sedans.

The Malaysian company, Grab, entered the Indonesian market in August 2015, offering a cash payment method (as opposed to credit card only), and was welcomed in

Jakarta. According to Kiki Rizki, Grab's Country Head of Marketing, Grab's three main business pillars are safety, comfort, and speed which is unique to the company. Grab provides insurance for their passengers, a review of their drivers' attitude, assuring cleanliness, and a flat rate to increase service quality. It also provides varied services, from transportation using motorcycles or cars, to services such as delivering documents or food. . This study focused on how service quality affects customer satisfaction and its impact on customer loyalty of GrabCar users.

As expected, Grab is not the only player and one of its competitors is Go-Jek which is a local company established in 2010 that provides almost the same services in Jakarta, Bogor, Depok, Tangerang, Bekasi, Bandung, Surabaya, Bali, and Makassar. Their passenger cars are known as Go-Car. Another direct competitor of Grabcar is Uber, originally from United States, which currently provides ride hailing services in Jakarta, Bandung, and Bali using motorcycles and cars.

LITERATURE REVIEW

Service Quality

Tjiptono (2007) defined service quality as the level of excellence expected and whether it satisfies customer needs. Specifically, service quality is determined by the company's ability to fulfil the needs and wants of the customer based on their expectations. Lewis and Booms (in Tjiptono, 2012) defined service quality as meeting customer expectations. Parasuraman,

Zeithamal and Berry in Ivanauskiene and Volungenaite (2014) defined service quality as the difference between customers' expectations and perceptions of the service. Tjiptono and Chandra (2011) stated that it was the customer, not the service provider, which evaluates service quality.

Parasuraman, Zeithamal and Berry (in Tjiptono, 2011) proposed variables to measure service quality:

Reliability, related to the company's ability to deliver the services precisely as promised.

Responsiveness, related to the company's willingness and ability in helping their customer on channelling the money given properly.

Assurance, related to the workers' knowledge and politeness and their ability in building trust and the givers' confidence

Empathy, shows how the company understands the givers' objectives on giving donation, and gives personal affection to the givers.

Tangibles, related to the physical appearance of the service facility, the tools, the workers, and the company's communication material.

Customer Satisfaction

Kotler and Amstrong (2010) defined customer satisfaction as the extent to which a product's perceived performance matches a buyer's expectations. Satisfaction is defined as customers' assessment of a

certain product or services, on whether the products or services could meet their needs and their expectations (Zeithaml, Bitner, & Gremler, 2009). Kotler, in Tjiptono (2011) defined customer satisfaction as a person's feelings of pleasure or disappointment as a result of comparing the product's perceived performance and whether it meets his or her expectations.

According to Kotler and Keller (2009) one of the keys to maintain a customer is customer satisfaction. According to Irawan (2008) customer satisfaction is a set of perceptions consumers have regarding the performance of products or services and if the latter meets their expectations. Customers are satisfied when the product or service meets or exceeds their expectations. Irawan (2008) reported the following factors influence customer satisfaction in relation to a product or service:

Service Quality: the quality of a service can be measured through opinions of the customers.

Emotional Factor: this factor is important because customer satisfaction can depend on customer's level of connectedness with the product or service. Although highly intangible, this factor determines customer's loyalty.

Ease of acquiring a product or services: if consumers feel it is difficult to communicate with the company to obtain a product or service, this will have a negative impact on the consumer's satisfaction level.

Customer Loyalty

Kotler and Keller (2009) defined loyalty as the customers' commitment to repurchase a certain product or service in the future even if the circumstances and rival marketing efforts may potentially make the customers turn to another company. According to Tjiptono (2011), loyalty is a behavior of customers that will lead to repeated purchases. It can be driven by price or sense of belonging to the particular brand, perhaps through an inferred exclusivity. Customer loyalty means the commitment of customer to the brand, shop, and suppliers, and is based on a very positive attitude from the customers and reflected in their positive buying behaviour (Hidayat, Zalzalalah, & Ekasasi, 2016; Tjiptono, 2007). According to Griffin (2010), the factors that can measure customer loyalty are:

- a. **Makes regular repeat purchases.**
- b. **Purchases across product and service lines.**
- c. **Refers to others (referral):** loyal customers will refer the brand to other people with positive WOM (word of mouth).
- d. **Demonstrates immunity to competitors (retention):** loyal customers will not change their brand preference.

