

Evaluation of Facility Services at Kapatang Train Station Based on User and Community Interest

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ABSTRACT

This study aims to evaluate the service infrastructure of Kapatang Railway Station based on users and public interest. The research method used was a survey method by distributing questionnaires to Kapatang railway station users and potential users of the station. The questionnaire included questions about the quality of station services, user expectations and needs, as well as public interest in railway station services. The results of the study showed that the infrastructure facilities at Kapatang railway station had met the minimum standard service regulations in place. From the analysis of the customer satisfaction index, it was found that the criteria for "very satisfied" was achieved with a score of 90.38%. In addition, the public interest in Kapatang railway station services was very high. These recommendations are expected to help improve the quality of Kapatang railway station services and increase public interest in using the station's services.

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1. INTRODUCTION

The background of evaluating the service facilities at Kapatang Train Station based on users and community interest is to evaluate the quality of services provided by the train station to users and to understand the needs and expectations of the community towards the service. This evaluation is carried out to improve the quality of train station services so that it can provide a better experience for users and meet the community's needs [1].

Kapatang Train Station is one of the train stations located in Banyuwangi Regency. As a train station serving the public, it must be able to provide good service and meet users' needs [2]. Therefore, evaluating the service facilities at the train station is crucial to ensure that the train station can provide optimal service to users [3]. Infrastructure facilities such as parking can enhance the volume of vehicular travel [4].

In evaluating the service facilities at the train station, several factors need to be considered, including the quality of station facilities, station cleanliness, station security, station comfort, and the availability of information required by users [5]. In addition, the evaluation must also consider the interests and needs of the community towards train station services so that the station can meet the expectations and needs of users well

[6]. By conducting regular evaluations, it is hoped that the service at the train station can continue to be improved and meet the community's expectations [7].

Service facilities at the train station cover everything related to the facilities and services provided by the train station to users [8]. These facilities can include excellent and comfortable platform facilities that will facilitate users boarding and disembarking from the train [9]. Good platform facilities include adequate platform width, the presence of stairs and lifts for access to the platform, as well as air conditioning and protection from the weather [10]. Good ticket facilities include the presence of automatic ticket machines and easily accessible ticket counters, and clear information on train schedules and ticket prices. Good passenger facilities include sufficient and comfortable seating inside the train, clean and adequate toilets, and food and beverage vendors on the train [11]. Train station security includes security officers who can assist users in terms of security and law enforcement. Good information availability includes information on train schedules, ticket prices, and information related to train travel.

This evaluation aims to improve the quality of train station services and provide a positive experience for users. Evaluation can also help train stations plan improvements to facilities and services to better meet the needs and interests of the community [12]. Some aspects that can be evaluated in train station service facilities include accessibility, security, comfort, cleanliness, information, and availability of facilities [13]. Evaluation can also be conducted on using technology and information systems in providing services to users [14]. This research is essential to carry out to measure the quality of service at train stations, especially Ketapang Station. Considering that this station is still relatively new and the existing infrastructure is still in the process of being improved, an assessment of the services provided is needed to provide a positive experience and increase public interest in using this train mode. Therefore, this research can also be used as material for consideration by the government in improving existing and non-existent infrastructure in the station area.

2. RESEARCH METHOD

The initial step in this research was conducted by literature review, initial survey, questionnaire preparation, and interviews followed by a direct physical survey together with the distribution of questionnaires to the customers of Ketapang railway station. Sampling was carried out using a field survey and questionnaire method. The sample formulation taken in the research was rounded up to 10% of the total number of passengers who got off at Ketapang Station during research activities. The data obtained were in the form of infrastructure facilities data of Ketapang station and the results of interviews with users of Ketapang railway station, which have been validated using the Microsoft Excel support program.

