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The Influence of Service Quality and Toll Rates on Public Interest in Using Toll Roads with User Satisfaction as an Intervening Variable at PT Makassar Metro Network

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Abstract: This study aims to determine The partial influence of service quality and toll rates on public interest in using toll roads, The influence of service quality and toll rates on user satisfaction with toll roads, User satisfaction with toll roads on public interest in using toll roads, The influence of service quality on public interest in using toll roads through user satisfaction with toll roads and The influence of toll rates on public interest in using toll roads managed by PT Makassar Metro Network through user satisfaction with toll roads. This research uses a quantitative method. The research is conducted at PT Makassar Metro Network in Makassar with a population and sample of 125 toll road users. The sample selection is done using purposive sampling and the sample size is determined based on the Yount percentage table. Data collection techniques include questionnaires, and data analysis uses the SEM PLS analysis technique. The results of the study show that Service quality and toll rates have a positive and significant influence on the public interest in using toll roads, Service quality and toll rates have a positive and significant influence on user satisfaction with toll roads, User satisfaction with toll roads has a positive and significant influence on the public interest in using toll roads, Service quality has a positive and significant influence on the public interest in using toll roads through user satisfaction with toll road and Toll rates have a positive and significant influence on the public interest in using toll roads through user satisfaction with toll roads.

Keywords: Service Quality, Toll Rates, Public Interest, User Satisfaction with Toll Roads.

A. Introduction

Toll road infrastructure plays a crucial role in addressing current traffic congestion issues, and as such, toll roads are expected to facilitate smooth traffic flow. The Toll (Tax on Location) system is designed to provide services that ensure smoothness, comfort, safety, and time efficiency. According to Government Regulation of the Republic of Indonesia No. 15 of 2005 concerning Toll Roads, the management of toll roads aims to achieve equity in development and its results and to create a balance in regional development, considering aspects of fairness, which can be achieved through the development of road networks. As one of the major cities in Indonesia, Makassar itself experiences rapid vehicle growth with

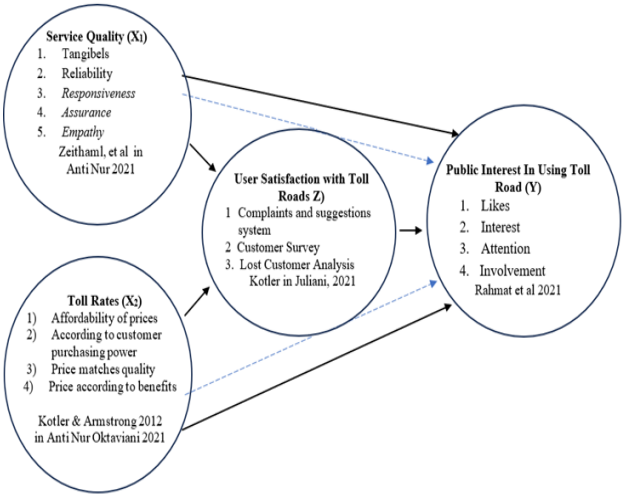
inadequate road infrastructure improvements. This has led to traffic congestion similar with in the other major cities.

The Toll road users are individuals or groups who use or access toll roads or the available service systems. Customers are users, and in a broader sense, customers are members of the community, both within and outside the service area, who wish to use the services provided. Users are consumers, such as toll road users (Halimatussadia, 2022). User satisfaction is an evaluation post-use where the chosen alternative meets or exceeds the expectations of the user or consumer. Consumer satisfaction is crucial because satisfied consumers are likely to make repeat use, thereby increasing benefits for the company (Cronin & Taylor as cited in Angie Factuaza Purnama, 2020). Pricing or tariffs are factors that influence customer satisfaction and are also crucial in sales. Pricing plays a significant role in the marketing mix, as pricing decisions are directly related to the revenue received by the company (Lupiyoadi as cited in Widyaningsih Putri Ariyanti, 2022). For companies, setting prices must align with consumer economics so that consumers can afford the goods. For consumers, price is a consideration in purchasing decisions and also reflects their perception of the product (Riyanti, Widyaningsih Putri Ariyanti, 2022).