Service Quality, Customer Satisfaction and Customer Loyalty Relationship

According to Moha and Loindong (2016), service quality and facilities have both a

positive and significant relationship with the satisfaction of users. Their findings were supported by Saleh and Kadarisman (2013) who pointed to a positive relation between customer satisfaction and service and product quality. This study will test the effect of these variables in the context of online transport industry. Therefore the first hypothesis is proposed:

H1: Service Quality significantly affects Customer Satisfaction of online transportation users (GrabCar users).

In a study that examined the relationship between service quality and customer satisfaction and loyalty, Cheng and Rashid (2013) found service quality had a positive relationship with customer loyalty. The present study will test the effect of service quality on customer loyalty in the online transport industry which leads to the development of second hypothesis:

H2: Service Quality significantly affects Customer Loyalty of online transport users (GrabCar users).

Prihanto (2013) showed customer satisfaction and customer loyalty have a positive relationship - the higher the level of customer satisfaction, the higher their loyalty.

Based on Hasan (2014), the relationship between customer satisfaction and customer loyalty can be summarised as shown in Table 1.

Table 1
Relationship between customer satisfaction and customer loyalty

		Customer Loyalty	
		Low	High
Customer Satisfaction	Low	<i>Failures</i> The customers are unsatisfied and disloyal	<i>Forced</i> The customers are unsatisfied but they're loyal to the brand
	High	<i>Defectors</i> The customers are satisfied, but disloyal	<i>Successes</i> The customers are satisfied and loyal, which makes them ideal to recommend the products or services to others

Table 1 shows how customer satisfaction will affect their loyalty. This study will test if there is a positive relationship between customer satisfaction and customer loyalty on online transport users. The following third hypothesis is proposed:

H3: Customer Satisfaction significantly affects Customer Loyalty of online transport users.

The research model for this study is shown in Figure 1:

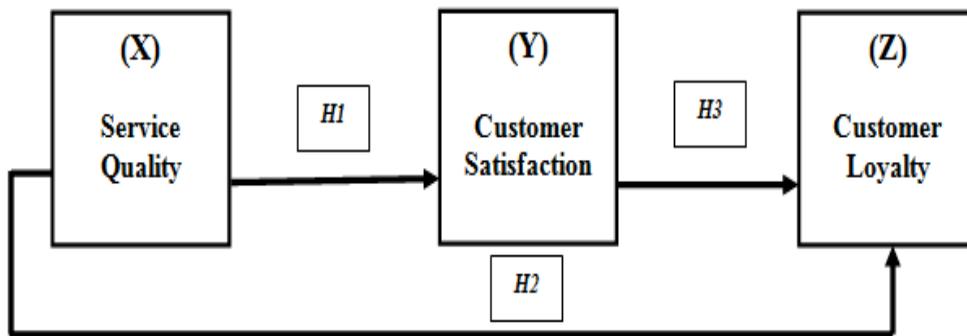


Figure 1. Research model

MATERIALS AND METHODS

This research adopted a questionnaire method and 100 respondents who are GrabCar users were recruited using a simple random sampling technique. A total of 22 indicators related to the dimensions adapted

from literature are used: Service Quality (tangibles, reliability, responsiveness, assurance, and empathy), Customer Satisfaction (service quality, emotional factors, ease of acquiring the product/service) and Customer loyalty (repeat orders,

purchase across product lines, referral, and retention). An associative method is used in this study which according to Siregar (2013), shows the relationship between two or more variables. Tests used on this study for analysing the data are as follows: validity test, reliability test, normality test, Pearson Product-Moment Correlation Test and path analysis for testing the hypotheses; all of the tests were conducted using SPSS software.

RESULTS AND DISCUSSIONS

All the tests for this study were conducted using SPSS and used a total of 100 data points from online transport users (Grab Car users) based on a survey questionnaire method.

Validity Test

The validity test used a 95% significance level, and the results for the validity test are shown in Tables 2, 3 and 4.

Table 2
Service quality validity test result

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
X1	0.17	0.608	X6	0.17	0.601
X2	0.17	0.617	X7	0.17	0.574
X3	0.17	0.623	X8	0.17	0.571
X4	0.17	0.281	X9	0.17	0.648
X5	0.17	0.509	X10	0.17	0.698

Table 3
Customer satisfaction validity test result

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
Y1	0.17	0.727	Y4	0.17	0.673
Y2	0.17	0.560	Y5	0.17	0.453
Y3	0.17	0.651	Y6	0.17	0.537

Table 4
Customer loyalty validity test results

Questions	r_{table}	r_{count}	Questions	r_{table}	r_{count}
Z1	0.17	0.626	Z4	0.17	0.625
Z2	0.17	0.575	Z5	0.17	0.698
Z3	0.17	0.594	Z6	0.17	0.580

The results of the validity tests for each variable shows that all of the instruments used for measuring service quality, customer satisfaction, and customer loyalty are valid. The r_{count} of each question on each variable show a higher amount compared to the r_{table} (0.17).

