

## **THE INFLUENCE OF QUEUEING SYSTEM AND SUPERVISION ON SERVICE QUALITY IN JAKARTA MRT TRANSPORTATION**

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### *Abstract*

*This study aims to analyze the impact of the queuing system and supervision on service quality in Jakarta MRT transportation. This research is quantitative research. Data for this research was gathered from interviews, direct requests from relevant companies, and secondary sources like government publications, company records, media analysis, and websites. The study's population included MRT Jakarta transportation users over a one-week period, and the sample consisted of 50 customers selected using Systematic Random Sampling. Data was collected through questionnaires and interviews and analyzed using statistical analysis with SPSS application. The results of this study are as follows: there is an influence between the queuing system and service quality, there is an influence between supervision and service quality partially, and there is an effect between the queuing system and supervision on the quality of service simultaneously 78.2%, while the remaining 21.8% is influenced by other variables.*

**Keywords:** *Service Quality, Supervision, Queuing System*

### **1. INTRODUCTION**

Traffic jams are a frequent issue experienced by the people of Jakarta almost every day. Previously, congestion was limited to rush hours during the commute to and from work. However, nowadays, traffic jams persist at all times and locations, making it challenging for the community to travel anywhere. This situation is understandable considering the unbalanced ratio between the growth of roads and the increasing number of motorized vehicles. To address these problems, Jakarta requires more dependable transportation services, and one viable option is the Mass Rapid Transit (MRT). The MRT is a widely used mode of land transportation, and one of the rapidly growing transportation companies is PT MRT Jakarta (Perseroda). The MRT stands out due to its affordability, relatively shorter travel time, and lower risk of accidents.

Based on the author's observations, the people of Jakarta predominantly use the MRT for transportation. The success of PT MRT Jakarta (Perseroda) in operating the MRT is evident in the expanding MRT travel routes. Initially, the MRT only served phase 1 of the North-South route (Lebak Bulus Station to HI Roundabout Station), and it is currently under construction to extend phase two of the Jakarta MRT line, connecting HI Roundabout Station to City Station, spanning about 5.8 kilometers. PT MRT Perseroda aims to provide excellent service facilities to ensure customer satisfaction and comfort with the MRT service

According to (Lovelock & Wirtz, 2011) service is an economic activity offered by one party to another. The point is that activities carried out by a person or group of people in an effort to create satisfaction to other people or customers by offering something in the form of services to other parties. Good service will also create a good relationship between consumers and the company. the services provided by the company to consumers from year to year will always be improved for comfort, security, safety, and also the

perfection of the service methods arranged according to company policy. For this, of course, measuring how much the level of service can be seen from how much quality of service the company can provide.

(Tjiptono, 2014) Service quality is a service that focuses on fulfilling the needs and desires of consumers and the accuracy of its delivery to balance consumer expectations. What is meant is the expected excellence to fulfill the desires of consumers. Consumers are always looking for something that makes them feel like everything can be fulfilled if what they want can be fulfilled. That opportunity must be prioritized by the management of the operational section to improve the quality of these services. The result of the company's efforts in improving service quality is to be able to retain existing customers. This means that the company is obliged to make developments in service quality in order to continue to get satisfaction from customers so that consumers will continue to survive and have loyalty to the company. For this reason, service quality is something that must be carried out or carried out by the company (Yuliani & Husen, 2022).

The queuing system in a service must be considered. The system in the queue is made according to the existing consumers. Suppose these consumers are priority consumers because of their loyalty, then the company must create a special line for them. Usually there are service options for consumers to choose what service package they choose. Of course, the higher the choice of service package, the higher the price. But there are also companies that consider all customers the same and there is no choice of service packages. All must follow the existing queuing procedures to get the same service.

Not only does the queuing system affect the quality of service, but there are also other measures that management in the operational section will undertake to improve service quality. One essential aspect is supervision. As mentioned by (Terry, 2008), supervision involves determining what has been accomplished by evaluating work performance and, if necessary, implementing corrective actions to ensure that the work results align with the predetermined plan. In this context, supervision is interpreted as an evaluation framework employed by the company to enhance overall performance, with a specific focus on supervising service quality.