The study of risk analysis of railway infrastructure on public interest in using trains was focused on the relationship or influence of railway infrastructure on public interest in using trains. The survey limited the scope of respondents based on specific criteria, namely all passengers who have used trains through Ketapang station and residents around Ketapang station who have used trains through Ketapang station. The survey was conducted from December 22, 2022, to January 1, 2023. The survey location was at Ketapang station located on Jalan Gatot Subroto, Lkr. Kp. Baru, Bulusan, Kec. Kalipuro, Kabupaten Banyuwangi, East Java 68455.

The infrastructure data analysis was in the form of qualitative descriptive data. Meanwhile, the user data was analyzed quantitatively, and the Customer Satisfaction Index (CSI) method was used for the analysis. This method is an index of customer satisfaction that measures customer satisfaction based on specific attributes [15]. According to [16], there are four steps in calculating the Customer Satisfaction Index (CSI), which are determining the mean importance score (MIS), creating weight factors (WF), creating weight score (WS), determining the total weight (WT), and determining the Customer Satisfaction Index (CSI). Then, the results of the CSI calculation were compared with the criteria table for the Customer Satisfaction Index (CSI). The criteria are listed in Table 1.

Table 1. Criteria for Customer Satisfaction Index (CSI)

No	Indeks value	Criteria
1.	$80\% < \text{satisfaction index} \leq 100 \%$	Very Satisfied
2.	$60\% < \text{satisfaction index} \leq 80 \%$	Satisfied
3.	$40\% < \text{satisfaction index} \leq 60 \%$	Fair
4.	$20\% < \text{satisfaction index} \leq 40 \%$	Dissatisfied
5.	$0\% < \text{satisfaction index} \leq 20 \%$	Very Dissatisfied

Source: [16]

3. RESULTS AND DISCUSSION

3.1 Condition of Ketapang Station

Ketapang Station, formerly known as Banyuwangi Baru Station, is a type C large active railway station located in Ketapang Village, Kalipuro District, Banyuwangi Regency, East Java, included in the IX Jember action area, with an elevation of +7 meters. This station is the easternmost active railway station in Daop IX, located approximately 10 kilometers north of the district's administrative center and 100 meters from the Ketapang ferry terminal. The station was built to create continuity between the railway and the crossing at the port. On December 1, 2019, the Banyuwangi Regency Government requested that Indonesian Railways Company change the name of Banyuwangi Baru Station to Ketapang Station to facilitate tourists visiting Banyuwangi.

The opening of the new port in Ketapang was motivated by the condition of the old Banyuwangi port, which was filled with mud, making it difficult for cargo ships to dock. This station was built in 1984-1985 to replace the old Banyuwangi Station, which had been located in the city of Banyuwangi. Ketapang Station has six railway tracks, with Track 2 being straight. To the north of the station is a locomotive sub-depot and a train depot for storing and maintaining railway fleets, especially trains operated by Daop IX. Train services at Ketapang Station are divided into 2 categories: (a) Inter-City Services and (b) Local Train Services. Inter-city train services are long-distance trains, as shown in Table 2. Local train services are KRD trains that travel short distances, as shown in Table 3.

Table 2. Inter-City Train Services

Route	Train name	Class	Destination
Northern Java Line	Blambangan Ekspres	Eksekutif dan Ekonomi	Semarang Tawang
			Ketapang
Southern Java Line	Wijayakusuma	Eksekutif dan Ekonomi Premium	Cilacap
			Ketapang
	Mutiar Timur	Eksekutif dan Ekonomi	Yogyakarta
			Ketapang
Eastern Java Line	Sritanjung	Ekonomi	Lempuyangan
			Ketapang
	Probowangi	Ekonomi	Gubeng
			Ketapang
	Tawang Alun	Ekonomi	Malang Kotalama
			Ketapang

Source: PT. KAI Daop IX

Table 3. Local Train Services

Train Name	Destination
Pandanwangi	Jember
	Ketapang

Source: PT. KAI Daop IX

3.2 Station Facilities

A parking lot is a place where vehicles, both four-wheel and two-wheel, with a non-temporary nature to carry out activities at a specific time, will be placed. The parking lot at Ketapang Station has the capacity to accommodate the parking needs of train passengers, and the parking lot is located in front of the station.

