

# The Influence Of Service Quality And Price Perceptions On Customer Loyalty And Customer Satisfaction As Intervening Variables

## Case Study on PT Tiki Lane Nugraha Ekakurir Customers in Bogor

*Servqual, Perceived Price, Loyalty and Satisfaction*

**1165**

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### ABSTRACT

*This study aims to determine whether: 1) to determine the effect of service quality on JNE customer satisfaction, 2) to determine the effect of perceived price on customer satisfaction in JNE, 3) to determine the effect of service quality on customer loyalty in JNE, 4) to determine the effect of Price perceptions on customer loyalty at JNE, 5) to determine the effect of customer satisfaction on customer loyalty at JNE, 6) to determine the effect of service quality on customer loyalty with customer satisfaction as the intervening variable, 7) to determine the effect of price perceptions on customer loyalty and customer satisfaction as an intervening variable. This type of research is quantitative. The population in this research is all customers who have used the delivery service of PT Tiki Jalan Nugraha Ekakurir (JNE), with a sample of 200 respondents. The sampling procedure used in this study was non-probability with a purposive sampling technique which is a sampling technique based on the evaluation of the respondent's knowledge regarding the object of research by the researcher. The data collection technique in this study was a questionnaire. The method used in this research is Structural Equation Modeling which is processed using the AMOS 23 program. The research results are 1) Service quality has a positive and significant effect on customer satisfaction, 2) Price perception has a positive and significant effect on customer satisfaction, 3) Service quality has a positive and significant effect on customer loyalty, 4) Price perception has a negative and insignificant effect on customer loyalty satisfaction, 5) customer satisfaction has a positive and significant effect on customer loyalty, 6) service quality has a positive and significant effect on customer loyalty not mediated by customer satisfaction and 7) price perception has a negative and insignificant effect on customer loyalty through mediation of customer satisfaction.*

**Keywords:** *Service Quality, Perceived Price, Customer Satisfaction and Customer Loyalty*

### INTRODUCTION

In the current era of globalization, *e-commerce* growth is very high. This very fast growth is influenced by the fact that people have made *e-commerce* their lifestyle. This will cause tight competition in the field of goods delivery services. In its development, goods delivery service companies have experienced a transformation towards *digital platforms*. With the enormous business potential, several goods delivery service companies want to contribute to the delivery process, resulting in tight competition among goods delivery service companies in Indonesia.

In Indonesia, there are many companies operating in the expedition sector. The delivery services currently used by the public include JNE, TIKI, Pos Indonesia and J&T. These companies are one of the expeditions that accept shipments of domestic and foreign goods. Goods delivery services are one of the companies in the international scale expedition sector. This gives rise to tight business competition. When many new expedition companies emerge such as Sicepat, Paxel, Anteraja, etc. JNE's position as *pioneer* in service delivery in mind customer has been overthrown by the player new in the world of shipping services industry namely J&T. Increased Sales use service send J&T 3 years final This must become something evaluation for quality JNE services so that old customers can trust them delivery goods use service JNE delivery no feel disappointed.

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Following This is comparison price service delivery For area Jabodetabek which uses type regular service with heavy goods 1 kg.

Table 1. Regular Service Price with a Weight of 1 Kg Bogor - Jakarta

No	Courier Services	Service Type	Estimated Day	Price
1.	Vehicle	Reg	2 days	Rp. 5,000
2.	SAP	Reg	3 – 5 Days	Rp. 8,000
3.	Lion Parcel	Reg	1 – 2 Days	Rp. 6,500
4.	JNE	Reg	1 – 2 Days	Rp. 9,000
5.	TIKI	Reg	2 days	Rp. 8,000
6.	Ninja Express	Reg	1 – 2 Days	Rp. 9,500
7.	J&T	Express	1 – 2 Days	Rp. 10 000
8.	Quick	Reg	1 – 2 Days	Rp. 10,000
9.	Anteraja	Reg	1 – 2 Days	Rp. 10,000

Source : <https://shipper.id/shipping/check-rates>

Description: Price list for postage from Bogor to Jakarta with Regular Service As for comparison price service delivery goods For area Jabodetabek which uses type “ *Yes/Best/Next Day* ” service with heavy goods 1 kg as following :