MRT (mass rapid transit) can be understood as a mode of transportation capable of efficiently transporting large numbers of passengers (mass) with high frequency and speed (rapid). During this pandemic, PT MRT Jakarta has implemented strict health protocols to mitigate the risk of contracting Covid-19. These health protocols are enforced at all Jakarta MRT stations, including Lebak Bulus Station. Passenger points at 13 stations are equipped with hand sanitizers. Additionally, routine cleaning of all facilities, including stations, ticket machines, tapping machines, and elevators, is conducted three times a day. Furthermore, intensive cleaning in each train both interior and exterior using disinfectants, health and hygiene officers apply personal protective equipment, temperature checks for passengers at the entrance to limit 62-67 people per train (Yuniarti & Aditya, 2020).

MRT, in good public services must also be supported by the quality of public services (Service Quality). Service is a very important factor, improving service quality is very important because it increases public satisfaction with transportation services (Febriyanti et al., 2018). Quality starts with customer needs and ends with achieving good service quality. According to (Philip & Cox, 2004) service quality is a form of consumer assessment of the level of service received with the expected level of service. If the service received and felt is in accordance with what is expected, then the perceived service quality is good and satisfying.

Satisfaction arises because of the comparison of expectations with what has been received by the service user (Noersanti & Prasetyo, 2020). Community satisfaction is very important to evaluate service quality by measuring the extent of the community's response to receiving transportation services, with the provision of good service quality. Then, community satisfaction will be created. There is a close relationship between service quality and community satisfaction because community satisfaction can influence service quality. The level of community satisfaction can also impact people's expectations of a service or a service provider (Sudiarta et al., 2022).

According to data from [Jakartamrt.co.id](http://Jakartamrt.co.id), customers of the Jakarta MRT have expressed dissatisfaction with the services provided by PT MRT Jakarta (Perseroda). This is evident from the fluctuating percentages over the years since the operation of the Jakarta MRT. In 2020, the customer satisfaction rate decreased to 82.78% from 86.64% in 2019, indicating that the services provided by MRT Jakarta Perseroda were not satisfactory. The dissatisfaction is attributed to the lack of garbage disposal facilities, train delays, and errors in ticket bookings through the MRT J application.

To address this issue, the author conducted a survey by asking several Jakarta MRT transportation users about their experiences with the level of service. The questionnaire, with a scoring system of 1 to 5, was distributed for several days until it was completed by one hundred people. Based on the responses, here are the results of the score assessment for the Jakarta MRT, as per the author's survey conducted at the Jakarta MRT station.

Based on the above problems, it can be observed that 60% of the 50 respondents gave a score of 4, while 30% rated it 5. Additionally, 10% rated it 3. The average calculation of these scores shows a service quality value of 4.34. This value falls between not being bad and not being excellent. Value 4 remains predominant in the assessment table, suggesting that the service provided may be good but not entirely satisfactory. Therefore, further research is needed.

One of the challenges that often arises in service is the ability of a company to provide the best service to its customers. The level of customer satisfaction can vary greatly due to individual differences among consumers. This study aims to analyze the impact of the queuing system and supervision on service quality in Jakarta MRT transportation.

## **2. LITERATURE REVIEW**

### **2.1. Service Quality**

The word "quality" has various definitions and meanings as different people may interpret it differently. It could mean conformity to requirements or guidelines, suitability for continuous improvement, freedom from defects, meeting customer needs, and achieving overall satisfaction. Quality is broadly perceived in the perspective of TQM (Total Quality Management), encompassing not only the end results but also the processes, areas, and people involved. Garvin (Diana & Tjiptono, 2016) reported that there are five perspectives on quality, where the perception of quality depends on the individual evaluating it, making a product or service satisfying for someone a sign of high quality.

### **2.2. Queue System**

Queue is an activity to obtain a service, carried out by a service provider or an organization that offers services to its customers. Through queues, we can determine the number of customers waiting to be served. According to (Maarif & Tanjung, 2003), queue is a situation where a group of individuals (arrivals) is trying to receive service from limited facilities (service providers), causing them to wait for some time in line to be served. According to (Heizer & Render, 2010), queue theory is the study of queues, where queues are a common occurrence in daily life and are useful for both manufacturing and service companies.