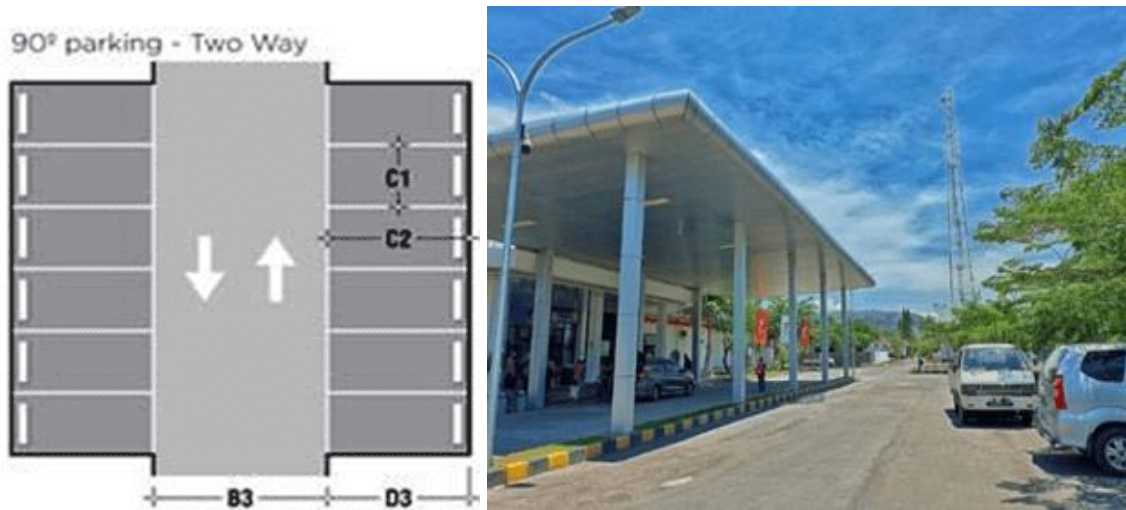


Figure 1. 90-degree parking - Two Way and Parking Area at Ketapang Station.

Figure 1 show the type and parking spaces available at Ketapang Station to meet the parking needs of train passengers. Referring to the SNI regulations regarding parking areas, where the minimum width of a straight one-way ramp is 3 meters, and for two-way ramps, there must be a separator of 0.5 meters, resulting in a minimum width of 6.5 meters and a minimum area of 500 square meters, it can be said that the parking area at Ketapang Station meets the requirements and is by applicable regulations.

A prayer room is a place religious believers use to worship according to their respective beliefs or teachings. Ketapang Station provides a prayer room facility for Muslims who will perform their prayers before or after using the train mode of transportation. Based on the capacity and condition of the prayer room at the station, it is adequate and sufficient for the facility for passengers and the surrounding community. Figure 2 is the prayer room available at Ketapang Station by the minimum service standards for a train station.



Figure 2. Prayer room Space at Station



Figure 3. Waiting Room at Station

The waiting room is a space used as a waiting area for people. Figure 3 is an outdoor waiting area provided for train station passengers. Railway stations have waiting rooms provided for passengers who are waiting for departure or have traveled by train. Ketapang Station's waiting room is divided into indoor and outdoor waiting areas, each located inside and outside.

Service is an activity intended to provide satisfaction to customers. At Ketapang Station, there is a room designated as a service center (information center) to assist passengers who need help or require the latest information related to trains. Figure 4 is a customer service room that provides all information to train station passengers.