Table 2. Prices for Express Services weighing 1 Kg Bogor - Jakarta

No	Courier Services	Service Type	Estimated Day	Price
1.	Vehicle	<i>Next Day</i>	1 day	Rp. 10,000
2.	Paxel	<i>Next Day</i>	1 day	Rp. 25,000
3.	Lion Parcel	<i>One Pack</i>	1 day	Rp. 10,000
4.	JNE	<i>Yes</i>	1 Day	Rp. 18,000
5.	TIKI	OUNCE	1 day	Rp. 12,000
6.	J&T	Express	1 – 2 Days	Rp. 10 000
7.	Quick	<i>Best</i>	1 day	Rp. 13,000
8.	Anteraja	<i>Next Day</i>	1 day	Rp. 13,000

Source : <https://shipper.id/shipping/check-rates>

Description: Price list for postage from Bogor to Jakarta with *Express Service*

## METHODS

Research Location is a research object where this research activity is carried out. This research was conducted on customers who had used the goods delivery service PT Tiki Lintas Nugraha Ekakurir (JNE) in Bogor. Determining the location is intended to simplify or clarify the location that will be the target of a research. The reasons for choosing this research location is respondents are free and not restricted because to find out the influence of service quality and price perception on customer loyalty and customer satisfaction as intervening variables. And the time of this research starts from July 2022 to July 2023.

In this research the author uses quantitative research, because the data obtained will be in the form of numbers. The figures obtained will be analyzed further in data analysis. The method used to collect data is a survey method using a questionnaire. The number of required in this research is a minimum of 200 data samples. This refers to the ' maximum sample size ' likelihood estimate to reduce bias in all types of SEM estimates (Loehlin, 1998).

In this research, the object is PT Tiki Lane Nugraha Ekakurir (JNE) using the variables Service Quality, Price Perception, Customer Satisfaction and Customer Loyalty. In this study, the research subjects were customers who had used the goods delivery service PT Tiki Lintas Nugraha Ekakurir (JNE).

According to Hair, Anderson, Tatham, & Black, (2010), if the sample size is too large, it will be difficult to obtain a suitable model, and it is recommended that an appropriate sample size be between 100-200 respondents so that interpretation estimates can be used using *the Structural Equation Model* (SEM). For this reason, the number of samples will be determined based on the results of the minimum sample calculation. Determination of

the minimum sample size for SEM according to Hair et al (2010) is: (Number of indicators + number of latent variables) x (5 to 10 times) Based on these guidelines, the maximum sample size for this research is: Maximum sample = (20 + 4) x 10 = 240 respondents. Based on the formula above, the maximum sample size in this research is 240 respondents for JNE delivery services.

The tool used to measure the variables being studied is a questionnaire. This questionnaire is a collection of questions that will be distributed to respondents to fill in. The results of this data collection will then be processed in this research. In this study, researchers used four answer categories, namely:

Table 3. Measurement Instruments

Strongly agree	Score 4
Agree	Score 3
Don't agree	Score 2
Strongly Disagree	Score 1

Author's reasons using 4 scales *Likert* is For remove weaknesses contained in 5 scales *likert*. Modification This aim For remove answer with category *undecided* which mean Not yet can decide or give answer. However , it can also be interpreted as n neutral or doubtful. This matter will give trend opinion respondent , ke direction agree u or toward No agree. If provided n answer That will omit n lots of research data so that reduce many available information screened the respondents.

It can be seen that the weight of the highest value is 4 and the weight of the lowest value is 1. The number of classes is 4 so that the interval can be calculated as follows:

$$\text{Interval} = \frac{\text{maximum value} - \text{minimum value}}{\text{interval class}}$$

$$\text{Interval} = \frac{4-1}{4} = 0.75$$

*Structural Equation Modeling* is a multivariate analysis that can be used to analyze variables in a complex manner. SEM can test structural models and measurement models. Apart from that, SEM can also be used to test measurement error and factor analysis by testing hypotheses (Bahri, S. and Zamzam, 2005) . In SEM, there are 2 types of variables that can be analyzed for their relationship, namely as follows ( *Jais, 2007* ) :

1. *Observed Variable*, is a variable that can be measured
2. *Latent Variable*, is a variable that is not directly measured directly. *Latent variables* consist of several *observed variables* that will be tested.

