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Analysis of Service Quality Factors That Affect Customer Satisfaction and Loyalty in the C-Access Application

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Abstract: This study aims to determine the level of customer satisfaction and loyalty through the quality of service presented by PT KAI's C-Access Application. In this study, a quantitative approach was used, and data collection was carried out by online survey. The population in this study were KRL Commuterline users who live in Jakarta, Bogor, Depok, Tangerang and Bekasi (Jabodetabek) areas. The sampling technique used a simple random sampling method, namely random sample selection from the population using the C-Access application. A total of 207 respondents filled out the questionnaire, then the data was analyzed using Path Analysis to evaluate and develop the effectiveness of the application. The results showed that there is a significant influence between the quality of service provided through the C-Access application on the level of customer satisfaction and loyalty. The results of the analysis show that the higher the quality of service perceived by customers, the higher the level of satisfaction they feel with the service.

Keyword: Service Quality, Satisfaction, Loyalty, C-Access Application, Commuter Line.

INTRODUCTION

Public Transportation is a passenger transportation service that has an important role in supporting daily activities. Public transportation is managed according to a schedule, operated on a set route, and charged a fare for each trip. The purpose of public transportation is to make it easier for people to move places at an affordable cost, thus supporting the economic activities of the community. The availability of efficient and effective public transportation is expected to be a solution to facilitate community movement. Commuter Line Railway (KRL) is a public transportation option that is in great demand by people in Jabodetabek because of its affordable fares, avoiding congestion and relatively fast time to get to the destination.

In the digital era, mobile applications have become a part of people's lives. This also applies to the transportation sector, where various applications have been launched to facilitate the mobility of its users. One example is the C-Access application developed by PT

Kereta Api Indonesia (Persero) or PT KAI. The C-Access application is a development of the KRL-Access application that can be downloaded on the Play Store. C-Access comes with a more modern look than before. New features added include Gopay digital payment, Multi-Trip Card top-up, QR Ticket, and Explore. The C-Access application was created to help Jabodetabek KRL users get information about KRL schedules and positions in real time (Google, 2018) (Pertiwi et al., 2019).

Users of the C-Access application certainly have some problems when using it. According to Google Play Store data (2024), the C-Access application has had 500,000 total downloads and received an average rating of 2.4 out of 5 stars. This is due to the poor reviews given by users about the C-Access app. The reviews obtained by Google Play Store show that many users complain about difficulties, the application often experiences errors so users feel uncomfortable.

Literature review

1. C-Access Application

C-Access is an evolution of KRL Access that introduces new features such as the ability to purchase QR codes and top up KMT balances using the NFC (Near Field Communication) system. C-Access is more user-friendly, easier to use, and has a more millennial look due to its applicable features (Son, 2023). C-Access was developed to create an urban transportation ecosystem that allows KAI Commuters to connect with other modes of transportation. This collaboration is the "KAI Commuter" travel planner that will be introduced in 2026 (Car et al., 2023).

2. Service Quality

The definition of service quality according to Mashur et al. (2019); Santos de Oliveira & Caetano (2019); and Zhu et al. (2020), refers to all economic activities whose results are not products in physical form or structure, but added values such as comfort, entertainment, health, pleasure and others (In Bungatang & Reynel, 2021). Chang & Yeh (2017) explain that service quality has a prolonged effect on shaping customer satisfaction and loyalty to the company (Setyawati & Hasan, 2021). Dahoklory & Ismail (2017) also revealed that service quality is closely related to customer satisfaction. There are 5 dimensions of service quality as described by Tjiptono and Chandra (2016) (Maamari & Wasfi, 2020), that is reliability, responsiveness, assurance, empathy, and tangible.

Service quality is essential for service owners. In today's competitive environment, service quality is a key strategy for success. Good e-service quality will increase customer satisfaction. According to Forslund (2007), customer satisfaction with electronic services is highly dependent on the quality they perceive from these services (Indriyati, 2021).

Service quality is how consumers assess the difference between the service they receive and the service they expect. Good service quality can influence purchasing decisions because satisfying service will increase customer satisfaction and loyalty, as well as encourage them to make repeat purchases. This will certainly have a positive impact on the company's sales and revenue. To be able to compete, survive, and develop, companies need to meet the needs and desires of customers by providing the best service. Thus, customers will feel satisfied, give a positive image to the company, and are more likely to become loyal customers (Stevent, 2020).