Figure 4. Customer Service Room

An electrical outlet, or power outlet, is a component of an electrical installation that distributes electrical energy from a house installation to loads. The loads referred to here are smartphones, laptops, and other electronic devices. At Ketapang Station, electrical facilities are available for passengers waiting for their train departure. Figure 5 shows the Charging Corner Facility provided so passengers can charge their communication devices.



Figure 5. Charging Corner Facility

Safety facilities are the implementation of occupational health and safety (K3) to prevent accidents, occupational diseases, fires, explosions, and environmental pollution. At Ketapang Station, K3 has been implemented with reminders and facilities such as hand sanitizers and signs to remind passengers to maintain physical distance while sitting. Figure 6 is a train passenger safety facility with the provision of hand sanitizer and K3.



Figure 6. Security during the Pandemic

3.3 Station Connectivity

The construction of Ketapang Station had a background of transportation mode integration due to the increasing demand for crossings when a new port was opened in the Ketapang area. This required connectivity with other modes of transportation, such as the need for a train station and a transport terminal. The transportation connectivity around Ketapang Station is as follows:

a. Connectivity with the Port

Ketapang Station is located at +7 meters above sea level, which means it is not far from the coastal area, making it easy to connect with the Ketapang Port located on Jalan Raya Banyuwangi Situbondo, Bulusan, Kalipuro District, Banyuwangi.

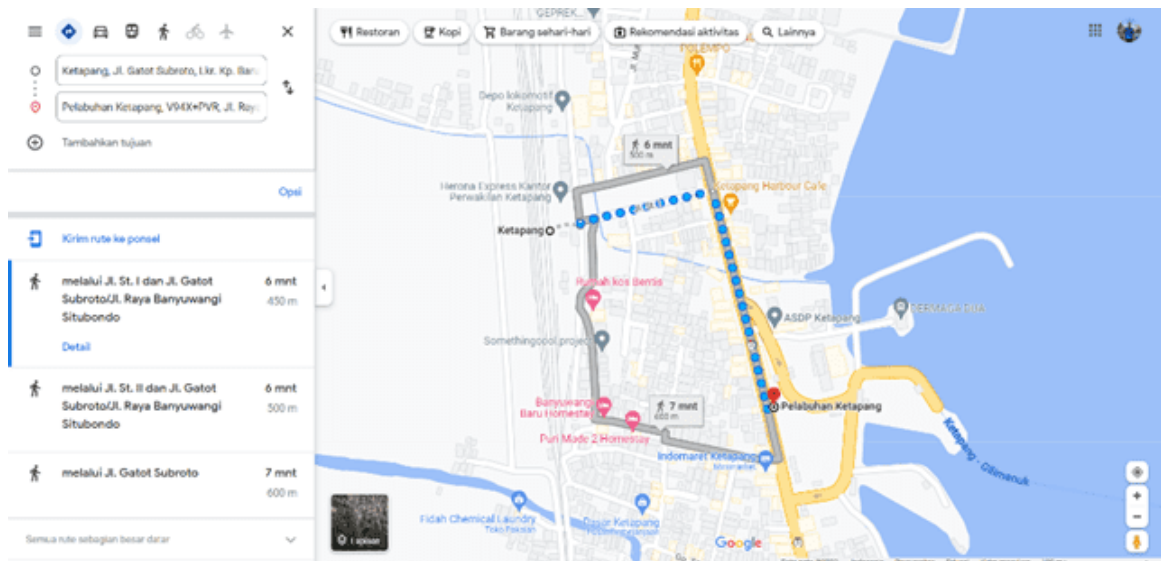


Figure 7. Distance to the Port

The image 7 is a measure of the distance between the train station and the nearest port. The distance is pretty close, only about 500 meters from the station, so to reach the port, people can walk and use a motorcycle or online taxis (motorcycle and car). Stasiun Ketapang also has connectivity with the transportation terminal not far from the Ketapang area. The terminal is called Terminal Sritanjung, located on Jalan Raya Kecamatan Situbondo, Bulusan, Kec. Kalipuro, Banyuwangi.