The SEM method has several stages that must be carried out, as follows (Haryadi, S. and Winda, 2015) :

1. Model Specifications  
Model specification is the stage of identifying problems until the model is formed. The model formed is in accordance with the variables found in the research. In this research, model specifications were not carried out because this research used a model developed by Lingling Gao, Kerem Aksel Waechter, and Xuesong Bai.
2. Model Identification  
Model identification is the stage of analyzing the model. Whether the model can be used in research or not. In this research, model specifications were not carried out because this research used a model developed by Lingling Gao, Kerem Aksel Waechter, and Xuesong Bai.
3. Model Estimation  
Model estimation is the stage of determining the estimated value of each model parameter that forms the matrix. So, the parameter value becomes closer to values contained in the matrix. The methods used are *Maximum Likelihood Estimation*, *Generalized Least Square*, and *Weighted Least Square*.
4. Model Fit Test

Model suitability testing is the stage of testing whether the model used is appropriate or not. To carry out a model fit test, several measures are used. These sizes will be explained further in the next sub.

5. Model Respecification

Model respecification is the stage of modifying the model if the model formed does not match the specified dimensions. This model modification is carried out by looking at *the modification indicators* in the SEM model output.

**RESULTS AND DISCUSSION**

**Respondent Profile**

This questionnaire was distributed to all customers who have used PT Tiki's delivery service , Lintas Nugraha Ekakurir (JNE). From the number of questionnaires distributed, researchers took a sample of 400 respondents. Respondent descriptions are based on questionnaire answers given by 400 respondents who were the objects of research. The following will be described in table form based on gender, age, education, occupation, income and number of consumer transactions at JNE.

Table 4. Respondent Characteristics

01	Respondent By Gender		
		<i>Frequency</i>	<i>Percent (%)</i>
a.	Man	99	45.5
b.	Woman	101	50.5
	Total	200	100
02	Age Respondent		
a.	15-20 years	28	14.0
b.	21-25 years old	81	40.5
c.	26-30 years old	68	34.0
d.	31-35 years old	18	9.00
e.	Over 36 years old	5	2.50
	Total	200	100
03	Respondent's Education		
a.	SMA/SMK	125	62.50
b.	Diploma	30	15.00
c.	S1	36	18.00
d.	S2	9	04.50
	Total	200	100
04	Work Respondent		
a.	Student / Student	60	30.00
b.	Self-employed	106	53.00
c.	Civil servants	13	06.50
d.	TNI/POLRI	5	02.50
e.	Bank employees	12	06.00
f.	IRT	4	02.00
	Total	200	100
05	Income Respondents (Rp)		
a.	1,500,000-3,500,000	70	35.00
b.	3,500,001-6,500,000	85	42.50
c.	6,500,001-10,000,000	36	18.00
d.	Above 10,000,001	9	04.50
	Total	200	100

06	Lots of it Transaction		
a.	1 time	58	29.00
b.	2 times	46	23.00
c.	3 times	38	19.00
d.	4 times	17	08.50
e.	Above 5 times	41	20.50
	Total	200	100

Source: Primary data processed in SPSS, 2023

Based on table 4 above, it can be concluded that the majority of JNE delivery service users in this study were women, 101 respondents (50.5%), while 99 respondents (49.5%) were men.

Based on table 4 above, it can be concluded that the majority of JNE delivery service users in this study were 81 respondents (40.5%) aged 21 - 25 years and 68 respondents (34%) aged 26 - 30 years, while those aged 31 - 35 years were 28 respondents (14%), JNE delivery service users aged 36 - 40 years were 18 respondents (9%) and >40 years old was the lowest age of respondents in using JNE delivery services as many as 5 respondents (2.5%).

Based on table 4 above, it can be concluded that the majority of JNE delivery service users in this study had a high school/vocational education, 125 respondents (62.5%). Meanwhile, 36 respondents (18%) had a bachelor's degree, 30 respondents (15%) had a diploma, and 9 respondents (4.5%) had a master's degree.

Based on table 4 above, it can be concluded that the majority of JNE delivery service users in this study work as entrepreneurs, 106 respondents (53%), while 60 respondents (30%) are students. Other jobs were as civil servants as many as 13 respondents (6.5%), bank employees as many as 12 respondents (6%), TNI/POLRI as many as 5 respondents (2.5%) and housewives as many as 4 respondents (2%).