3. Customer Satisfaction

Kotler and Keller (2012) state that satisfaction is how a person feels happy or disappointed as a result of comparing the perceived performance of a product with his expectations (In MaminiainaAimee, 2019). Customers will be satisfied when the product performance they feel meets or exceeds their expectations (Amin et al. 2013; Meesala and Paul, 2018). Conversely, dissatisfaction will arise if the product does not meet expectations

(Amin et al. 2013). Customer satisfaction is an important aspect of the company's products. In this study, the authors used 3 indicators according to (Kotler 2016). Indicators of Customer Satisfaction, namely Experience, Customer Expectations, and Needs. Willie, (2020) stated that three factors determine customer satisfaction, including Product Quality, Service Quality and Price.

4. Customer Loyalty

Loyalty is defined as a strong customer commitment to continue to buy certain products or services in the future, despite the influence of circumstances and marketing efforts that can influence their behavior (Kotler,2009) (Widyo Kristantyo, 2021). The Customer Loyalty indicator has an important role and provides a benchmark for companies to understand their customers and measure the revenue of a company. In this study, the authors used indicators designed according to Griffin (2010) (In Yuliana & Purnama, 2021). indicators of customer loyalty, namely: repeat purchases, recommending to others, buying between product/service lines, and not buying similar products/services from competitors.

Table 1. Measurement Of Variables

Variable	Operational definition	Source
Service Quality	Level of excellence expected and managed to help meet customer expectations. Service quality is based on the theory of the gap between customer expectations of the service provided and the perceived evaluation of the service.	(Setyawati & Hasan, 2021)
Customer Satisfaction	Customer satisfaction is a person's feeling that is created from comparing the performance of a product purchased with what consumers expect.	(MaminiainaAimee, 2019)
Customer Loyalty	Customer loyalty is the extent to which customers remain loyal to a particular brand through continuous purchases and other positive behaviors, such as word of mouth, despite marketing pressure from other competing brands.	(Febryanti et al., 2024)

Table 2. Panel of Instrument

Variable	Indicator	Source
Service Quality	a. Reliability b. Responsiveness c. Assurance d. Empathy e. Tangible	(Maamari & Wasfi, 2020)
Customer Satisfaction	a. Experience b. Customer expectations c. Needs	(Yuliana & Purnama, 2021)
Customer Loyalty	a. Repeat Purchases b. Recommend to others c. Buying between product or service lines d. Not buying similar products or services from competitors	(Willie, 2020)

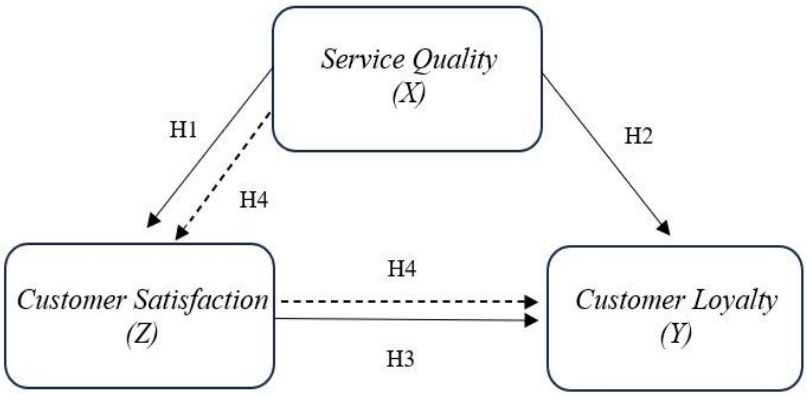

Figure 1. Research Model

Hypothesis:

H_1: It is suspected that Service Quality has a substantial impact on Customer Satisfaction.
H_2: It is suspected that Service Quality has a substantial impact on Customer Loyalty.
H_3: It is suspected that Customer Satisfaction has a substantial impact on Customer Loyalty.
H_4: It it suspected that Service Quality has a substansial impact on Customer Loyalty through Customer Satisfaction

METHOD

This research uses a type of quantitative research, namely by collecting data from users of the C-Access application using a questionnaire. This methodology was chosen to examine the effect of Service Quality on Customer Satisfaction and Customer Loyalty on the C-Access application. The population in this study are users of the KRL Commuter Line and the C-Access application in the Jabodetabek area while the sample used is C-Access application users. The questionnaire in this study was directed at statements related to the quality of service provided by the C-Access application affecting the level of customer satisfaction used to form graduate competencies on a Likert Scale with 5 categories of value levels, then this questionnaire was submitted to parties who had used the C-Access application as respondents who were considered to give an objective assessment. This research uses SmartPLS SEM (Partial Least Square - Structural Equation Modeling) software. PLS can explain the relationship between variables and perform various analyses in one test. The purpose of PLS is to help researchers confirm the theory and identify the relationship between latent variables. Imam Ghozali (2016: 417) argues that the PLS method can describe latent variables that are not directly measured and measured using indicators.