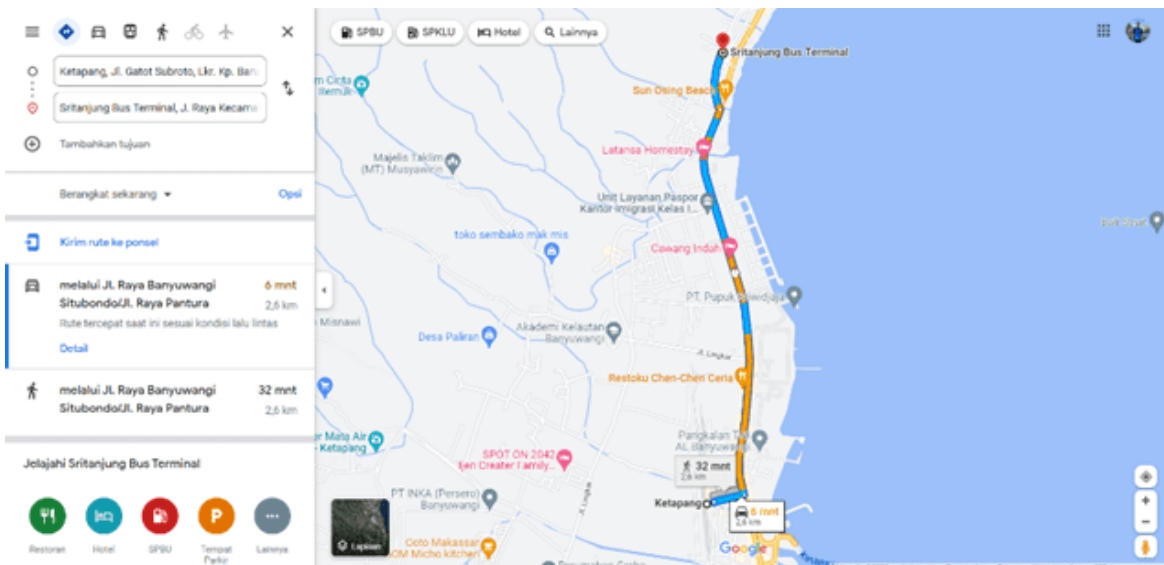


Figure 8. Distance to Passenger Terminal

Figure 8 measures the distance between the train station and the passenger terminal. The terminal is 2.6 km from Stasiun Ketapang. If you want to go to Terminal Sritanjung from the station, you can use motorcycle taxis, public transportation buses (Colt), or online motorcycle taxis or cars.

3.4 Analysis Facility

Validity is the accuracy or precision of an instrument in measurement. In testing data collection instruments, validity is divided into factors and items. Factor validity is measured when the items are arranged using more than one factor (there is a similarity between one factor and another). Factor validity measurement is done by correlating the factor score (sum of items in one factor) with the total factor score (total of all factors). Item validity measurement is done by correlating the item score with the total item score. The correlation or support for the total score indicates item validity. If we use more than one factor, the item validity

test is done by correlating the item score with the factor score, then continuing by correlating the item with the total factor score (sum of several factors). A correlation coefficient is obtained from the correlation calculation to measure an item's validity level and determine whether an item is appropriate for use. In determining the appropriateness of an item, a valid significance test is usually used if it correlates significantly with the total score [17] [18].

3.5 Validity Test Criteria

In the validity test, the correlation result will be compared with the Significance Value (P-value) or compared with the R table value.

Using the R-Value and R-Table Value

R-Value, > R-Table Value, concludes VALID

R-Value < R-Table Value concludes INVALID

Number of N = Number of Respondents, 100 Respondents, R-Table Value is 0.195.

Using the Significance Value (P-value)

Significance Value < 0.05 concludes VALID

Significance Value > 0.05 concludes INVALID

The validity test result from the respondent's answers using SPSS 22 software can be seen in Table 4.