Based on table 4 above, it can be concluded that the majority of JNE delivery service users in this study earn Rp. 3,500,000 – Rp. 6,500,000 as many as 85 respondents (42.5%) and Rp. 1,500,000 – Rp. 3,500,000 as many as 70 respondents (35%). Meanwhile, those who earn Rp. 6,500,000 – Rp. 10,000,000 as many as 36 respondents (18%) and as many as 9 respondents (4.5%) earned >Rp. 10,000,000.

Based on table 4 above, it can be concluded that the majority of JNE delivery service users often make transactions once, as many as 58 respondents (29%), while as many as 46 respondents (23%) make transactions twice, as many as 41 respondents (20.5%) do transactions >5 times, 38 respondents (19%) made transactions 3 times and 17 respondents (8.5%) made transactions 4 times.

### **Hypothesis testing**

In this research, the model was developed using SEM analysis tools (Structural Equation Modeling) using the Amos application version 23. The following are the SEM modeling stages in this research:

#### 1. Development of Theory-Based Models

The SEM modeling in this research has been based on strong theory and has been confirmed by several previous studies as explained in chapter 2, and as stated by Ghazali (2017) that the quality relationships between variables assumed by researchers are not always only based on analytical methods. chosen but must be based on a strong theory.

#### 2. Arranging a Path Diagram (Path Diagram)

Creating a path diagram is the second step in SEM data analysis. In preparing a path diagram, pay attention to causal relationships with path diagrams and structural equations. The path diagram in this research is shown in the image below:

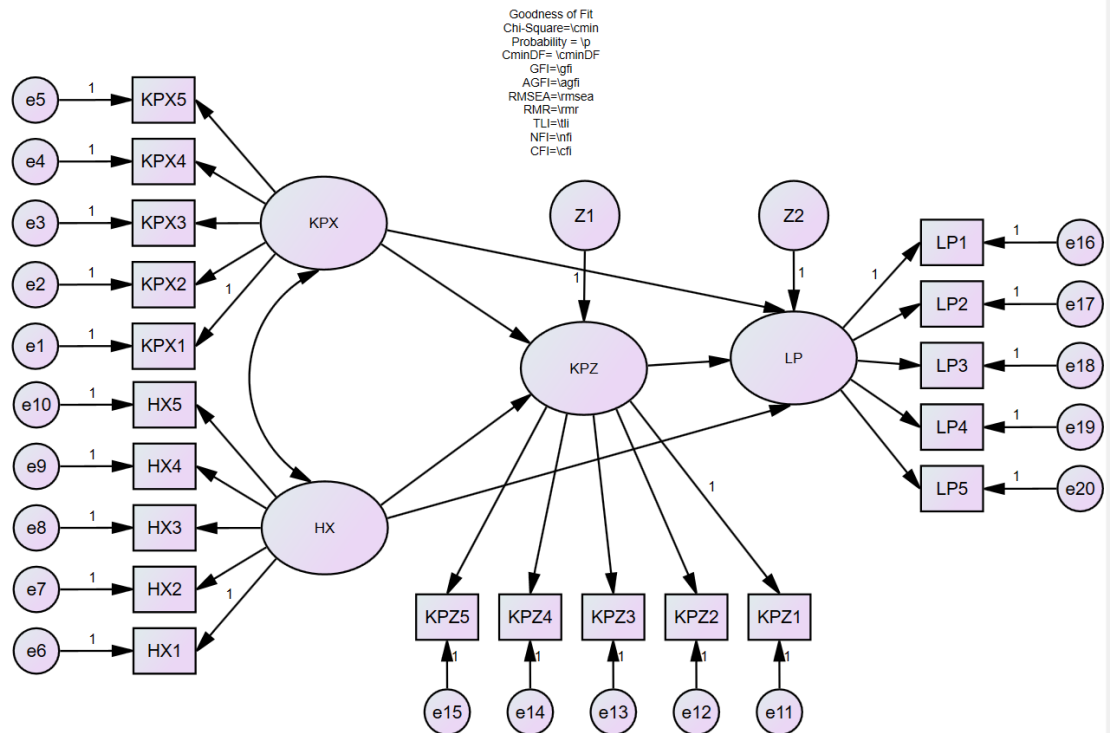


Figure 4. 1 Structural Equation Modeling

Source: AMOS version 23 input

3. Converting Path Diagrams to Structural Equations

This stage converts the path diagram into an input matrix for a structural equation model or structural measurement model.