According to (Sunyoto, 2014), a system is an arrangement that depicts a series of various components with interconnected and coordinated relationships, working or functioning within a specified and planned timeframe. With this understanding, a system consists of interconnected components that are coordinated through various planning and designated timeframes. This means that the system is organized through various planning efforts, considering various components that can be connected to achieve coordination and create an orderly arrangement. From the perspectives mentioned above, we understand that the queuing system is a way to anticipate the accumulation of consumers or customers in a company by waiting to receive the facilities that will be provided if the service cannot be given to all arriving customers. Another aspect is when customers complete their service and leave the place after being served.

### **2.3. Supervision**

Supervision is the monitoring of behavior and information activities for the purpose of gathering information, influencing, overseeing, or directing. According to Fahmi (Sondole et al., 2015), supervision can be defined as an organizational approach to achieve effective and efficient performance and, furthermore, to support the realization of an organization's vision and mission. According to Moekizat (Pinang, 2015), supervision involves reviewing the results of work, evaluating those results, and, if necessary, taking corrective actions to ensure that the work aligns with the plans. According to LAN (Kotler, n.d.), supervision is a leader's process to ensure that organizational activities are in accordance with established plans, policies, and regulations. Based on the explanations from experts, supervision is an evaluation method based on observed performance data to improve performance for better results. Supervision is solely conducted to enhance employee performance. It can also improve services by increasing customer satisfaction, as improved employee performance leads to higher customer satisfaction. Therefore, service quality is influenced by employee performance, which requires supervision.

## **3. RESEARCH METHODS**

The research used in this study is quantitative research. In this study, the variables used are raw material quality (X1), which includes all activities related to maintaining the quality of raw materials, and machine capacity (X2), which assesses how capable a machine is in producing products with the appropriate quality and quantity. The last variable is production output (Y), which will determine the quality of the products produced by the company.

Data was obtained through interviews and direct requests for data from the companies needed for the research. Secondary data was obtained from various literature sources such as government publications, company records or documentation, media

analysis, websites, and so on. This research was conducted in the South Jakarta and HI Roundabout areas, where MRT transportation is used. The research was conducted over a period of about 3 months, from August to October 2021.

The population in this study consists of users of MRT Jakarta transportation services over a one-week duration. The sample for this study includes some customers who use MRT Jakarta transportation services. The criteria for selecting respondents are customers who have used MRT Jakarta transportation services. The sample for this study was chosen using the Systematic Random Sampling method, with a total of 50 people. In the data collection method, the researcher gathered data through questionnaires and interviews. The data analysis method used in this research is statistical analysis with the help of the SPSS application.

## **4. RESULTS AND DISCUSSION**

### **4.1. Results**

#### **4.1.1. Characteristics of Respondent Data**

The analysis results show that the users of MRT transportation are dominated by male respondents, accounting for 40% of the 50 respondents. Meanwhile, female respondents account for only 60% of the 50 respondents. From this data, we can infer that the average MRT transportation user is female. There are also male users of MRT transportation, but they do not dominate as their presence is minimal.

The average age of the respondents using MRT transportation is between 20 and 30 years old, which dominates compared to other age groups. The age group between 21 and 30 years old has a percentage of 50%, which is the highest among other age groups. However, there are also respondents in the older age group, specifically between 41 and 50 years old, which is considered elderly. Only 20% of the elderly participants came and needed services at MRT Jakarta. This indicates that participants below 40 years old are more active and likely to use the transportation service. This may be due to factors such as starting a new job, which is common among people aged 20 to 30 years old, leading them to start using this mode of transportation.

Looking at the educational backgrounds of the users, it can be seen that the majority of MRT Jakarta transportation users are Bachelor's degree graduates. Based on this data, we can tentatively conclude that most individuals who graduate with a Bachelor's degree immediately enter the workforce. This also influences their participation as MRT transportation users when they are over 20 years old. However, this conclusion may not be entirely accurate as it has not been proven as a fact. Nevertheless, this conclusion can have an impact on the research findings as the role of the younger generation in service development is crucial since they possess more advanced and critical thinking in various circumstances.