RESULTS AND DISCUSSION

Measurement theory determines how latent variables or constructs are measured. In general, there are two different methods for measuring variables that cannot be directly observed. One approach is referred to as reflective measurement, and the other is formative measurement (Ketchen, 2013). In SEM-PLS, researchers use reflective variables, which are methods for measuring latent constructs using indicators that are correlated and influenced by latent constructs.

Measurement Model Reflective

The measurement model is reflective own three aspects main according to (Sholihin, 2021) that is :

1. **Reliability Internal Consistency**

For considered reliable, *Composite reliability* and *Cronbach alpha values* must be more than 0.70. However, in the study exploration, a value of 0.60 - 0.70 still can be accepted.

2. **Validity Convergent**

Indicator loadings greater than 0.70 to ensure convergent validity.

3. **Validity Discriminant**

a. The square root of the Average Variance Extracted (AVE) must be greater than the correlation between other constructs.

b. The indicator's loading on the measured construct should be higher than its loading on other constructs so that cross-loading remains low.

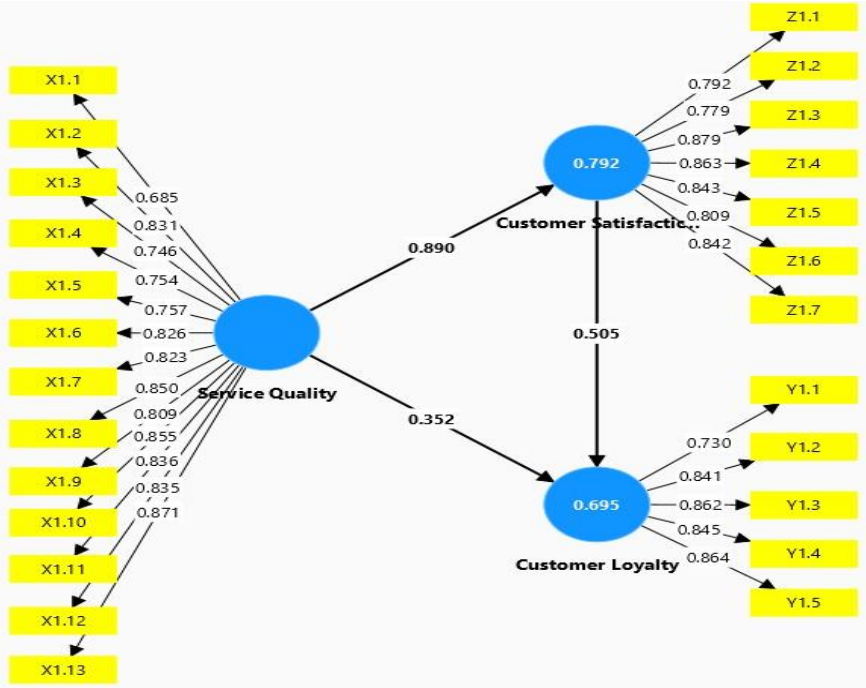

Figure 2. Initial Model

Measurement Model (Outer Model)

Evaluation of the measurement model (outer model), aims to evaluate the validity and reliability of the model. For outer models with reflective indicators, evaluate done with evaluate convergent and discriminant validity of indicator shaper latent constructs, as well measure composite reliability and Cronbach alpha for block every indicators (Ghozali, 2015: 73) (In Sugiono, 2019). Following is a test performed on the outer model:

1. **Convergent Validity**

According to (Ghozali, 2015:37) Validity Convergent can be seen from the correlation between indicators or item scores and the construct. Indicators are considered reliable if the correlation is above 0.7. However, at the scale development stage, the loading factor value between 0.5 - 0.6 still can accepted (In Sugiono, 2019). All model indicators have mark overloading of 0.7. This shows that construct can be accepted.