4. Matrix Input and Model Estimation

The input matrices used are covariance and correlation. The estimated model used is *the maximum likelihood (ML)* estimate. The ML estimate has been met with the following assumptions:

a. Sample Size

In this research, the method used to collect data was a survey method using a questionnaire. The number of samples required in this research is a minimum of 200 data samples. This refers to maximum likelihood sample size estimation to reduce bias in all types of SEM estimates (Loehlin, 1998). This research uses a sample of 200 respondents, so the sample size used in this research meets the assumptions required for the SEM test.

b. Normality test

The Normality Test is carried out by using the z value (*critical ratio* or CR in AMOS version 23 output) from the *skewness* and kurtosis values of the data distribution. The critical value is  $\pm 2.58$  at a significance level of 0.01 (Ghozali, 2011). The results of the data normality test can be carried out as follows:

Table 5 Normality Test Results

Variables	min	max	skew	cr	kurtosis	cr
LP5	1,000	4,000	-,302	-1,743	-1,166	-3,367
LP4	1,000	4,000	-,191	-1,100	-1,197	-3,456
LP3	1,000	4,000	-,490	-2,830	-,795	-2,294
LP2	1,000	4,000	-,177	-1.025	-1,088	-3,140
LP1	1,000	4,000	-,066	-,381	-1,179	-3,402
KPZ5	1,000	4,000	-,103	-,597	-1,334	-3,851
KPZ4	1,000	4,000	-,329	-1,899	-1,042	-3,008

Variables	min	max	skew	cr	kurtosis	cr
KPZ3	1,000	4,000	-,268	-1,545	-1,000	-2,886
KPZ2	1,000	4,000	-,054	-,311	-1,212	-3,498
KPZ1	1,000	4,000	-,263	-1,520	-1,012	-2,922
HX5	1,000	4,000	,184	1,063	-,953	-2,751
HX4	1,000	4,000	-,030	-,172	-,804	-2,322
HX3	1,000	4,000	,282	1,630	-,650	-1,877
HX2	1,000	4,000	-,055	-,315	-,991	-2,862
HX1	1,000	4,000	-,326	-1,882	-,848	-2,449
KPX5	1,000	4,000	-,121	-,696	-1,138	-3,286
KPX4	1,000	4,000	-,258	-1,489	-,979	-2,827
KPX3	1,000	4,000	-,148	-,857	-,944	-2,726
KPX2	1,000	4,000	-,013	-,078	-1,180	-3,405
KPX1	1,000	4,000	-,201	-1.158	-1,173	-3,385
Multivariate					10,422	2,484

Source: Primary data processed using AMOS, 2023

From the results of the z-skewness and z-kurtosis values, it can be seen that all the observed variable data has a normal univariate distribution because it is in the region  $-2.58 < CR < +2.58$ . Multivariately, the result data is normally distributed because it is in the area  $-2.58 < CR < +2.58$ , namely 2.484, so the data is normally distributed.

Data normality testing aims to identify the normality of data distribution which is carried out both *univariate* (per indicator) and *multivariate* (all indicators), namely by observing the values of data skewness (*skewness*) and data sharpness (*kurtosis*). For these two parameters, each indicator has a *critical ratio* (CR) value. If a significance level of 5% is used, then the CR value which is between -1.96 to +1.96 is said to be normally distributed data both *univariately* and *multivariately*. Meanwhile, at a significant level of 1%, the CR value is between  $\pm 2.58$ . If the CR value is within this limit, it can be said that the data on the indicator is normal.

#### Identification of Outliers

Evaluation of *multivariate outliers* can be seen through the AMOS output in the *Mahalanobis Distance* section. The criteria used are at the  $p < 0.001$  level. In this case the indicator is 20, then via the excel program in the Formula *Insert Function – CHIINV* sub-menu enter the probability and number of measured indicators as follows:

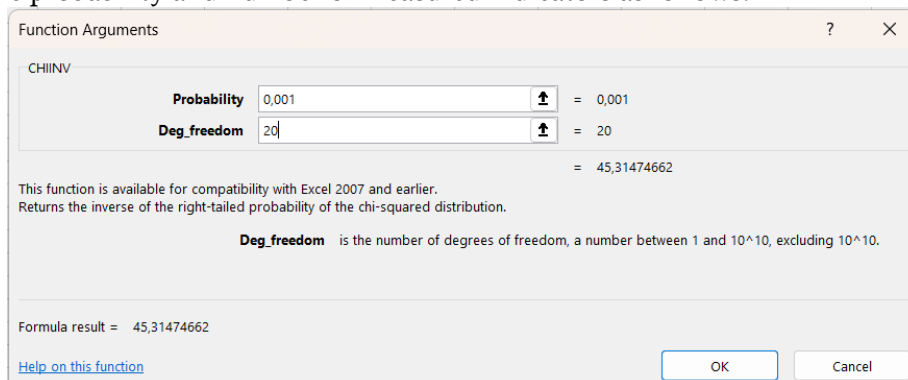


Figure 1. Chi – Square Value

The result is 45,314. This means that all data/cases greater than 45,314 are multivariate outliers.

#### 5. Assessing Model Identification

At this stage, the model is identified whether there are illogical or *meaningless estimation results*. If there is *meaningless*, it means that the research model has an

identification problem. The identification problem is the inability of the proposed model to produce a unique estimate. The indicator for determining a model that is suitable to be continued to the next stage is to look at the identification results. There are 3 identification models in structural modeling, namely *unidentified*, *just identified* and *overidentified* models. An identification model can be said to be feasible if the model is *overidentified* with positive *degrees of freedom*. Ghazali (2017).

Table 6. Calculation of Degrees of Freedom

Number of distinct sample moments:	210
Number of distinct parameters to be estimated:	46
Degrees of freedom (210 - 46):	164

Source: Primary data processed using AMOS, 2023

In the research above which was processed using AMOS version 23, it states that the *degrees of freedom* is 164 or positive, so it can be said that the model is *overidentified* and is suitable for continuing to the next stage.

6. Assess Goodness of Fit Criteria

Assessing *goodness of fit* is the main goal in SEM to find out to what extent the hypothesized model is "Fit" or fits the data sample. The *goodness of fit* results are displayed on the data the following:

Table 7. Goodness Fit Test Results

No.	Goodness of Fit Index	Cut Off Value	Results	Information
<i>Absolute Fit Indices</i>				
1	Chi Square	The more small, increasingly Good	206,491	Good Fit
	<i>Probability</i>	≥ 0.05	0.0 14	Good Fit
2	RMSEA	≤ 0.08	0.0 36	Good Fit
3	GFI	≥ 0.90	0.904	Good Fit
4	AGFI	≥ 0.90	0.877	Bad Fit
5	RMR	≤ 0.05	0.0 50	Good Fit
6	CMIN/DF	< 2	1,259	Good Fit
<i>Incremental Fit Indices</i>				
7	TLI	≥ 0.90	0.9 64	Good Fit
8	CFI	≥ 0.9 0	0.9 69	Good Fit
9	NFI	≥ 0.90	0.868	Bad Fit

Source: Primary data processed using AMOS, 2023

Based on the results of the table above, the *goodness of fit test* shows that 8 criteria are met, namely Chi Square with a value of 206.491, RMSEA with a value of 0.036, GFI with a value of 0.904, RMR with a value of 0.05, CMIN/DF with a value of 1.259, TLI with a value 0.969, and CFI with a value of 0.969. According to Ghazali (2011) that if only 1 *goodness of fit criterion* is met then the model built as a whole is considered good or can represent the entire model. So in this study it was concluded that the model was accepted.

**Discussion**

**1. Service quality has a positive and significant effect on customer satisfaction**

Based on the results of testing hypothesis 1 in this research, the influence of service quality on customer satisfaction shows positive and significant results, which means that service quality is able to provide customer satisfaction. So hypothesis 1 in this study can be accepted because there is a positive influence and

significant relationship between service quality and customer satisfaction. The results of this research are in line with previous research by Dennisa et al., (2016) which stated that "service quality has a positive and significant effect on customer satisfaction at the Cosmedic Beauty Clinic". This influence indicates that the higher the quality of service provided by the Cosmedic Beauty Clinic, the higher the customer satisfaction. On the other hand, the lower the quality of the service provided, the lower the customer satisfaction.

Meanwhile, according to Saputro, Adi Novianto, (2017) stated that "Service quality influences consumer satisfaction, so it is concluded that the higher the service quality, the more consumer satisfaction will increase." Good quality service provided by all employees of Federal International Finance Rungkut Surabaya Branch, such as friendly and informative communication to consumers regarding company programs, clear directions and guidance to consumers who are interested in company services, politeness to consumers, and providing solutions towards consumers who experience problems is a factor in increasing consumer satisfaction.