During May 2021, a total of 744,488 people used the services of MRT Jakarta. The number indicates that on average, approximately 24,016 people used MRT Jakarta per day, with 6,895 train trips without any cancellations. The punctuality of travel time, arrivals, and stops of the trains also reached 100 percent. The highest number of service users was recorded on Wednesday, May 19, reaching 33,572 people. The number of users in May showed an increase compared to the number of MRT Jakarta users in the previous month, April 2021, which was 710,803 people with an average of 23,693 people per day.

This increase in the number of passengers indicates a growing public trust in MRT Jakarta's services even amidst the pandemic.

For PT MRT Jakarta (Perseroda), safety, security, and passenger comfort are always the company's top priorities. MRT Jakarta consistently implements health protocols at stations and on trains for the safety of everyone through the "Protokol Bangkit," which has been well appreciated by the public as a tangible measure in reducing the risk of COVID-19 transmission on MRT Jakarta.

#### **4.1.2. Validity Test**

Based on the validity test of the queue system variable in the table above, we can see that all statements that have been tested in the SPSS application are valid because the  $r$  hiung assessment  $\geq r$  table and the significant value is less than 5%, namely 0.05.

The supervision variable in the table above, we can see that all statements that have been tested in the SPSS application are valid because the assessment of  $r$  hiung  $\geq r$  table and the significant value is less than 5%, namely 0.05.

The service quality variable in table 4.6, we can see that all the statements given are valid statements because the calculated value  $\geq r$  table and the alpha signfkan value is smaller than 5%.

#### **4.1.3. Reliability Test**

The reliability of an instrument can be seen if the Cronbach Alpha value is  $> 0.600$ . Then the data is reliable. Based on the results of the Cronbach Alpha of the three variables above, it shows a number higher than 0.600. Even the X1 and Y variable instruments show a Cronbach Alpha value above 0.800. This figure means that the instruments used are very reliable and consistent.

#### **4.1.4. Normality Test**

The natural provisions for determining whether the data is normal or not are seen from the histogram and the existing table by looking at the distribution of existing data. By analyzing the histogram below, we will be able to find out whether the data we have is normal for analysis or not.

The analysis results show that the curve shape displayed is normal. Then in the normal p-plots of regression standardized residuals, it can be seen that the spread of the dots does not exceed the line. That indicates that the data being analyzed is normally distributed.

#### **4.1.5. Heteroscedasticity Test**

The heteroscedasticity test is carried out by researchers to determine whether in the regression model there is an inequality of residual variants between one another. If the residual variant remains in one observation to another, it is called homoscedasticity. If the heteroscedasticity assumption is not met, then the regression model is declared invalid.

Based on the results of the heteroscedasticity test, it can be analyzed that the distribution of points spreads above and below the number 0 on the Y axis. This indicates that there is no heterokedastisitas in the regression model so that the data owned can be tested further.

#### 4.1.6. Multicollinearity Test

**Table 1. Multicollinearity Test Results**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.619	3.445		.470	.641		
	SISTEM ANTRIAN	.431	.099	.399	4.374	.000	.556	1.798
	PENGAWASAN	.534	.086	.567	6.214	.000	.556	1.798

a. Dependent Variable: KUALITAS PELAYANAN

Source: data processed in the SPSS version 25 application

Based on the results of the multicollinearity test in table 1, the VIF value on both independent variables has a value of 1.798. Where the value is smaller than 10. It shows that there is no problem with multicollinearity..

#### 4.1.7. Determination Coefficient Test (r square)

**Table 2. Test Results of the Determination Coefficient (r<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.885 <sup>a</sup>	.782	.773	2.109	2.075

a. Predictors: (Constant), Supervision, Queuing System

b. Dependent Variable: Service Quality

Source: data processed in the SPSS version 25 application

Based on the data in table 2, it can be seen that the coefficient of determination (r square) in table 2 data is 0.782 or 78.2%. That means that the effect of the independent variables (from the queuing system [X1] and supervision [X2]) on the dependent variable (service quality [Y]) is 78.2%. While the remaining 21.8% comes from various other variables that are not raised in the tea problem.