Table 3. Outer Loadings

Variable	Code	Statement	Outer Loadings	Description
Service Quality (X1)	X1.2	The C-Access application always provides accurate and up-to-date schedule information.	0.831	Valid
	X1.3	The C-Access application can be used to purchase KRL Commuter Line tickets online.	0.747	Valid
	X1.4	The C-Access app provides an effective feature to accommodate my complaints and suggestions.	0.754	Valid
	X1.5	The helpdesk on the C-Access app responds quickly.	0.755	Valid
	X1.6	The C-Access application loads the home page, train schedule, route information and ticket information quickly.	0.826	Valid
	X1.7	The C-Access application guarantees the security of KRL Commuter Line ticket purchase transactions and my personal data.	0.822	Valid
	X1.8	The C-Access application provides a sense of security and comfort when traveling the KRL Commuter Line.	0.850	Valid
	X1.9	The C-Access application provides features that suit the needs of users, including users with disabilities.	0.809	Valid
	X1.10	The C-Access application conveys information clearly and is easy to understand.	0.856	Valid
	X1.11	The design and visuals of the C-Access application are attractive and comfortable to use.	0.836	Valid
	X1.12	Icons and buttons on the C-Access application are easy to understand.	0.835	Valid
	X1.13	The appearance of the C-Access application is neat and informative.	0.872	Valid
Customer Satisfaction (Y1)	Y1.1	C-Access application is easy to access and use anywhere.	0.792	Valid
	Y1.2	The C-Access app is always smooth and glitch-free when used.	0.779	Valid
	Y1.3	The C-Access app provides features that really help me when planning my KRL Commuter Line trip.	0.879	Valid
	Y1.4	The C-Access app satisfies me and its functions are very easy to understand.	0.863	Valid
	Y1.5	The C-Access app meets or exceeds my expectations with the functions and features provided.	0.843	Valid
	Y1.6	The Helpdesk service on the C-Access application solves my problem as expected.	0.809	Valid
	Y1.7	The C-Access application helps me easily purchase tickets online.	0.842	Valid
Customer Loyalty (Y2)	Y2.1	I have experienced problems when using the C-Access application but I am still interested in using it again.	0.730	Valid
	Y2.2	I recommend the C-Access application to people who often travel using the KRL Commuter Line.	0.841	Valid
	Y2.3	The C-Access app provides additional features that I need.	0.862	Valid

Variable	Code	Statement	Outer Loadings	Description
	Y2.4	I will always use the C-Access application when I want to travel using the KRL Commuter Line.	0.845	Valid
	Y2.5	I always use the C-Access application to buy KRL Commuter Line tickets.	0.864	Valid

2. Discriminant Validity

(Ghozali, 2015:39) argues that Discriminant Validity is a cross-loading factor value that is useful for determining whether a construct has adequate discriminant. The method is to ensure that the loading value on the targeted construct more taller compared to with loading value on the construct of others (In Sugiono, 2019).

Table 4. Cross Loading

	Customer Loyalty	Customer Satisfaction	Service Quality
X1.1	0.517	0.596	0.685
X1.10	0.677	0.763	0.855
X1.11	0.658	0.772	0.836
X1.12	0.662	0.761	0.835
X1.13	0.669	0.763	0.871
X1.2	0.672	0.734	0.831
X1.3	0.647	0.621	0.746
X1.4	0.631	0.681	0.754
X1.5	0.655	0.666	0.757
X1.6	0.680	0.748	0.826
X1.7	0.641	0.727	0.823
X1.8	0.669	0.739	0.850
X1.9	0.620	0.745	0.809
Y1.1	0.636	0.792	0.760
Y1.2	0.633	0.779	0.672
Y1.3	0.740	0.879	0.782
Y1.4	0.674	0.863	0.781
Y1.5	0.667	0.843	0.710
Y1.6	0.685	0.809	0.679
Y1.7	0.714	0.842	0.778
Y2.1	0.730	0.527	0.501
Y2.2	0.841	0.739	0.719
Y2.3	0.862	0.728	0.710
Y2.4	0.845	0.668	0.683
Y2.5	0.864	0.704	0.682

From the table above, it can be concluded that each construct has adequate discriminant validity, with a higher loading value on the intended construct compared to other constructs. In addition, all indicators have a loading value of more than 0.5. This indicates that there is no problem with discriminant validity in this analysis.