Table 4. Validity Test Results

No Item	Correlation Value	Critical R (at 5%)	Description
X 1	0,379	0,195	VALID
X 2	0,653	0,195	VALID
X 3	0,832	0,195	VALID
X 4	0,661	0,195	VALID
X 5	0,791	0,195	VALID
X 6	0,771	0,195	VALID
X 7	0,809	0,195	VALID
X 8	0,536	0,195	VALID
X 9	0,527	0,195	VALID
X 10	0,833	0,195	VALID
X 11	0,805	0,195	VALID
X 12	0,801	0,195	VALID

Source: Analysis

3.6 Reliability Test

The reliability test is intended to determine the consistency of a measuring instrument when used repeatedly at different times, or in other words, the measuring instrument has consistent results when used multiple times [19]. The Cronbach's Alpha technique is used for reliability testing. The results of the reliability test of the respondents' answers using SPSS 22 software can be seen in table 5.

Criteria for Testing Reliability

The basis for taking the Cronbach Alpha reliability test is as follows:

Cronbach alpha value > 0.6 is concluded that the item is valid.

Cronbach alpha value < 0.6, it can be concluded that the item is unreliable or not valid.

Table 5. Results of the Reliability Test

Item Number	Correlation Value	Critical R-Value	Description
Value	0,907	0,6	Valid

Source: Analysis

3.7 Customer Satisfaction Index (CSI) Test

The results of the CSI calculation using Excel software can be seen in the table below.

Table 6. Customer Satisfaction Index Test Results

No	Attribute	Average Assessment Score (MIS)	Weight Factors (WF)	Average Expectation Score (MSS)	Weight Score (WS)
1.	Connectivity	4,44	10,77	4,72	50,83
2.	Parking Area	3,68	8,93	4,42	39,45
3.	Prayer Room	3,31	8,03	4,58	36,77
4.	Waiting Room	3,72	9,02	4,58	41,32
5.	Officer Service	3,14	7,62	4,14	31,53
6.	Toilet/WC	3,34	8,10	4,43	35,89
7.	Information Center	3,31	8,03	4,57	36,69
8.	Canteen/Food Court	3,87	9,39	4,57	42,90
9.	Railway Line	4,07	9,87	4,43	43,73
10.	Electricity	2,71	6,57	4,57	30,04
11.	Safety and Health	3,19	7,74	4,71	36,44
12.	Internet/Wifi	2,45	5,94	4,43	26,32
	Total	41,23			
	Weight Total (WT)				451,91
	Customer Satisfaction Index (CSI)		CSI = 451,91 : 5 = 90,38		

Source: Analysis

Based on the CSI test results, the final score obtained was 90.38%, which falls into the "Very Satisfied" category, with an index score ranging from 80% to 100%. Looking at the results of the entire report, the relationship between railway infrastructure or station facilities and potential risks, such as low public interest in railway transportation, operational issues at the station, and poor station management, can be avoided because the railway infrastructure, especially at Ketapang Station, is rated as "Very Satisfied" by passengers. Railway Infrastructure and Facilities at Ketapang Station [20] [21] [22].

1. Connectivity is rated as good, with an average passenger rating of 4.44, thus not posing any risk that could decrease public interest in railway transportation.
2. Parking facilities are considered adequate, with an average passenger rating of 3.68, thus not posing any risk that could decrease public interest in railway transportation.
3. The prayer room is considered sufficient for worship activities, with an average passenger rating of 3.31, thus not posing any risk that could decrease public interest in railway transportation.
4. The waiting room is considered sufficient for passengers, with an average passenger rating of 3.72, thus not posing any risk that could decrease public interest in railway transportation.
5. The service provided by the staff is considered adequate, with an average passenger rating of 3.14, thus not posing any risk that could decrease public interest in using railway transportation.
6. The toilets/WCs are considered comfortable, with an average passenger rating of 3.34, thus not posing any risk that could decrease public interest in railway transportation.
7. The information center is sufficient to meet the passengers' information needs, with an average passenger rating of 3.31, thus not posing any risk that could decrease public interest in using railway transportation.
8. The canteen/food court is considered sufficient to meet the needs of passengers, with an average passenger rating of 3.87, thus not posing any risk that could decrease public interest in using railway transportation.
9. The railway track is considered sufficient, with train services and no train congestion, with an average passenger rating of 3.87, thus not posing any risk that could decrease public interest in using railway transportation.
10. The electrical facilities are considered inadequate due to the lack of charging corners in all areas of the station, with an average passenger rating of 2.71, thus having the potential to pose a risk that could decrease public interest in using railway transportation.