#### 4.1.8. Partial Hypothesis Testing (t test)

In this partial hypothesis testing (t test), researchers want to find out whether there is a partially significant effect of each independent variable and the dependent variable. This test will be carried out by looking at the t table where the sig level determined is below the value of 0.05 by determining the formula  $df = (n - k - 1)$  which means  $103 - 2 - 1 = 100$ . In the t table, the df value of 100 with a sig level of 0.05 in the two tailed test method is 1.9840.

Table 3. T Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.619	3.445		.470	.641
1 Queuing System	.431	.099	.399	4.374	.000
Supervision	.534	.086	.567	6.214	.000

a. Dependent Variable: Service Quality

Source: data processed in the SPSS version 25 application

Based on the data table above, we can see that:

1. There is an influence between variable X1 and variable Y partially. That is because the sig value is smaller than 0.05 ( $0.000 < 0.05$ ) and the t test is greater than the t table based on the results in the coefficient table ( $4.374 > 2.01$ ). Therefore, the Ho1 hypothesis is rejected and the Ha1 hypothesis is accepted because there is a partial positive and significant effect between the queuing system and service quality.
2. There is an influence between variable X2 and variable Y partially. That is because the sig value is smaller than 0.05 ( $0 < 0.05$ ) and the t table test count is greater than the t table results in the coefficient table ( $6.214 > 2.01$ ). Therefore, the Ho2 hypothesis is rejected and the Ha2 hypothesis is accepted because there is a positive and significant effect partially between supervision and service quality.

#### 4.1.9. Simultaneous Hypothesis Testing (F Test)

In determining the f table using the df 1 and df 2 formulas, where the formula is  $df_1 = k - 1$  and  $df_2 = n - k$ , which means the value of the f table is 3.20. The following are the test results in the anova table.

Table 4. F Test Result

ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	751.315	2	375.658	84.476	.000 <sup>b</sup>
Residual	209.005	47	4.447		
Total	960.320	49			

a. Dependent Variable: Service Quality

b. Predictors: (Constant), Supervision, Queuing System

Source: data processed in the SPSS version 25 application

Based on the data above, the calculated f table value shown in the table above shows the calculated f value of  $84.476 > 3.20$ . From here we can see that the calculated f value is greater than the f table. The sig value generated is 0.000, which is smaller than 0.05. Thus, the value of f count is greater than the t table. Based on the data analysis above, we can



conclude that the Ho3 hypothesis is rejected and Ha3 is accepted because there is a simultaneous influence between the independent variable and the dependent variable.

## 4.2. Discussions

### 4.2.1. The Effect of Queuing System on Service Quality

Based on the results of the data analysis conducted earlier, it is evident that the calculated t-value is greater than the t-table value, and the sig value is less than 0.05. The data based on the t-test is ( $4.374 > 2.01$ ), and the sig value ( $0.000 < 0.05$ ). Consequently, Ho1 is rejected while Ha1 is accepted, indicating a positive and significant partial effect between the queuing system and service quality. This suggests that an optimal service provision can lead to high customer satisfaction.

In this context, the aspects of speed and accuracy are of paramount importance in service delivery. Ensuring that customers do not wait unnecessarily contributes to a positive perception of service quality. The findings of this study align with previous research by (Azhari & Niswah, 2020; Irzani & Astuti, 2012; Milanda & Ukkas, 2019, Septiani et al., 2017).

Service quality is a crucial aspect that service providers should prioritize. Maintaining service quality enhances customer satisfaction with the company's services. In Islam, it is essential always to provide the best and highest quality when offering goods or services to others. As stated in Surah Ali 'Imran verse 159, which reads:

مِنْ لَانَفْضُوا الْقَلْبِ غَائِظًا فَظًّا كُنْتُمْ وَلَوْ أَنَّهُمْ لِنْتَ اللَّهُ مِنْ رَحْمَةٍ فِيمَا  
فَتَوَكَّلْ عَزَمْتَ فَإِذَا الْأَمْرُ فِي وَشَاوَرُ هُمْ لَهُمْ وَاسْتَغْفِرْ عَنْهُمْ فَاعْفُ ط حَوْلَكَ  
الْمُتَوَكِّلِينَ يُحِبُّ اللَّهُ إِنَّ اللَّهَ عَلَى

The meaning of Surah Ali 'Imran verse 159 is: "So by mercy from Allah, you (Muhammad) were lenient with them. And if you had been rude [in speech] and harsh in heart, they would have disbanded from about you. So, pardon them and ask forgiveness for them and consult them in the matter. And when you have decided, then rely upon Allah. Indeed, Allah loves those who rely [upon Him]."