Interest is a psychological aspect that significantly influences behavior and serves as a source of motivation directing individuals in their actions. According to Mangkunegara as cited in Cahaya Agung (2021), there are several key factors affecting a person's interest in purchasing or using a service, including psychological factors, personal factors, and social factors. Psychological factors encompass an individual's learning experiences about past events, as well as the influence of attitudes and beliefs. Learning experiences here can be defined as behaviors resulting from previous experiences. User interest is also closely linked to the satisfaction of toll road users with the condition of the road.

There have been several reports to the toll road management, PT Makassar Metro Network, indicating that the quality of service provided is still considered inadequate or not meeting user and public service expectations. The toll road is expected to serve the community effectively and without discrimination towards service users. Additionally, some reports from users suggest that the toll rates are perceived as high relatively. Information from social media indicates that following the implementation of new rates on September 29, 2023, on the toll road managed by PT Makassar Metro Network, there have been complaints from road users about the high toll rates, while the road conditions still include uneven surfaces and water pooling during rain. There have also been several complaints related to toll equipment, including issues with toll machines debiting user cards multiple times, with some customers suggesting the replacement of machines and improvement in the service quality team's performance at PT Makassar Metro Network. Data from PT Makassar Metro Network management show that traffic volume achievement was only 84.32% in 2021 and 98.93% in 2022 of the business plan. For 2023, the realization was 88.50%, and up to April 2024, it was 91.65% of the company's business plan. Additionally, there are ongoing customer complaints regarding the use of E-Payment/E-Toll systems. In this regard, customers must incur extra costs for purchasing cards, which increases the overall expense of using the toll road in addition to the already perceived high toll rates.

Figure 1. Conceptual Framework.



Research Hypotesis

1. It is suspected that the quality of service affects the public's interest in using the toll roads managed by PT Makassar Metro Network.
2. It is suspected that toll road rates influence the public's interest in using the toll roads managed by PT Makassar Metro Network.
3. It is suspected that the quality of service affects the satisfaction of toll road users managed by PT Makassar Metro Network.
4. It is suspected that toll road rates influence the satisfaction of toll road users managed by PT Makassar Metro Network.
5. It is suspected that the satisfaction of toll road users influences the public's interest in using the toll roads managed by PT Makassar Metro Network.
6. It is suspected that the quality of toll road service influences the public's interest in using the toll roads managed by PT Makassar Metro Network through toll road user satisfaction.
7. It is suspected that toll rates influence the public's interest in using the toll roads managed by PT Makassar Metro Network through toll road user satisfaction.

B. Research Methodology

This study employs a quantitative method comprising four variables: service quality and toll rates (independent variables), toll road user satisfaction (intervening variable), and interest in using toll roads (dependent variable). The research was conducted on the toll road sections managed by PT Makassar Metro Network in Makassar

The data collection method used in this study was the distribution of questionnaires. According to Andi Djalante (2023), a population is all individuals, objects, or subjects that meet the inclusion criteria and are targeted in a study. In research, selecting the appropriate population is crucial because it affects the validity of the study's results. Sugiyono (2019) defines a population as a group consisting of objects or subjects that have certain qualities and characteristics determined by the researcher for study, from which conclusions are drawn. The population in this study consists of residents who use the toll roads under the jurisdiction of Makassar Metro Network (MMN) from five toll gates: 1) Cambaya Toll Gate, 2) Kaluku Bodoa Toll Gate, 3) Tallo Barat Toll Gate, 4) Tallo Timur Toll Gate, and 5) Parangloe Main Toll Gate. The sample in this study is a portion of the population that has the same characteristics as the population (Sugiyono, 2019). According to data from the Nusantara Infrastructure Toll Application (NITA) as of May 2024, the total population is 12,519. Since this number cannot be fully reached, the sample size was determined using purposive sampling techniques. The sample size in this study refers to the determination of the sample based on percentages according to Yount in Ahmad Jamalauddin in Suci et al. (2023), with the following table:

Table 1. Sample Size Measurement

Besarnya Populasi	Besarnya Sampel
0-100	100%
101-1000	10%
1001-5000	5%
5001-10000	3%
10001 lebih	1%

Based on a population of 12,519, the appropriate sample size according to Yount's table is 1%, resulting in a sample of 125. This study employs Partial Least Squares (PLS) analysis to examine the relationships between research variables using SmartPLS version 4.0 software. The Partial Least Squares (PLS) method is an alternative approach that shifts from covariance-based SEM to variance-based SEM for hypothesis testing. Validity and reliability tests are conducted using the measurement model, while the structural model is used for hypothesis testing through prediction models, commonly referred to as causal testing. According to Ghozali & Latan (2020:7), SmartPLS includes three measurement models in the research: outer model analysis (measurement model analysis), inner model analysis (structural model analysis), and hypothesis testing (Bootstrapping).

