

Analysis of Official Motorcycle Parking Facilities of Bekasi Stations on Commuter Line Users Which Bring Motorcycle

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Abstract. Many people began to use public transportation, especially the commuter line to travel from Jabodetabek area, especially in the satellite city of Jakarta, Bekasi City. Motorcycle is the most used vehicle to get to Bekasi station because it is easier to use and faster than other vehicle. By distributing questionnaires containing 14 questions to users, which are reviewed from the dimensions of Tangibles (Physical Form), Empathy (Sympathy), Reliability, Responsiveness and Assurance (Guarantees) using a Likert scale 1 to 5, researchers could understand the problem from the weight value calculation. The 5 questions with the lowest weight are used as the main problems to be used as questions for the interviewees. Some road points which are uneven and perforated can interfere with driving comfort. The official parking capacity of Bekasi station is still insufficient for commuter line users. So many commuter line users park their vehicles in non-official parking lots. The high and increasing needs for commuter lines increases the number of users and parking space requirements for transportation transfers mode also increased.

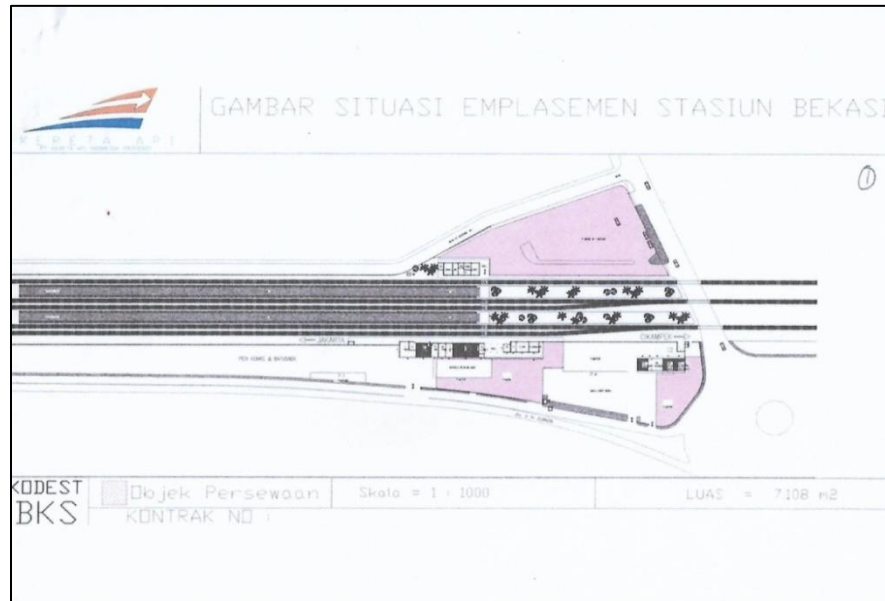
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INTRODUCTION

Increasing the awareness of Jabodetabek society in using public transportation each year has caused the needs for public transportation facilities and infrastructure also increased. Many people began to use public transportation, especially commuter line trains to travel, especially in satellite city of Jakarta especially Bekasi City which is densely populated. Bekasi City has around 210.49 km² of area with 2,873,484 population and those traveling with commuter line trains from Bekasi station reaches 15,030,291 people per year (BPS, 2017). Bekasi Station serves 2 commuter line train routes, namely Jakarta Kota - Bekasi and the extension of the Jakarta Kota - Cikarang route which is the same as the blue line and several long-distance train routes to raise and drop passengers from and to Bekasi station.

Motorcycles are the most used vehicles to get to Bekasi station because it is easier to use and faster, therefore the official parking area of the Bekasi station managed by PT.Reska Multi Usaha needs to be analyzed whether it meets the needs of the parking space during rush hour and meet the needs of available parking space.

In this study only analyzed the official parking facilities which available at Bekasi station, although there are still unofficial parking facilities as illustrated.