Reliability Test

On conducting the reliability test, the basis for the decision-making is taken from Sarjono and Julianita (2013) in which a survey was considered reliable if the Cronbach's alpha > 0.600 . Based on the criteria, these are the results of the reliability tests (Table 5).

Table 5
Reliability test results

Variable	Cronbach's Alpha	N of items
Service Quality	0.852	10
Customer Satisfaction	0.814	6
Customer Loyalty	0.829	6

Table 6
Service quality normality test result

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Service Quality	.073	100	.200*	.975	100	.056

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Based on the Cronbach's Alpha of each variable that shows a higher amount than 0.600, it could be concluded that all of the variables are reliable and can be used for this study.

Normality Test

Data distribution is considered normal if the distribution of the data is still inside the scatter plot. Using the 95% significance level, if the significance number or the probability values is higher than 0.05, the data is normally distributed. It is then transformed into interval data before the normality test (Appendix 1). Using SPSS, the table below shows results of each normality test for the three variables:

Table 7
Customer satisfaction normality test result

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Customer Satisfaction	.069	100	.200	.966	100	.012

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Table 8
Customer loyalty normality test result

Model	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Customer Loyalty	.086	100	.068	.975	100	.050

*This is a lower bound of the true significance
a. Lilliefors Significance Correction

Each variable shows that each of them had a higher Sig. Kolmogorov-Smirnov compared with the confidence level used. As we could see, the Sig. Kolmogorov-Smirnov for service quality shows 0.073 which is higher than $\alpha = 0.05$. For customer satisfaction and customer loyalty, the Sig. Kolmogorof-Smirnov are 0.069 and 0.086 respectively, both higher than $\alpha = 0.05$. This indicates that all the data for each variable are distributed normally.

Correlation Analysis

Correlation analysis aims to see whether there is a linear relationship between two variables and measures the strength of the

relationship. Sarjono and Julianita (2013) interpretations for coefficient correlation used in this study are shown in Table 9.

Table 9
Coefficient correlation of correlation value interpretation

Interval Coefficient	Relation rank
0.80 – 1.000	Very strong
0.60 – 0.799	Strong
0.40 – 0.599	Strong enough
0.20 – 0.399	Weak
0.00 – 0.199	Very weak

The result of the correlation test for this study is shown in Table 10.

Table 10
Correlation test results

		Service Quality (X)	Customer Satisfaction (Y)	Customer Loyalty (Z)
Service Quality (X)	Pearson Correlation	1	.764**	.859**
	Sig. (2-tailed)		.000	.000
	N	100	100	100
Customer Satisfaction (Y)	Pearson Correlation	.764**	1	.720**
	Sig. (2-tailed)	.000		.000
	N	100	100	100
Customer Loyalty (Z)	Pearson Correlation	.859**	.720**	1
	Sig. (2-tailed)	.028	.002	
	N	100	100	100

** Correlation is significant at the 0.01 level (2-tailed)

Based on the data provided above, it can be concluded service quality and customer satisfaction have a strong and positive relationship. This could be seen by their Pearson-Correlation at 0.764. Service quality and customer loyalty show a positive and very strong relationship, with a positive correlation of 0.859. Customer satisfaction also shows a positive and strong relationship with customer satisfaction, which was

reflected in the Pearson-Correlation at 0.720.

Path Analysis

The R square (R^2) shown in Table 11 reflects how much service quality affects customer satisfaction. Based on the results, it was concluded that service quality would affect customer satisfaction (58.4%), and the rest not covered in this study.

Table 11
Summary of path sub-structural 1 analysis

	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764 ^a	.584	.580	.50584

a. Predictors: (Constant), Service Quality (X)

b. Dependent Variable: Customer Satisfaction (Y)

Table 12
ANOVA path sub-structural 1

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.172	1	35.172	137.461	.000 ^b
	Residual	25.075	98	.256		
	Total	60.248	99			

a. Dependent Variable: Customer Satisfaction (Y)

b. Predictors: (Constant), Service Quality (X)

Using $\alpha = 0.05$, service quality could be concluded as affecting customer significantly only if the Sig. shows a lower number of α . As we can see in the Table above, the Sig.

shows a 0.000 value, which was lower than $\alpha = 0.05$. This shows that service quality significantly affects customer satisfaction.