C. Result and Discussion

Result

a. Structural equation modeling (SEM) Analysis

1. Outer Model Test

a) Convergent Validity

Figure 2. PLS Algorithm II Model

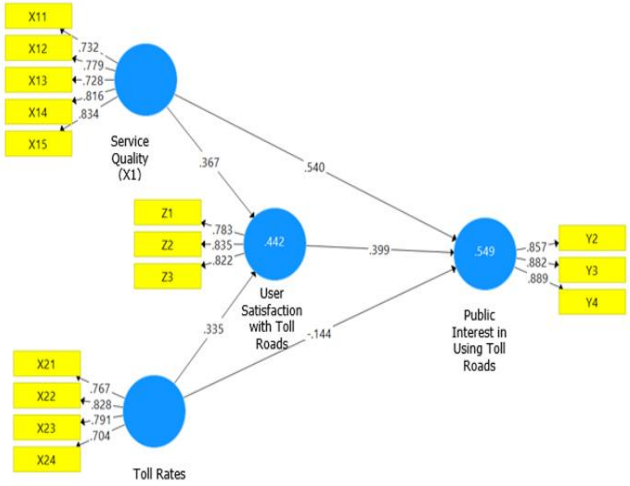


Table 2. Loading Factor Indicator II Value

	Kepuasan Pengguna Jalan Tol (Z)	Kualitas Pelayanan (X1)	Minat Menggunakan Jalan Tol (Y)	Tarif Tol (X2)
X11		0,732		
X12		0,779		
X13		0,728		
X14		0,816		
X15		0,834		
X21				0,767
X22				0,828
X23				0,791
X24				0,704
Y2			0,857	
Y3			0,882	
Y4			0,889	
Z1	0,783			
Z2	0,835			
Z3	0,822			

From table 2, it can be observed that the loading factor values for most indicators are above 0.7, indicating that they are significant contributors to the respective measured variables. The highest loading factor value in the category 'Interest in Using Toll Roads (Y)' is Y4 with a value of 0.889, indicating that this indicator is very strong in explaining interest in using toll roads. On

the other hand, the lowest loading factor value is X13 with a value of 0.728, although still significant, indicating a weaker contribution compared to other indicators in the category 'Service Quality (X1)'. Overall, this table shows that all measured indicators have a relatively strong influence on the variables they represent, with loading factor values consistently above 0.7.

b) Validity Discrimination

Table 3. Cross Loading Value

	Kepuasan Pengguna Jalan Tol (Z)	Kualitas Pelayanan (X1)	Minat Menggunakan Jalan Tol (Y)	Tarif Tol (X2)
X11	0,386	**0,732**	0,464	0,528
X12	0,423	**0,779**	0,584	0,582
X13	0,477	**0,728**	0,504	0,647
X14	0,521	**0,816**	0,539	0,644
X15	0,627	**0,834**	0,545	0,673
X21	0,412	0,555	0,345	0,767
X22	0,487	0,626	0,429	**0,828**
X23	0,547	0,655	0,459	**0,791**
X24	0,474	0,603	0,401	**0,704**
Y2	0,571	0,595	**0,857**	0,485
Y3	0,543	0,589	**0,882**	0,443
Y4	0,593	0,598	**0,889**	0,473
Z1	**0,783**	0,45	0,496	0,424
Z2	**0,835**	0,533	0,554	0,604
Z3	**0,822**	0,556	0,535	0,488

In table 3, the Cross Loading values above indicate that the factor loading value for the Quality of Service indicator is higher than the Cross Loading values for Toll Rates, User Satisfaction with Toll Roads, and Interest in Using Toll Roads. Based on the results of the discriminant validity test in the table, it can be observed that all indicators have the highest values for their respective constructs rather than for other constructs, thus it can be stated that all indicators meet the requirements for discriminant validity.