Source : PT. Reska Multi Usaha

The official parking facilities of Bekasi station managed by PT. Reska Multi Usaha with 7,108 m² of area and the parking space for motorbikes is 0.75 m X 2 m or around 1.5 m² for one motorcycle. (Directorate General of Land Transportation, 1996)

LITERATURE REVIEW

According to the Technical Guidelines for the Implementation of Parking Facilities, the Director General of Land Transportation (1998) Parking is an immovable condition of a vehicle which is not temporary. Parking is the condition of a vehicle which stops, the vehicle is turned off and left behind in a vehicle parking lot in the run certain time. As well as being a part of traffic using vehicles.

Markings are colored lines which has the function as parking spaces between vehicles. Because it serves as a guide and guide for the driver when parking, markers and road signs must be maintained so they can still be clearly seen by the user.

Satisfaction is someone's feeling of pleasure or disappointment which results from comparing the product's performance or perceived results from consumer expectations. If the performance or service is not in line with expectations, the customer is not satisfied. If it is in line with expectations, customers feel satisfied. If it exceeds expectations the customer feels very satisfied or happy. (Kotler Philip & Keller K, 2016).

RESEARCH METHODS

Data obtained by the researcher from the questionnaire was processed with Microsoft Excel software with the aim of obtaining the weighted average results of all questionnaires using the Likert scale (1 to 5). Furthermore, the 5 lowest weighted questions from the average results as questions are addressed to several informants.

The data obtained by researchers were obtained from interviews with several informants as sources of data processed by qualitative descriptive methods, so the final results of the study were in the form of word or sentence descriptions of research problems.

This research was conducted in the parking area of Bekasi station, Bekasi City, West Java. The official parking of Bekasi station is managed directly by a subsidiary of PT. Kereta Api Indonesia, namely PT. Reska Multi Usaha. This study was conducted for approximately 3 months (April - June 2019). Adjust to the data provided directly by PT. Reska Multi Usaha as

the official parking manager at Bekasi station and distributing questionnaires to motorcycle parking users.

The total calculation of population of official parking motorcycles users of Bekasi station is not known for certain. Therefore, the researcher used the Lemeshow formula to calculate the number of samples to be examined. The formula for determining the population to be sampled in this study:

$$n = \frac{z^2 p(1-p)}{(1)^2}$$

- n = number of samples
- p = population proportion
- Z = is certain degree of trust and a sampling error
- p = is always in the range between 0 - ~

The formula can be used if the population is unknown, in the Dhinda Pramuningtyas study, the study of perceptions of factors which influence people's demand using ATM + Debit cards as a transaction tool, the Lemeshow formula is simplified to be:

$$n = \frac{Z^2}{4d^2}$$

The equation above is a simplified standard formula if the population is unknown. If the degree of trust is 95% and sampling error is 10% and the number of samples is 1.96 then:

$$n = \frac{Z^2}{4d^2} = \frac{(1.96)^2}{4(0.1)^2} = \frac{3,8416}{4(0.1)^2} = 96.04 = 100$$

With this calculation, the samples taken were 100 commuter line users which carrying motorcycles parked at Bekasi stations who had parked vehicles at the Bekasi station several times.

RESULTS AND DISCUSSION

The results of passenger perceptions as listed in table 1 with the lowest answer category are 5 statements for the interview guide to the informants including statements are 1). The official motorcycle parking facilities at Bekasi Station are neatly arranged; 2). The quality of the road in the official parking area of the Bekasi station motorcycle is decent (neat); 3) Facilities Traffic signs are available at Bekasi station official motorcycle parking area; 4). Motorcycle parking capacity meets needs and 5). The use of motorcycle parking facilities prefers to be official rather than non-official.