3. Fornell Larcker

The Fornell-lacker criterion is the second approach to assessing discriminant validity. This method is calculated by comparing the root of the Average Variance Extracted (AVE) value with the correlation of the latent variables. For good discriminant validity, the square root of the AVE for each construct should be greater than its highest correlation with the other constructs. An alternative approach to evaluating the results of the Fornell-Larcker criterion is to determine whether the AVE is higher than the square between the constructs of the constructs. (Ketchen, 2013)

Table 5. Fornell Larcker

	Customer Loyalty	Customer Satisfaction	Service Quality
Customer Loyalty	0.830		
Customer Satisfaction	0.818	0.830	
Service Quality	0.801	0.890	0.808

In the table, the discriminant validity value based on the Fornell-Lacker criterion for this research model shows good discriminant validity, because the root of the AVE value for each construct is greater than the highest correlation between other constructs.

4. HTMT

Henseler et al (2015) suggest using heteroit-monotrait (HTMT) to assess correlation. In short, HTMT compares the average correlations between indicators measuring different constructs (heterotrait-heterometric correlation) with the average between indicators that measure the same construct (correlation monotrait-heteromethod) (Ketchen, 2013).

If the HTMT value exceeds 0.90. This indicates that discriminant validity is insufficient. If the constructs in the path model are conceptually more distinct, then a lower and more conservative threshold value of 0.85 is required. (Ketchen, 2013)

Table 6. HTMT

	Heterotrait-Monotrait Ratio (HTMT)
Customer Satisfaction <-> Customer Loyalty	0.896
Service Quality <-> Customer Loyalty	0.864
Service Quality <-> Customer Satisfaction	0.945

The table shows that the discriminant validity between the service quality and customer satisfaction constructs is inadequate with a very high HTMT value. Other constructs are below 0.90, which means that the discriminant validity is adequate.

5. Composite Reliability

For confirmatory research, the composite reliability value must be> 0.7. However, for exploratory research, a value of 0.6 - 0.7 is still acceptable (Ghozali , 2015:75) (In Sugiono, 2019).

Table 7. Composite Reliability

Variable	Composite reliability
Service Quality	0.960
Customer Satisfaction	0.939
Customer Loyalty	0.917

In the table above, it can be seen that the composite reliability value for all the variables is more than 0.7. This shows that respondents are consistent in answering statements, so all constructs can be considered to have a good level of reliability. The very high composite reliability values on all variables indicate that the data in the study are reliable to meet the standards set for confimatory research.

6. Cronbach's Alpha

The Cronbach's Alpha value is expected to be > 0.7 for all constructs. However, in exploratory research, a value > 0.6 still can accepted (Ghozali , 2015:77) (In Sugiono, 2019).

Table 8. Cronbach's Alpha

Variable	Cronbach's alpha
Service Quality	0.955
Customer Satisfaction	0.925
Customer Loyalty	0.886

From the table above, the Cronbach's alpha value for all the variables is more than 0.7. This shows that the data in the study all constructed have a good and reliable level of reliability.

7. Average Variance Extracted (AVE)

According to (Ghozali, 2015: 76) The expected AVE value is > 0.5 (Sugiono, 2019)

Table 9. AVE

Variabel	Average Variance Extracted (AVE)	Keterangan
Service Quality	0.652	Valid
Customer Satisfaction	0.689	Valid
Customer Loyalty	0.689	Valid

In the table above, all AVE values exceed 0.5, namely all variables indicate that the constructs tested have sufficient construction validity or meet the specified requirements and can be used properly in further analysis.

Inner Model Analysis

Inner model analysis or analysis structural model, aims to predict the connection between latent variables (Ghozali , 2015:73) (In Sugiono, 2019). Evaluation of the inner model is done by looking at several indicators, namely:

1. Direct Effect (Path Coefficients)

The standard regression coefficient shows how much direct influence the independent variable has on the dependent variable in a particular path model (Hakam, 2015:61-70) (In Sugiono, 2019).

Table 10. Path Coefficients

Hypothesis	Pengaruh Langsung (Direct Effect)	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T statistics (|O/STDEV|)	P values	Hasil
H1	Service Quality -> Customer Satisfaction	0.890	0.888	0.027	33.536	0.000	Accepted
H2	Customer Satisfaction -> Customer Loyalty	0.505	0.503	0.096	5.259	0.000	Accepted
H3	Service Quality -> Customer Loyalty	0.352	0.353	0.095	3,711	0,000	Accepted

2. Coefficient Determination (R^2)

2 dependent variables are influenced by other variables, namely Customer Satisfaction which is influenced by Service Quality and the second variable is Customer Loyalty which Service Quality and Customer Satisfaction influence.