Table 4. Fornell-Larcker Criterion Values

	Kepuasan Pengguna Jalan Tol (Z)	Kualitas Pelayanan (X1)	Minat Menggunakan Jalan Tol (Y)	Tarif Tol (X2)
Kepuasan Pengguna Jalan Tol (Z)	0,814			
Kualitas Pelayanan (X1)	0,633	0,793		
Minat Menggunakan Jalan Tol (Y)	0,65	0,678	0,876	
Tarif Tol (X2)	0,626	0,779	0,533	0,774

Service quality is greater than the correlation values with other variables. The Fornell-Larcker Criterion value for toll rates is higher than the correlation values with other variables. The Fornell-Larcker Criterion value for toll road user satisfaction is higher than the correlation values with other variables. The results of the discriminant validity test in the table above indicate that all indicators and constructs in the PLS model meet the required criteria for discriminant validity.

c) Composite Reliability

Table 5. Composite Reliability Value

	Composite Reliability
User Satisfaction with Toll Roads (Z)	**0,855**
Service Quality (X1)	**0,885**
Public Interest In Using Toll Road (Y)	**0,908**
Toll Rates (X2)	**0,856**

Table 5 above shows that the composite reliability values for the constructs are as follows: Service Quality 0.85, Toll Rates 0.856, Toll Road User Satisfaction 0.885, and Interest in Using Toll Roads 0.908. All four constructs have composite reliability values greater than 0.70, indicating that the variables are considered reliable.

d) Cronbach's Alpha

Table 6. Cronbach's Alpha Value

	Cronbach's Alpha
User Satisfaction with Toll Roads (Z)	**0,746**
Service Quality (X1)	**0,838**
Public Interest In Using Toll Road (Y)	**0,848**
Toll Rates (X2)	**0,776**

The Cronbach's alpha values obtained are as follows: User Satisfaction construct (z) 0.746, Service Quality 0.838, Interest in Using Toll Roads 0.848, and Toll Rates 0.776. Based on these Cronbach's alpha values, the seven latent variables have reliable indicators."

e) Average Variance Extracted (AVE)

Table 7. Average Variance Extracted (AVE) Values

	Average Variance Extracted (AVE)
User Satisfaction with Toll Roads (Z)	**0,662**
Service Quality (X1)	**0,607**
Public Interest In Using Toll Road (Y)	**0,767**
Toll Rates (X2)	**0,599**

The AVE values for the constructs are as follows: Service Quality 0.607, Toll Rates 0.599, Toll Road User Satisfaction 0.662, and Interest in Using Toll Roads 0.767. Based on these AVE results, all constructs for the latent variables have AVE values greater than 0.5, indicating that they are valid.

f) Mediation PLS with the Variance Accounted For (VAF) Method

Mediation Test with VAF 1 (Service Quality through Toll Road User Satisfaction on Interest in Using Toll Roads)

Calculation of Mediation Test VAF 1"

Direct Effect	(a)		= 0.540
Indirect Effect	(b*c)	(0.367*0.399)	= 0.146

$$VAF = \frac{0.146}{0.540 + 0.146}$$

$$VAF = \frac{0.146}{0.686}$$

$$VAF = 0.213$$

The mediation test for the variable Service Quality through Toll Road User Satisfaction on Interest in Using Toll Roads resulted in a VAF value of 21.3%, which falls within the VAF range of 20% - 80%, indicating partial mediation.

Mediation Test with VAF 2 (Toll Rates through Toll Road User Satisfaction on Interest in Using Toll Roads)

Calculation of Mediation Test VAF 2"

Direct Effect	(a)		= -0.144
Indirect Effect	(b*c)	(0.335*0.399)	= 0.134

Source: Data processed by the researcher using Smart PLS"

$$VAF = \frac{0.134}{-0.144 + 0.134}$$

$$VAF = \frac{0.134}{-0.10}$$

$$VAF = -0.013$$

The mediation test for the variable Toll Rates through Toll Road User Satisfaction on Interest in Using Toll Roads resulted in a VAF value of -1.3%, which falls within the VAF range of <20%, indicating no effect mediation.

2. Structural Model Testing (Inner Model)

To test the structural model, the R^2 value, which represents the Goodness of Fit test, is examined. The construct of Toll Road User Satisfaction has an R^2 value of 0.442, indicating that 44.2% of the variation in Toll Road User Satisfaction can be explained by the constructs of Service Quality and Toll Rates (while the remaining 55.8% is explained by other variables not examined). The R^2 value for Interest in Using Toll Roads is 0.549, meaning that 54.9% of the variation in Interest in Using Toll Roads can be explained by the Service Quality construct. The complete R^2 values are presented in the table below.