## **2. Price perception has a positive and significant effect on customer satisfaction**

Based on the results of testing hypothesis 2 in this research, the influence of price perception on customer satisfaction shows positive and significant results, which means that price perception is able to provide customer satisfaction. So it can be concluded that hypothesis 2 in this study is accepted. The results of this research are in line with previous research by Widagdo & Laily, (2020) which stated that "the lower or more affordable the price level provided by Grab Bike, the higher the level of customer satisfaction with Grab Bike services." So, price has a positive and significant influence on customer satisfaction.

## **3. Service quality has a positive and significant effect on customer loyalty**

Based on the results of testing hypothesis 3 in this research, the influence of service quality on customer loyalty shows positive and significant results, which means that service quality is able to have an influence on customer loyalty. So it can be concluded that hypothesis 3 in this study is accepted because of the influence of the relationship between variables. The results of this research are in line with previous research by Saputro, Adi Novianto, (2017) who stated that maximum service provided to consumers who want to use the company's products and services or are just looking for information about company services provides a sense of satisfaction for customers. After feeling satisfied as if their hopes and expectations have been met, consumers will be happy to use the company's products and services in the future.

## **4. Price perception has a negative and significant effect on customer loyalty**

Based on the results of testing hypothesis 4 in this research, the influence of price perception on customer loyalty shows negative results, which means that price perception has no influence on customer loyalty. So it can be concluded that hypothesis 4 in this study is rejected because there is no influence of the relationship between variables. According to Widagdo & Laily, (2020) stated that "the low influence of price on customer loyalty means that price cannot have a direct influence and cannot determine customer loyalty". So, price has an insignificant positive influence on customer loyalty. The results of this research are in contrast to current research which states that price perception has a negative and insignificant effect on customer loyalty.

## **5. Customer satisfaction has a positive and significant effect on customer loyalty**

Based on the results of testing hypothesis 5 in this research, customer satisfaction with customer loyalty shows positive and significant results, which means that customer satisfaction is able to have an influence on customer loyalty. So it can be concluded that hypothesis 5 in this study is accepted. The results of this research are in line with previous research by Prasetya, (2018) which stated that customer satisfaction has an influence on customer loyalty, which can be interpreted as the more positive customer satisfaction, the higher the loyalty of J&T Express Malang City customers.

## **6. Service quality has a positive and significant effect on customer loyalty which is not mediated through customer satisfaction**

Based on the results of testing hypothesis 6, this research states that customer satisfaction has a negative effect as a mediator of service quality on customer loyalty, which means that customer satisfaction has not been able to have an influence as a mediator of service quality and customer loyalty. So it can be concluded that hypothesis 6 in this study is rejected. According to Prasetya, Wiradwipa Aldi, (2018), regarding customer satisfaction as a mediating influence of service quality on customer loyalty at J&T Express Malang City, stated that service quality has a positive and significant influence on customer loyalty through customer satisfaction. The results of previous research contradict current research which states that customer satisfaction does not mediate service quality on customer loyalty.

**7. Price perception has a positive and significant effect on customer loyalty through the mediation of customer satisfaction**

Based on the results of testing hypothesis 7, this research states that customer satisfaction plays a positive and significant role as a mediator of price perception on customer loyalty, which means that customer satisfaction is able to have an influence as a mediator of price perception and customer loyalty. So it can be concluded that hypothesis 7 in this study is accepted because of the influence of the relationship between variables. The results of this research are in line with previous research by Widagdo & Laily, (2020), regarding the influence of service quality and price on Grab Bike customer loyalty, mediated by customer satisfaction among East Surabaya students. The research results show that price has an influence positive and significant towards customer loyalty through customer satisfaction. Kotler and Keller (2009) Perception is the process by which we choose to organize and translate input information to create a meaningful picture of the world. So price perception is defined as the customer's expectations or hopes that he will obtain for the sacrifices he has made. When with this sacrifice the customer feels that it matches what was expected, of course there will be a feeling of satisfaction. With a sense of satisfaction, there is a possibility that customers will become loyal and make repeat purchases of the services they have purchased.