Based on the above verse, by doing good and being gentle towards others, we will also receive goodness in return. In providing service, we must be sincere and serious in delivering the service. If someone wants to give their opinion or feedback, we should give them time to express their concerns. Complaints help us identify our mistakes and allow us to evaluate to improve the quality of service.

In improving the quality of service, several factors are crucial, including the queuing system. The queuing system is one of the influencing factors. If the queuing system improves, the quality of service will also improve. Conversely, if the queuing system deteriorates, the quality of service will also decline. Therefore, the queuing system must always be maintained and enhanced to improve the quality of service.

Queuing has been a culture practiced by humans for many years. It is an etiquette that every person should possess. This is related to religion as well. Queuing is also associated with patience because the essence of queuing is waiting for service. Patience is highly valued in Islam. As stated in Hadith HR Bukhari number 1469, which says:

وَمَنْ يَسْتَعْفِفْ يُعِفَّهُ اللَّهُ، وَمَنْ يَسْتَغْنِ يُغْنِهِ اللَّهُ، وَمَنْ يَتَصَبَّرْ يُصَبِّرْهُ اللَّهُ، وَمَا أُعْطِيَ أَحَدٌ عَطَاءً خَيْرًا وَأَوْسَعَ مِنْ الصَّبْرِ

It means "Whoever tries to protect himself, Allah will protect him; whoever tries to be content, Allah will make him content. Whoever tries to be patient, Allah will make him patient and no one has been granted anything more than patience." (HR Bukhari No 1469)."

Based on the meaning of the Hadith above, patience is the virtue in queuing. Queues are indeed caused by the accumulation caused by limited facility services and limited labor. For this reason, queuing has indeed become a mandatory system for service facilities. if patience can be controlled, then the person will get what he wants.

#### 4.2.2. The Effect of Supervision on Service Quality

Supervision is also an important factor because in conducting an evaluation, one of the initial stages is seen from the supervision. If supervision increases, the quality of service will also increase. But on the contrary, if supervision decreases, the quality of service will also decrease. Therefore, supervision must also always be improved so that the quality of service can also be improved.

Supervision is one of the management methods where supervision is one of the pillars in the success of a business. Likewise, supervision in the service sector. supervision is very important in evaluation activities. Through supervision, we can monitor work activities in the workplace and can be made into a report. So in Islam. Supervision is very important considering that humans are also always supervised by Allah SWT. As in the letter Al- Ma'idah verse 117 which reads:

مَا قُلْتُ لَهُمْ إِلَّا مَا أَمَرْتَنِي بِهِ ۚ أَنِ اعْبُدُوا اللَّهَ رَبِّي وَرَبَّكُمْ وَكُنْتُ عَلَيْهِمْ شَهِيدًا مَّا دُمْتُ فِيهِمْ ۚ فَلَمَّا تَوَفَّيْتَنِي كُنْتُ أَنْتَ الرَّقِيبَ عَلَيْهِمْ وَأَنْتَ عَلَى كُلِّ شَيْءٍ شَهِيدٌ

The meaning of Surah Al-Ma'idah verse 177 is: "I never said to them except what You commanded me - to worship Allah, my Lord and your Lord. And I was a witness over them as long as I was among them; but when You took me up, You were the Observer over them, and You are, over all things, Witness."

The knowledge and wisdom we can take from the above verse are that Allah SWT always watches over His people as they go through life. Similarly, we should also carefully monitor and oversee the businesses or endeavors we are engaged in to ensure that our intentions continue to run smoothly. The same applies to providing good supervision for services.

Based on the results of the analysis, it is found that there is a partial influence of supervision (X2) on service quality (Y). This can be determined through the partial hypothesis test (t-test). From the data analysis conducted previously, it is evident that the calculated t-value is greater than the t-table value, and the sig value is less than 0.05.