Table 9. R-Square Values

	R Square	R Square Adjusted
User Satisfaction with Toll Roads (Z)	0,442	0,433
Public Interest In Using Toll Road (Y)	0,549	0,537

As for the goodness of fit assessment, it can be calculated as follows:

Q-Square = 1 [(1 – R21) (1 – R22)] … (1)

Where : R21 = R-Square Value of Road User Satisfaction

R22 = R-Square Value of Interest in Using Toll Roads

So that the calculation value is obtained:

Q-Square = 1 – [(1 – R21) x (1 – R22)]

= 1 – [(1 – 0.442) x (1 – 0.549)] = 1 – (0.558x 0.451)

= 1 – 0.252 = 0.748

Based on the results of the calculation of the equation above, a Q-Square value of 0.748 is obtained. This shows that the diversity of the research data described by the research model is 74.8%. As for the remaining 25.2%, it is explained by other factors that are outside of this research model. Thus, it can be said that this research model is stated to have a good goodness of fit.

b. Hypothesis Testing (Bootstrapping)

This test aims to see the significance of the influence between independent constructs on the dependent and answer what has been hypothesized. Testing with a significance level of 5% if the t-statistic value> 1.96 then the null hypothesis (H0) is rejected. The t-statistic value of the influence coefficient of the latent construct is obtained from PLS Bootstrapping. The results of the PLS Bootstrapping Model are presented in the figure below.

Figure 3. Bootstrapping Test

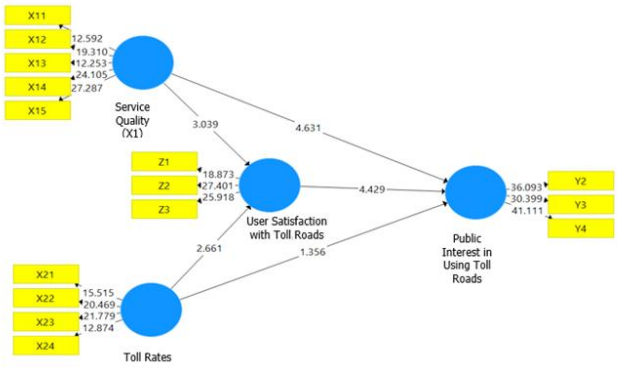


Table 10. Coefficient Values (Original Sample), Standard Error and T-Statistics

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
User Satisfaction with Toll Roads (Z) -> Interest in Using Toll Roads (Y)	0,399	0,399	0,090	04,429	**0,000**
Quality of Service (X1) -> User Satisfaction with Toll Roads (Z)	0,367	0,374	0,121	3,039	**0,002**
Service Quality (X1) -> Interest in Using Toll Roads (Y)	0,540	0,548	0,117	4,631	**0,000**
Toll Rates (X2) -> User Satisfaction with Toll Roads	0,335	0,329	0,126	2,661	**0,008**
Toll Rates (X2) -> Interest in Using Toll Roads (Y)	-,144	-,151	0,107	1,356	**0,176**

The following outlines the testing of 7 hypotheses:

1. The coefficient value of the effect of Service Quality (X1) on Interest in Using Toll Roads (Y) is 0.540, with a standard error of 0.117, a t-statistic value of 4.631, and a p-value of 0.000. Since the t-statistic value of 4.631 is greater than 1.96 and the p-value of 0.000 is less than 0.02, H1 is accepted. This result indicates that Service Quality has a positive and significant effect on Interest in Using Toll Roads.

   In this study, it is evident that the perceived quality of service by toll road users plays a crucial role in attracting people to use the toll roads based on the quality of service and the outcomes that meet expectations. The importance of service quality, which involves public participation, is essential in supporting

the role of toll road management. This can prevent PT Makassar Metro Network's internal efforts, which are already deemed optimal, from having no impact or even acquiring a negative image due to public dissatisfaction, such as complaints about road conditions and the need for improvements in the toll system equipment.

These findings are consistent with the research conducted by Kevin Rezananta Purnomo and Berto Mulia Wibawa (2020)."