Coefficient of Determination (R-Square) is used to measure how much influence exogenous variables have on endogenous variables. An R2 value of 0.75 is said to be good; 0.50 is moderate; 0.25 is weak. (Ghozali , 2015:79).(In Sugiono, 2019)

Table 11. R-Square

	R-square
Customer Loyalty	0.695
Customer Satisfaction	0.792

In the table, it can be seen that the value of Customer Loyalty is 0.695 and the value of Customer Satisfaction is 0.792 so it can be said that this value meets the requirements of the R-Square value.

Based on the table above, then can explained as follows:

a. Customer Loyalty has an R-Square value of 0.695 so it can be interpreted that the validity of the Customer Loyalty variable can be explained or influenced by the Service Quality and Customer Satisfaction variables in the moderate category of 69.6%. Meanwhile, the remaining 30.4% is explained by other variables not included in the research model.
b. Customer Satisfaction has an R-Square value of 0.792 so it can be interpreted that the validity of the Customer Satisfaction variable can be explained or influenced by the Service Quality variable in the good or strong category of 79.2%. Meanwhile, the remaining 20.8% is explained by other variables not included in the research model.

3. F-Square

According to Cohen (1998), the F-square or Effect size is calculated as the absolute value of the individual contribution of each predictor latent variable to the R-squared value of the criterion variable. F-Square is grouped into three categories: small (0.02), medium (0.15), and large (0.35). (Sholihin, 2021)

Table 12. F-Square

	Customer Loyalty	Customer Satisfaction	Service Quality
Customer Loyalty			
Customer Satisfaction	0.174		
Service Quality	0.085	3,804	

Based on the table above, it can be explained as follows:

a. Customer Satisfaction has a moderate effect on Customer Loyalty (F-Square = 0.174)
b. Service Quality has a low effect on Customer Loyalty (F-Square = 0.085)
c. Service Quality has a high effect on Customer Satisfaction (F-Square = 3,804)

4. Fit Test (Model Fit)

Used to validate the combined performance of the measurement model and structural models. The result value ranges from 0 - 1, with interpretations, namely 0 - 0.25 (small), 0.25 - 0.35 (moderate), and above 0.36 (large) (Setiawan, 2016:48) (In Sugiono, 2019)

Table 13. Model Fit

	Saturated Model	Estimated Model
SRMR	0.055	0.055
d_ULS	1.000	1.000
d_G	0.658	0.658
Chi-square	757.603	757.603
NFI	0.842	0.842

Overall, the SRMR, d_ULS, d_G, Chi-square, and NFI values in both models (saturated and estimated) have the same value. This indicates a good fit, which means that the model tested in this study has a good fit between the measurement model and the structural model, according to the established criteria.

Hypothesis

After completing the evaluation of the outer model and inner model, the next step is to test the hypothesis. Hypothesis testing aims to explain the direction of the relationship between the independent variable and the dependent variable. This test is carried out by paying attention to the probability value and t-statistic (Ghozali , 2015:42) (In Sugiono, 2019)

This test uses PLS (Partial Least Squares) to analyze the model that has been created. The author measures the correlation between constructs measured through the path

coefficient to evaluate how significant the effect of exogenous variables is on endogenous variables, both partially and simultaneously. The following are the steps to test the hypothesis of this study:

a) H1: There is a positive and significant influence between customer satisfaction variables on customer loyalty variables. The statistical T value obtained is very high, namely 33.608, and a very low P value of 0.000. This shows that this relationship is statistically significant and service quality affects customer satisfaction.
b) H2: There is a positive and significant influence between service quality variables on customer loyalty variables. The statistical T value obtained is 5,220 and the P value is 0.000. This shows that this relationship is statistically significant and service quality influences customer loyalty.
c) H3: There is a positive and significant influence between customer satisfaction variables on customer loyalty variables. The statistical T value obtained is 3.724 and the P value is 0.000. This shows that this relationship is statistically significant and customer satisfaction has a clear influence on customer loyalty.