Specifically, the data from the t-test show that ( $6.214 > 2.01$ ) and the sig value is ( $0.000 < 0.05$ ), which leads to the rejection of  $H_02$  while accepting  $H_a2$ . This means that there is a significant partial effect between supervision and service quality. In other words, when specific aspects of the supervision process are well-implemented, it will have a positive and statistically significant impact on improving service quality. It can be concluded that by applying focused supervision on specific aspects, an organization or service can experience a tangible improvement in service quality, which will have a positive impact on its users. This can affect customer satisfaction, operational efficiency, compliance with standards, and overall organizational reputation.

The findings of this study align with the results of previous research (Hauriyyah, 2014; Muliati & Putri, 2022; Sitorus, 2020) that indicate a positive influence of supervision on service quality. Through proper supervision, management can identify issues and errors in the services provided. This allows for corrective actions and quality improvement to ensure better service in the future. In many sectors, there are established quality standards for specific services. Supervision ensures that the services comply with these standards, providing customers with the expected level of service. Good service quality and strict supervision help maintain the organization's reputation and build customer trust. Customers are more likely to return to organizations that provide reliable and consistent services.

In conclusion, effective supervision can help improve service quality by identifying issues, measuring performance, receiving customer feedback, and encouraging responsibility in service delivery. Thus, supervision and service quality are interconnected and mutually influential in striving for organizational excellence.

#### **4.2.3. The effect between the queuing system (X1) and supervision (X2) on service quality (Y) simultaneously**

Based on the results of the data analysis carried out previously, it is known that the calculated t value is greater than the t table value and the sig value is less than 0.05. Where the data is ( $84.476 > 3.20$ ) and ( $0.000 < 0.05$ ), therefore,  $H_03$  is rejected while  $H_a3$  is accepted, which means that there is a simultaneous significant influence between the queuing system and supervision on service quality. This indicates that an efficient queuing system and good supervision are two important factors that are interrelated in improving service quality. By optimizing these two aspects simultaneously, institutions or organizations can increase customer satisfaction, productivity, and their reputation for providing high-quality services.

## **5. CONCLUSION**

The queuing system (X1) has a positive and significant partial effect on service quality (Y). Therefore,  $H_01$  is rejected while  $H_a1$  is accepted. Supervision (X2) also has a positive and significant partial effect on service quality (Y), meaning that  $H_02$  is rejected while  $H_a2$  is accepted. There is a significant simultaneous effect between the queuing system and supervision on service quality.

From the research results, it has been proven that the queuing system and supervision have a positive and significant influence on service quality. Therefore, it is expected that PT MRT Jakarta Persero continues to improve their supervision and the methods in their queuing system to further enhance their service quality. Implementing

new innovations in the queuing system, such as online queue number issuance and online appointment scheduling, can help manage the crowd and reduce congestion in the queue. Improving the existing supervision can also ensure better control and efficiency in managing queues and service delivery.

PT MRT Jakarta Perseroda is encouraged to use the findings of this research for evaluation and improvements in service quality, particularly in enhancing the queuing system by prioritizing speed and accuracy of service, as well as optimizing and strengthening supervision. These findings can serve as a benchmark for improving service quality. As a result, the public's satisfaction in using this transportation service will increase alongside the improvement in service quality.