2. The coefficient value for the effect of Toll Rates (X2) on Interest in Using Toll Roads (Y) is -0.144, with a standard error of 0.107, a t-statistic value of 1.356, and a p-value of 0.176. Since the t-statistic value of 1.356 is less than 1.96 and the p-value of 0.176 is greater than 0.05, H2 is rejected. This result indicates that Toll Rates do not have a positive and significant effect on Interest in Using Toll Roads.

   The researcher analyzes that the lack of effect of toll rates may be due to the absence of alternative routes besides the toll road, rather than solely the toll rates charged to users. The public continues to use the toll road because the location of Sections I, II, and III of the Toll Road facilitates access to strategic areas and residential neighborhoods more effectively than arterial roads, which are congested and require detours. As seen currently, even with a toll rate increase, user satisfaction might be affected due to the high toll rates, but users continue to use the toll road out of necessity and lack of alternatives. As is known, PT Makassar Metro Network (MMN) implemented new toll rates starting September 29, 2023, yet the public continues to use the toll road. These findings are consistent with the research by Anti Nur Oktaviani, Budi Arief, and Lia Amelia Megawati (2019) on the Impact of Toll Rate Increases on Toll Road User Satisfaction (Case Study on Bogor Outer Ring Road)."

3. The coefficient value for the effect of Toll Road User Satisfaction (Z) on Interest in Using Toll Roads (Y) is 0.399, with a standard error of 0.090, a t-statistic value of 4.429, and a p-value of 0.000. Since the t-statistic value of 4.429 is greater than 1.96 and the p-value of 0.000 is less than 0.05, H3 is accepted. This result indicates that Toll Road User Satisfaction has a positive and significant effect on Interest in Using Toll Roads.

   This study illustrates that the level of Toll Road User Satisfaction significantly influences public interest in using the toll roads. This means that, to increase public interest, toll road operators must meet customer satisfaction to attract users to continue using the toll roads. These findings are consistent with the research by Desy Mei Dina and Mawardi Amin (2022) on the Impact of Toll Road SPM Service Substance on Toll Road User Satisfaction in the Jabodetabek Area."

4. The coefficient value for the effect of Service Quality (X1) on Toll Road User Satisfaction (Z) is 0.367, with a standard error of 0.121, a t-statistic value of 3.039, and a p-value of 0.002. Since the t-statistic value of 3.039 > 1.96 and the p-value of 0.002 < 0.02, H4 is accepted. This result indicates that Service Quality has a positive and significant effect on Toll Road User Satisfaction.

   The researcher found that Service Quality has a positive and significant effect on Toll Road User Satisfaction. In excellent service, there is a concept known as 'quality nice' or distinctive characteristics that include ease, speed, accuracy, reliability, and empathy of the service personnel in delivering services to customers. In this context, the services provided by the Toll Road Operator must also have distinctive features that create a strong impression, which can be

immediately felt by customers at that moment and time and are able to solve the problems faced by toll road users. This research result aligns with the study conducted by Fathira Virda Nur (2020) on the Effect of Service Quality on Customer Satisfaction at PT Herba Penawar Alwahida Indonesia.

5. The coefficient value for the effect of Toll Rates (X2) on Toll Road User Satisfaction (Z) is 0.335, with a standard error of 0.126, a t-statistic value of 2.661, and a p-value of 0.008. Since the t-statistic value of 2.661 > 1.96 and the p-value of 0.008 < 0.05, H5 is accepted. This result indicates that Toll Rates have a positive and significant effect on Toll Road User Satisfaction.

   PT Makassar Metro Network adjusts toll rates every two years in accordance with government regulations, following an assessment by the Toll Road Regulatory Agency and compliance with Minimum Service Standards. Therefore, the toll rate is aligned with the benefits received by toll road users. The researcher found that Toll Road User Satisfaction is influenced by the toll rates."
6. The coefficient value for the effect of Service Quality on the Interest in Using Toll Roads through Toll Road User Satisfaction is 0.146, with a standard error of 0.061, a t-statistic value of 2.419, and a p-value of 0.016. Since the t-statistic value of 2.419 > 1.96 and the p-value of 0.016 < 0.05, H6 is accepted.

   The results of this study show that good Service Quality will affect Toll Road User Satisfaction, which in turn influences the public's interest in using toll roads. To increase public interest in using toll roads, PT Makassar Metro Network must satisfy customers by providing quality services that meet public expectations. This research is supported by the theory that public satisfaction is determined by various factors, including the quality of goods and services and the price of those services (Hadi Riajaya, 2019).
7. The coefficient value for the effect of Toll Rates on the Interest in Using Toll Roads through Toll Road User Satisfaction is 0.134, with a standard error of 0.060, a t-statistic value of 2.231, and a p-value of 0.026. Since the t-statistic value of 2.231 > 1.96 and the p-value of 0.026 < 0.05, H7 is accepted.