In a previous journal entitled "The effect of KRL Access information availability and service quality on KRL Commuter Line customer satisfaction in Jabodetabek" (Azzahra et al., 2023) has the same 2 variables as the author's research, namely service quality and customer satisfaction, the results show that service quality has a positive and significant effect on customer satisfaction.

Furthermore, the journal "Service Quality Towards Community Satisfaction in the KRL Access Application (Case Study of Jakarta-Bogor Travel Route Users)" (Marginingsih et al., 2021) has the same 2 variables as the author, namely service quality and customer satisfaction, the results show that the level of community satisfaction through service quality in the KRL Access application has positive and significant results.

The research results from the two journals are the same and follow the results of the author's research. Namely that service quality has a positive and significant influence on customer satisfaction.

Indirect Effects

Indirect effects are a sequence of two or more direct effects that are usually indicated by several arrows in a visual representation (Ketchen, 2013). Haryono (2016 argues that the indirect effect aims to analyze how much influence a variable has on other variables, both exogenous and endogenous. (In Darwin & Umam, 2020)

Table 14. Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Service Quality -> Customer Satisfaction -> Customer Loyalty	0.449	0.447	0.087	5.161	0.000

Based on the table, it can be seen that the high T statistical value is 5.161 and the low P value is 0.000. This shows that there is an indirect effect between service quality and customer loyalty through customer satisfaction, which is statistically significant. With an original sample value of 0.449, it shows that there is a positive and significant effect of service quality on customer loyalty through customer satisfaction. This shows the importance of considering customer satisfaction as a key factor in strategies to increase customer loyalty.

Final Model

The final model was created after testing Convergent and Discriminant Validity, Composite Reliability, Cronbach alpha, AVE (Average Variance Extracted), Inner VIF, Inner Model, Path Coefficient, R-Square, F-Square, Model fit, Hypothesis and Indirect Effect. Then the final model that we use in this study is presented in the table as follows:

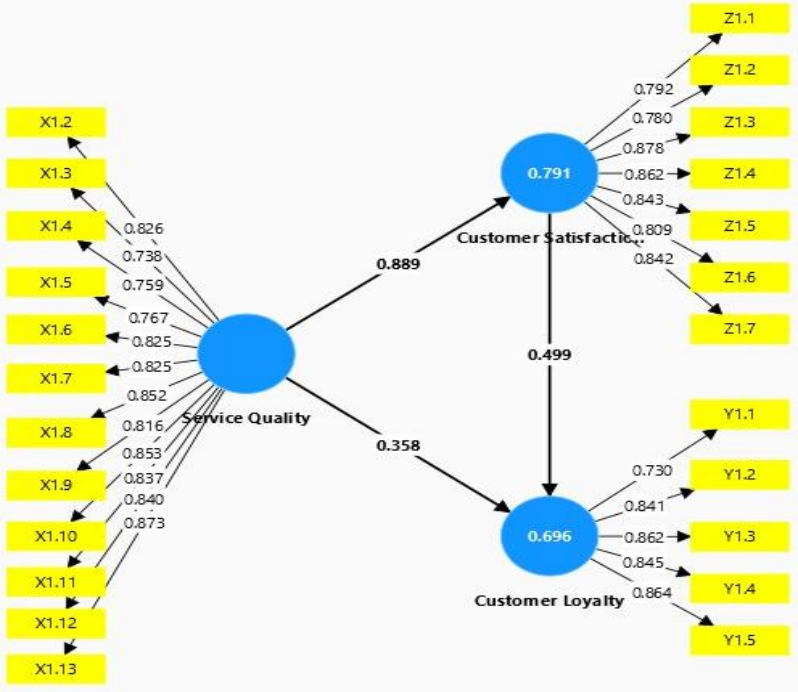

Figure 3. Final Model

CONCLUSION

This study shows that of the four hypotheses proposed, all are empirically proven and accepted on the direct effect, while one hypothesis on the indirect effect is also proven and acceptable. These results confirm that service quality plays a crucial role in increasing customer satisfaction and loyalty toward the C-Access application. The hypotheses regarding service quality having a direct impact on customer satisfaction and loyalty, as well as the effect of satisfaction on loyalty, were all strongly proven. In addition, the indirect effect of service quality on loyalty through satisfaction was also confirmed. This research highlights that service quality is a key determinant of successful customer satisfaction, with evidence that the majority of respondents are satisfied with the services provided by the C-Access application.

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