Table 1. Recapitulation of Passenger Perception

NO	Statement	Weight
1	The official motorcycle parking facilities at Bekasi Station are neatly arranged	292
2	The payment counter for motorcycle parking is neat	339
3	The quality of the road in the official motorcycle parking area of the Bekasi station is decent (neat)	262
4	Traffic signs facilities are available in the Bekasi Station official motorcycle parking area	296
5	Parking officers arrange vehicles which are parked carelessly	343

6	Officers provide the same service to all customers	371
7	Motorcycle parking capacity meets needs	263
8	The use of motorcycle parking facilities prefers to be official rather than non-official	284
9	Officers is always available in the parking area	333
10	Officers will take good care if there are items left behind	323
11	The officers react well if asked for help	360
12	The security of official motorcycle parking in Bekasi parking lot is well maintained	364
13	Officers are polite towards parking users	360
14	Accessories of vehicles (helmets, mirrors) during safekeeping vehicles are guaranteed safety	354
TOTAL		4544
Average		325

The results of interviews with official Parking Officers of Bekasi station as much as possible the officers always maintain the parking area so it is always neat, if there are holes in the road the officer will coordinate to the head office so the head office will provide equipment for road repairs, then for parking signs if there are complaints will be reported directly to the main office then from the main office will be presented officers who put up or delivered directly to the officers who install the traffic signs, because of the limited official parking space available then the motorcycle parking capacity does not meet the needs and because the tastes of each person is different then there is who prefer to park outside the official parking lot, but those who often use official motorcycle parking are users who have used commuter lines every day for traveling activities while those who park outside are usually the first to use a commuter line because they only park their vehicles just a few hours.

Then, the second informant was one of the lecturers who taught the railway sector at the Trisakti Institute of Transportation and Logistics, giving a statement which the genre of commuter line demand was increasing, passenger demand was increasingly insufficient, this affected the available parking facilities due to the transfer of user transportation modes.

Last, daily commuter line users carrying motorcycles said that the station parking was well organized but there were still some were not tidy yet, there were still many roads were not good and had to be repaired, parking capacity had not met the needs because there were many commuter line users from Bekasi station, preferring non-official parking due to official parking is insufficient capacity, while for statements regarding customer parking signs does not provide an answer. It is considered which the signs are in accordance with the provisions and needs.

A complete description of parking facilities users can be seen in table 2, in 2017 the total number of motorcycle users parked at Bekasi station for a year was 690,620 users and experienced an increase in 2018 by 7.7% by 744,096 users, while for 2019 data on the month January, February, March and April as many as 239,416. The increasing number of commuter line users from Bekasi station every year affects the use of parking facilities available for changing modes of private transportation to public transportation.

Table 2 . Number of Users of Bekasi Station Parking Official

MONTH	2017	2018	2019
JANUARY	57.158	53.113	61.741
FEBRUARY	50.139	51.851	54.744
MARCH	59.521	59.676	63.224

APRIL	52.492	61.824	59.707
MAY	59.255	62.325	-
JUNE	54.277	58.343	-
JULY	67.373	67.580	-
AUGUST	69.179	67.007	-
SEPTEMBER	62.168	63.965	-
OCTOBER	59.614	66.853	-
NOVEMBER	50.020	64.542	-
DECEMBER	49.424	67.017	-
TOTAL	690.620	744.096	239.416

Source : PT. Reska Multi Usaha

CONCLUSION

1. The quality of the road in Bekasi station is still not good, there are some road points which are uneven and perforated even though the damage is not too severe but this can disturb comfort and driving safety.
2. The official parking capacity of the Bekasi station is still insufficient for commuter line users, so many commuter line users who carry motorcycles park vehicles in non-official parking lots. This shows the non-official parking regulations are still in effect so they are predicted to disturb the environmental security of the Railway Station.
3. Because of the high demand for commuter lines and the increasing number of users, this has led to increased parking space requirements for transportation modes so the official parking cannot accommodate all vehicles.
4. Users of official motorcycle parking are usually daily users of Bekasi station commuter line, while those parked outside are usually new users or rarely use commuter line services. But there are also many daily users who park motorcycles in non-official places because prices are relatively cheaper than official parking.

SUGGESTION

1. Research is still limited to the Bekasi station official parking facilities, the next study can be analyzed by non-official parking facilities which grow as one of the environmental revenues of the Bekasi station.
2. Maintenance of the road environment of Bekasi station is a consideration for Bekasi City Government to improve services to the society.
3. The growth of non-official parking can be addressed by Railway Management as a CSR and can be used as a collaborative partner to improve the parking facilities around Bekasi Station.

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