   This study illustrates that Toll Road User Satisfaction plays a role in mediating the effect of toll rates on the public's interest in using toll roads. It can be concluded that toll road users' satisfaction with the toll rates applied by PT Makassar Metro Network impacts the public's interest in using toll roads again. User satisfaction is influenced by price or rates, as stated by Lupiyoadi (in Anti Nur Oktaviani, 2019)."

D. Conclusion

Based on the results of the research, it can be concluded:

1. Toll rates do not have a positive and significant effect on interest in using toll roads.
2. Service quality has a positive and significant effect on the satisfaction of toll road users
3. Toll rates have a positive and significant effect on the satisfaction of toll road users.
4. Toll road user satisfaction has a positive and significant effect on interest in using toll roads
5. The quality of the waiter has a positive and significant effect on the interest in using the toll road through the satisfaction of toll road users.
6. Toll tariffs have a positive and significant effect on interest in using toll roads through toll road user satisfaction.

References

Angie Factuaza Purnama. 2020. The Influence of Service Quality and Tariffs on Consumer Satisfaction of Salatiga Toll Road Users Faculty of Economics and Business. Universitas Kristen Satya Wacana.

Anti Nur Oktaviani dkk. 2021 The Effect of Toll Tariff Increase on Toll Road User Satisfaction (Case Study on Bogor Outer Ring Road) Journal. Civil Engineering Study Program, Faculty of Engineering, Pakuan University.

Balai Besar Jalan Tol. 2022. Direktorat Jenderal Bina Marga Kementrian PU dan Perumahan Rakyat

Darwin Muhammad.2020. Quantitative Approach Research Method. CV. MEDIA SAINS INDONESIA Melong Asih Regency B40-Cijerah Bandung City - West Java

Djalante,Andi. 2023. Research Methodology: Basic Concepts of Scientific Research and Scientific Writing. First Edition, Yogyakarta: Deepublish.

Fathira Virda Nur .2020. The Influence of Service Quality on Customer Satisfaction of PT Herba Penawar Alwahida Indonesia (Study at Alfatih Business Center II HPAI Bengkulu City). Islamic Economics Study Program, Department of Islamic Economics, Faculty of Islamic Economics and Business Institut Agama Islam Negeri (IAIN) Bengkulu.

Ghozali, Imam., & Latan, H. 2020. Partial Least Squares: Concepts, Techniques, and Applications Using Program SmartPLS 4.0 (2nd ed.). Publishing Agency - Undip.id.wikipedia.org.

Halimatussa'diah. 2022. Effectiveness of Toll Road User Services of PT Jasamarga Belmera Branch, Medan City. Public Administration Study Program, Faculty of Social and Political Sciences, University of Medan Area.

Hadi Riajaya, Kristoforus Orlando & Palupi Lindiasari Samputra. 2019. Evaluation of Public Satisfaction Level on Becakayu Toll Tariff Policy. Darussalam Economic Perspective Journal Volume 5 Number 2, ISSN. 2502-6976

Purnama, Cahaya Agung. Analysis of the Influence of Promotional Attractiveness, Perceived Convenience, Perceived Usefulness and Price on Purchase Interest of Bank Mandiri E-Toll Card: Case Study on Toll Road Users in Semarang City" Thesis–Diponegoro University, Semarang, 2021.Sugiyono .2019. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung:Alphabet.

Suci, Kamaruddin Sellang & Muhammad Ikbal. 2023. Implementation of Management Functions on the Development of Laburang Gallang Tourism Objects in Batu Mila Village, Maiwa District, Enrekang Regency. Scientific Journal of Administration Volume XI Number 1, 2023. Muhammadiyah University of Sidenreng Rappang.

Widyaningsih Putri Ariyanti, Haris Hermawan & Ahmad Izzudin. 2022. The Influence of Price and Location on Public Customer Satisfaction: Journal of Human Resource Management, Administration and Public Service, Bina Taruna University, Gorontalo Volume IX Number 1, 2022 Muhammadiyah University of Jember