11. The health and safety (K3) facilities are considered sufficient, with warning signs and other health facilities, with an average passenger rating of 3.19, thus not posing any risk that could decrease public interest in using railway transportation.
12. The internet facilities are considered inadequate due to the lack of Wi-Fi facilities at the station, with an average passenger rating of 2.45, thus having the potential to pose a risk that could decrease public interest in using railway transportation.

Other risks may occur if the infrastructure and facilities at the station need to be well-maintained and managed. The passenger assessment reflects public interest in railway transportation, as evidenced by the increasing number of passengers in the past few years, which decreased due to Covid-19. The evidence of the increasing number of passengers at Ketapang Station is as follows: (1) The opening of a new train service (Banyuwangi-Yogyakarta) called Blambangan Express. (2) The renovation of infrastructure and facilities at Ketapang Station in 2019 to improve passenger service [23].

Ketapang Banyuwangi railway station is a large-class station. According to the Regulation of the Minister of Transportation of the Republic of Indonesia, number PM 63 of 2019, concerning the minimum service standards for transporting people by train [17], there are several criteria based on the class of the station. The criteria are differentiated into several types of services, such as safety, security, reliability/orderliness, comfort, convenience, and equality. The indicators for each type of service consist of safety infrastructure such as safety information and facilities, lighting, platforms, station platform canopies, and gathering points. The indicator for security services consists of security facilities, lighting, ticket sales services, operating schedule information, and railway service network maps. Comfort infrastructure services include waiting areas, boarding areas, toilets, prayer rooms, facilities for regulating air circulation in enclosed waiting areas, trash cans, and no-smoking signs. Convenience infrastructure services include service information, train travel disruption information, information on continuing transportation, integration with other transportation modes, parking areas, pedestrian areas, and directional signs. Equality infrastructure services may include facilities for special passengers, disability counters, and nursing rooms. From the survey and observation conducted in the Ketapang Banyuwangi railway station field, the existing facilities meet the minimum service standards according to the regulations. Based on the assessment of the station's users, the station facilities received positive responses, and they were delighted with the facilities provided. Station users were also asked whether they would use Ketapang Banyuwangi railway station again for future travel [24] [25].

CONCLUSION

Based on the results of the evaluation research on railway infrastructure and public interest in using trains, a case study was conducted on "Ketapang Station" by the Regulation of the Minister of Transportation of the Republic of Indonesia number PM 63 of 2019 concerning the minimum service standards for transporting people by train. The Customer Satisfaction Index (CSI) calculation results show that the facilities at Ketapang Station are rated "Very Satisfied" by train passengers who have used the station. This is evidenced by the Customer Satisfaction Index (CSI) score obtained, which is between 80% - 100%, at 90.38%. In addition, the high rating given by train passengers to the infrastructure at Ketapang Station is based on facilities that are still new and well-maintained. The station also has connectivity to other transportation hubs, such as ports and terminals, making it convenient for train passengers, especially at Ketapang Station. Currently, the number of people coming and traveling through Ketapang Station is increasing, as evidenced by the addition of the newest train service route from Banyuwangi to Yogyakarta, the Blambangan Express.

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