Table 13
Coefficients^a sub-structural 1

Model		Unstandardised Coefficients		Standardised	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.285	.309		.923	.358
	Service Quality (X)	.886	.076	.764	11.724	.000

a. Dependent Variable: Customer Satisfaction (Y)

The t-test will show whether service quality affects customer satisfaction individually or not. The decision would be made with comparing the value of t_{count} and t_{table} , in which if t_{count} is higher than t_{table} ($t_{count} > t_{table}$), then service quality individually affects customer satisfaction.

Using $df = 98$ and $\alpha = 0.05$, the t_{table} used for this study is 1.66; meanwhile the t_{count} as shown in Table 14 is 11.724. Thus, we conclude $t_{count} > t_{table}$; $11.724 > 1.66$, which means that service quality individually

affects customer satisfaction. Meanwhile, we see the Sig. for this variable is 0.000, compared with $\alpha = 0.05$. The Sig shows a lower value than α . It could be concluded that service quality makes a significant contribution towards customer satisfaction (**Accept H1**). Based on the information above we could state the formula as shown below:

$$Y = \rho_{yx}X + \rho_y \epsilon_1$$

$$Y = 0.764X + 0.64 \epsilon^1$$

Notes - Y: Customer Satisfaction, X: Service Quality

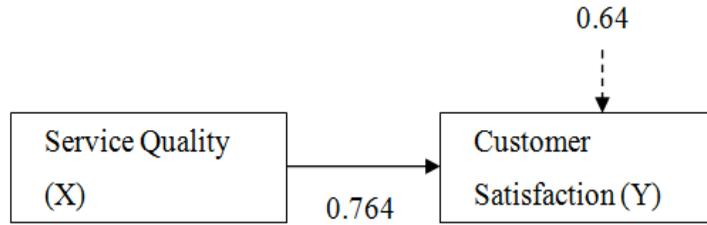


Figure 2. Sub-structural 1

The R square (R^2) shows a number of 0.742 or 74.2%, which reflects the amount of effect service quality and customer satisfaction have on customer loyalty. This also means that other factors outside the two variables in this study, affects customer loyalty 25.3%.

Table 14
Summary of path sub-structural 2 analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865 ^a	.747	.742	.44905

- a. Predictors: (Constant), Customer Satisfaction (Y), Service Quality (X)
- b. Dependent Variable: Customer Loyalty (Z)

Table 15
ANOVA path sub-structural 2

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.895	2	28.947	143.557	.000 ^b
	Residual	19.559	97	0.202		
	Total		77.454	99		

- a. Dependent Variable: Customer Loyalty (Z)
- b. Predictors: (Constant), Customer Satisfaction (Y), Service Quality (X)

The Sig. in the table above shows a value of 0.000. If we compare it to $\alpha = 0.05$, the Sig shows a lower value than α . This concluded that both service quality and customer satisfaction have a significant effect on customer satisfaction.

Table 16
Coefficients^a sub-structural 2

Model		Unstandardised Coefficients		Standardised t	Sig.
		B	Std. Error	Beta	
1	(Constant)	-1.561	.276	-5.663	,000
	Service Quality(X)	,976	,104	,742	,000
	Customer Satisfaction (Y)	,174	,090	,153	,056

a. Dependent Variable: Customer Loyalty (Z)

Using t-test, we would like to test whether both service quality and customer satisfaction affect customer loyalty individually. In making the decision, we compared the value of t_{count} and t_{table} , in which if the t_{count} is higher than the t_{table} ($t_{count} > t_{table}$), then service quality and customer satisfaction individually affect customer loyalty.

Using $df = 98$ and $\alpha = 0.05$, the t_{table} used for this study was 1.66, meanwhile the t_{count} for service quality as shown in table 17 is 9.379. We can conclude that $t_{count} > t_{table}$; $9.379 > 1.66$, which means that service quality affects customer loyalty individually. Meanwhile, we could also see that the Sig. for this variable is 0.000, compared with $\alpha = 0.05$; the Sig shows a lower value than α . It could also be concluded that service quality

makes a significant contribution to customer loyalty (**Accept H2**).

The t_{count} for customer satisfaction as shown in Table 17 is 1.938. With this, we can conclude that $t_{count} > t_{table}$; $1.938 > 1.66$, which means that individually, customer satisfaction affects customer loyalty. Meanwhile, the Sig. for customer satisfaction is 0.056, compared to $\alpha = 0.05$; the Sig shows a higher value than α . This proves that customer satisfaction does not contribute significantly to customer loyalty (**Reject H3**).