**CONCLUSION**

Based on the results of data analysis and hypothesis testing which has been carried out using structural equation modeling (SEM), and carried out through the AMOS version 23 program, where to test seven hypotheses with JNE consumer objects in this research, with the research title the influence of service quality and price perception on Customer satisfaction and loyalty among JNE consumers can be concluded as follows: Service quality has a positive and significant effect on customer satisfaction. This is proven by the results of hypothesis testing, which shows that *the standardized regression weight coefficient value* is 0.385 and the CR value is 3.464. This shows that the relationship between service quality and customer satisfaction is positive. This means that the better the quality of service, the greater customer satisfaction will be. Testing the relationship between these two variables shows a probability value of 0.001 ( $p < 0.05$ ), so that (H1) which reads "Service quality has a positive and significant effect on customer satisfaction at JNE" is supported and can be stated if there is a direct influence between service quality and satisfaction customer.

Price perception has a positive and significant effect on customer satisfaction. This is evident from the results of hypothesis testing, which shows that the *standardized regression weight coefficient value* is 0.343 and the CR value is 2.562. This shows that the relationship between price perception and customer satisfaction is positive. This means that the better the price perception, the greater the customer satisfaction. Testing the relationship between these two variables shows a probability value of 0.010 ( $p < 0.05$ ), so that (H2) which reads "Price perception has a positive and significant effect on customer satisfaction at JNE" is supported and can be stated if there is a direct influence between price perception and satisfaction customer.

Service quality has a positive and significant effect on customer loyalty. This is proven by the results of hypothesis testing, which shows that *the standardized regression weight coefficient value* is 0.261 and the CR value is 2.866. This shows that the relationship between service quality and customer loyalty is positive. This means that the better the quality of service, the more customer loyalty will increase. Testing the relationship between these two variables shows a probability value of 0.004 ( $p < 0.05$ ), so that (H3) which reads "Service quality has a positive and significant effect on customer loyalty at JNE" is supported and can be stated if there is a direct influence between service quality and loyalty. customer.

Price perception has a negative and significant effect on customer loyalty. This is proven by the results of hypothesis testing, which shows that *the standardized regression weight coefficient value* is 0.072 and the CR value is 0.725. This shows that the relationship between price perception and customer loyalty is negative and significant. This means that price perception cannot increase customer loyalty. Testing the relationship between these two variables shows a probability value of 0.468 ( $p < 0.05$ ), so that (H4) which reads "Price perception has a positive and significant effect on customer loyalty at JNE" is rejected and can be stated if there is no direct influence between price perception. with customer loyalty.

Customer satisfaction has a positive and significant effect on customer loyalty. This is proven by the results of hypothesis testing, which shows that *the standardized regression weight coefficient value* is 0.566 and the CR value is 5.175. This shows that the relationship between customer satisfaction and customer loyalty is positive. This means that the better customer satisfaction will increase customer loyalty. Testing the relationship between these two variables shows a probability value of 0.001 ( $p < 0.05$ ), so that (H5) which reads "Customer Satisfaction has a positive and significant effect on customer loyalty at JNE" is supported and can be stated if there is a direct influence between customer satisfaction and loyalty. customer.

Service quality has a positive and significant effect on customer loyalty which is not mediated through customer satisfaction. This is evident from testing the influence of service quality on customer loyalty, mediated by customer satisfaction, comparing the *direct effect value* < *the indirect effect value* , testing the relationship between these two variables shows a value of  $0.287 > 0.240$ , this shows that customer satisfaction does not mediate service quality on customer loyalty.. This means that service quality has not been able to create customer satisfaction and have an impact on customer loyalty. So (H6) which states "Service quality has a positive and significant effect on customer loyalty through customer satisfaction as an intervening variable at JNE" is rejected and can be stated if there is no direct influence between service quality and customer loyalty through customer satisfaction.

Price perception has a positive and significant effect on customer loyalty through the mediation of customer satisfaction. This is proven by testing the influence of service quality on customer loyalty, mediated by customer satisfaction, comparing the *direct effect value* < *the indirect effect value* , testing the relationship between these two variables shows a value of  $0.066 < 0.178$ , this shows that customer satisfaction mediates price perception on customer loyalty. This means that the higher the price perception, the more customer satisfaction it will create and have an impact on increasing customer loyalty. So (H7) which reads "Price perception has a positive and significant effect on customer loyalty through customer satisfaction as an intervening variable at JNE" is supported and can be stated if there is an indirect influence between price perception and customer loyalty through customer satisfaction.

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