## REFERENCES

- Azhari, P. N., & Niswah, F. (2020). Kualitas Pelayanan Pendaftaran Pasien Melalui Sistem Informasi Antrian di Puskesmas Tarik (SIAP TARIK) Kecamatan Tarik-Sidoarjo. *Publika*, 8(1).
- Diana, A., & Tjiptono, F. (2016). Pemasaran: Esensi dan Aplikasi. *Andi Offset Yogyakarta*.
- Hauriyah, T. (2014). *Pengaruh Pengawasan terhadap Kualitas Pelayanan di Kecamatan Margahayu Kabupaten Bandung*. UIN Sunan Gunung Djati Bandung.
- Heizer, J., & Render, B. (2010). Manajemen operasi. *Edisi Ketujuh Buku, 1*.
- Irzani, I., & Astuti, A. M. (2012). Optimalisasi kualitas layanan melalui analisis antrian pada pusat pelayanan mahasiswa di Fakultas Tarbiyah IAIN Mataram. *Beta: Jurnal Tadris Matematika*, 5(2), 124–148.
- Kotler, P. (n.d.). Armstrong.(2018). Prinsip-prinsip Marketing Edisi Ke Tujuh. *Penerbit Salemba Empat. Jakarta*.
- Lovelock, C., & Wirtz, J. (2011). Pemasaran jasa perspektif edisi 7. *Jakarta: Erlangga*, 4.
- Maarif, M. S., & Tanjung, H. (2003). Teknik-teknik kuantitatif untuk manajemen. *PT. Grasindo, Jakarta*.
- Milanda, S., & Ukkas, D. (2019). Pengaruh Sistem Antrian dan Pelayanan dalam Meningkatkan Efektifitas Pelayanan Pasien Rawat Jalan di Puskesmas Madising Na Mario Kota Parepare. *Jurnal Ilmiah Manusia Dan Kesehatan*, 2(1), 26–33.
- Muliati, L., & Putri, H. Y. (2022). Pengaruh Profesionalisme Dan Pengawasan Terhadap Kualitas Pelayanan Administrasi Kependudukan Di Kecamatan Kota Tangerang. *Dynamic Management Journal*, 6(1), 1–9.
- Noersanti, L., & Prasetyo, T. A. (2020). Influence Service Quality, Brand Image, Location to Customer Satisfaction and Customer Loyalty (Case Study on Motorcycle Repair Shop Sahabat Motor-Cibinong Customer). *6th Annual International Conference on Management Research (AICMaR 2019)*, 152–155.
- Philip, K., & Cox, K. (2004). Manajemen dan Strategi Pemasaran. *Erlangga, Jakarta*.
- Pinang, P. T. (2015). Pengaruh Pengawasan Kepala Sekolah Terhadap Kinerja Guru Pada Sd Negeri Binaan Tanjungpinang Satriadi. *Journal of Economic and Economic Education Vol*, 4(2), 288–295.
- Septiani, A. S., Wigati, P. A., & Fatmasari, E. Y. (2017). Gambaran Sistem Antrian Pasien Dalam Optimasi Pelayanan Di Loker Pendaftaran Instalasi Rawat Jalan Rumah Sakit Umum Pusat Fatmawati. *Jurnal Kesehatan Masyarakat*, 5(4), 1–14.
- Sitorus, M. (2020). Pengaruh Pengawasan Terhadap Kualitas Pelayanan Masyarakat

- (Studi Kasus: Dinas Perdagangan dan Perindustrian Kota Medan). *Jurnal Wacana Kinerja: Kajian Praktis-Akademis Kinerja Dan Administrasi Pelayanan Publik*, 11(4), 81–96.
- Sondole, E. M. R., Nelwan, O. S., & Palandeng, I. D. (2015). Pengaruh Disiplin Kerja, Motivasi dan Pengawasan terhadap Kinerja Karyawan pada PT. Pertamina (Persero) Unit Pemasaran VII, Terminal BBM Bitung. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 3(3).
- Sudiarta, I. N., Wirawan, P. E., Astina, I. N. G., & Dewi, I. G. A. M. (2022). Kualitas Layanan Dan Destinasi Wisata Terhadap Kepuasan Wisatawan Untuk Mengunjungi Kembali Desa Wisata. *Journal Of Management And Bussines (JOMB)*, 4(1), 508–526.
- Sunyoto, D. (2014). *Dasar-dasar Manajemen Pemasaran, konsep, strategi, dan kasus*.
- Terry, G. R. (2008). *Prinsip-prinsip manajemen*.
- Tjiptono, F. (2014). *Pemasaran Jasa*. Gramedia Tjiptono, F., Gregorius, Chandra. 2005. *Service, Quality & Satisfaction*.
- Yuliani, R., & Husen, T. I. (2022). Analysis Of Service Quality In Applications For Making Passports Using M Passports At The Class 1 Immigration Office Of Tpi Banda Aceh. *Journal Of Humanities, Social Sciences And Business*, 1(4), 183–188.
- Yuniarti, A., & Aditya, T. (2020). Service quality terhadap kepuasan masyarakat mass rapid transit (MRT) DKI Jakarta di stasiun Lebak Bulus pada masa pandemik Covid-19. *Jurnal Ilmiah Ilmu Administrasi*, 10(2), 55–69.

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