Based on the information above the formula below:

$$Z = \rho^{zx}X + \rho^{zy}Y + \epsilon^2$$

$$Z = 0.742X + 0.153Y + 0.503\epsilon^2$$

Note - Z: Customer Loyalty, Y: Customer Satisfaction, X: Service Quality

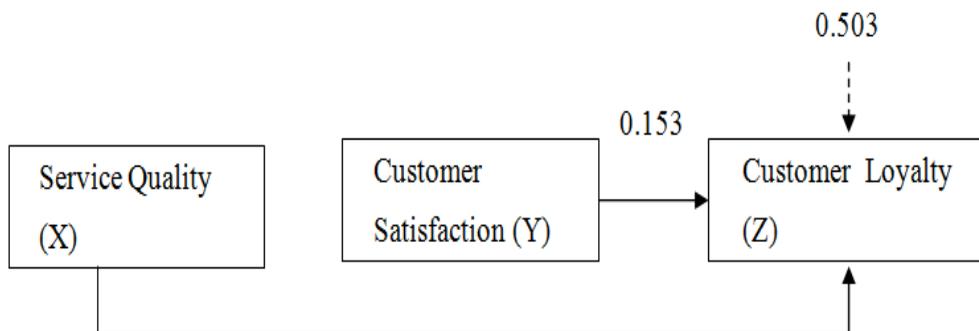


Figure 3. Sub-structural 2

Based on the test results, the path of the three variables are shown in Table 17 and Figure 3:

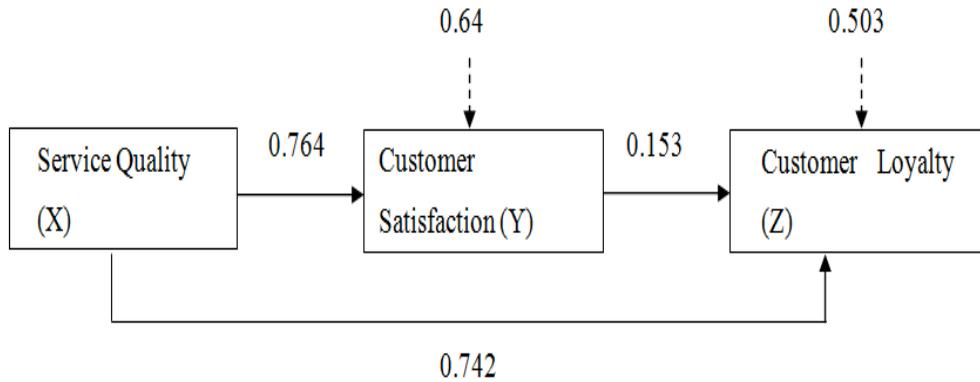


Figure 4. Path model summarisation

Table 17
Coefficients^a sub-structural 2

Variable	Standardised Coefficient	Effect		
		Direct	Indirect* (through Y)	Total
X to Y	0.764	0.764		0.764
X to Z	0.742	0.742	0.764x0.153= 0.116892	0.859
Y to Z	0.153	0.153		0.153
ϵ_1	0.64	0.64		0.64
ϵ_2	0.503	0.503		0.503

Service quality has a positive and significant effect on customer satisfaction and customer loyalty. Improvement in service quality contributes to customer satisfaction and vice versa. Customer satisfaction is 58.37% based on while customer loyalty is 74.7% as direct result of service quality.

Even though there is no significant effect between customer satisfaction and customer loyalty, the former has some

positive effect contributing 51.84% to the latter.

CONCLUSION

The practical implications for online transport, especially GrabCar, are they should pay more attention to service quality as proven by this study which will lead to customer satisfaction and build loyalty. Fitzsimmons and Fitzsimmons (2011)

state that customers in choosing a certain service provider will consider nine criteria: availability, convenience, dependability, personalisation, price, quality, reputation, safety, and speed.

Customer will consider things such as how accessibility and reliability of service. They will also consider whether the quality of the services is worth the price they are charging, and the reputation of the service provider, or how long they will have to wait for the service. These nine criteria need to be fulfilled by GrabCar as the service provider.

Limitation of this research is that it has only examined one online service provider (Grab) in addition to using the minimum sample size (100 respondents) to draw a conclusion. For further research it will be beneficial if the sample size is larger and the focus is on other competitors such as GoJek, Uber in Indonesia.

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