

Analysis of Consumer Satisfaction Levels MRT Users (Based On the Customer Satisfaction Index Indicator)

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ABSTRACT: Satisfaction analysis needs to be carried out by mapping the performance of MRT stations based on satisfaction indicators (CSI). The use of the multidimensional scaling method can determine the level of customer satisfaction and determine station mapping based on CSI indicators which can be used to display objects and variables simultaneously (at once) in multidimensional space and compare objects with other objects based on similarities and dissimilarities on geometric maps or graphs, which provides information that is easier to understand. Through a quantitative and qualitative approach measure and understand the importance and satisfaction of each MRT service and facility during pre-journey, on-board, and post-journey using people, process, and physical evidence.

KEYWORDS: MRT, Multidimensional Scaling, Customer Satisfaction Index

I. INTRODUCTION

According to Andrian and Tresani (2022), Jakarta needs good public transportation as its infrastructure. The rapid growth of transportation in Jakarta helps the movement of its population. Even so, there are still many Jakarta residents who use private vehicles such as motorbikes as vehicles to get around traffic jams in Jakarta. However, with various public transportation options in Jakarta, from public transportation, motorbike taxis, city buses, and commuter trains, to Trans Jakarta and MRT (Mass Rapid Transit), private vehicle users are slowly starting to switch to public transportation. Djachremi (2022), rail-based transportation in cities is one of the public transportation modes used by governments in developed countries to facilitate community mobilization. Barrier-free and punctuality are the main reasons for a government to build an integrated rail transportation system.

The MRT Jakarta was inaugurated on March, 24th 2019. Since it first operated, MRT Jakarta has transported 102,067,777 people as of March 13 2024. There are 13 MRT stations in Jakarta, including Lebak Bulus Grab, Fatmawati Indomaret, Cipete Raya, Haji Nawi, Blok A, Blok M BCA, ASEAN, Senayan, Istora Mandiri, Bendungan Hilir, Setiabudi Astra, Dukuh Atas BNI, and Bundaran HI. Based on the MRT Jakarta version 2 final report survey, it was found that the main reasons people use the MRT are faster, comfortable, clean, and on time. Overall passenger satisfaction with the MRT in 2022 shows a slight increase and tends to be stable compared to the previous year. The increase in performance is influenced by the increase in the Post Journey aspect. However, performance improvements are required in Pre-Journey on On-Board which sees a slight decrease in 2022.

II. LITERATURE REVIEW

Jakarta Mass Rapid Transit is a rapid rail transportation system in Jakarta. The process of developing this mode of transportation began in 2013. The first line of the Jakarta MRT service was operated on March 24th, 2019, making it the first integrated motorway service to operate in Indonesia. The customer satisfaction index or Customer Satisfaction Index (CSI) is an index to determine the overall level of customer satisfaction with an approach that considers the level of importance of the product or service attributes being measured. CSI provides clear data regarding the level of customer satisfaction so that at a certain time it can carry out regular evaluations to improve what is lacking and improve services that customers consider to be of added value (Widodo and Sutopo, 2018). One effort to maintain company quality is to create satisfaction because satisfaction is one of the keys to the success of a business. When consumers are satisfied with the service they receive, they will likely return and use the service or product and will recommend it to people around them.

According to the journal "Journal of Marketing Management", the Marketing Mix 7P concept provides a more comprehensive view of developing an effective service marketing strategy. In the journal, research shows that the People and Process aspects are the most important elements in the 7P Marketing Mix because service quality and customer experience are greatly influenced by human factors and the processes used in providing services. People refer to the people involved in providing products or services to consumers. According to the latest experts,

People are very important in the context of services marketing because the interaction between consumers and service providers is very close. Therefore, it is important to ensure that employees and service providers have the skills, knowledge, and behavior that are in line with the company's brand and values. According to the pre-journey indicator people, by PT MRT Jakarta (Perseroda) in 2023, they are as

Follows:

1. Neatness and cleanliness of officer uniforms at the station
2. Service from officers for purchasing tickets (friendliness, speed of service, communication)
3. Clarity of information and ability to offer solutions from officers at the station
4. Security officer services before entering the passenger gate

According to the on-board indicator people, by PT MRT Jakarta (Perseroda) in 2023, they are as follows:

1. Neatness and cleanliness of officer uniforms at the station
2. Security services and officers at the gate
3. Clarity of information and service from station staff
4. Officer service for purchasing tickets and topping up electronic money cards in terms of friendliness, speed of service, communication
5. Officers use masks/face shields when serving

The post-journey indicator people, by PT MRT Jakarta (Perseroda) in 2023, are as follows:

1. Responsiveness of social media admins and call centers in responding to customer complaints/input (customer complaints)
2. Responsiveness of station staff in responding to customer complaints/input (customer complaints)
3. Service from the officers when they tap out (friendliness, speed of service, communication) Process
Process relates to a series of activities or processes carried out to provide products or services to consumers. According to the latest experts, companies need to pay attention to how these processes can be improved to provide a better experience to consumers.
This can be achieved by analyzing all stages of the process from start to finish so that the company can identify parts that can be improved to increase consumer satisfaction.

According to the pre-journey indicator process, by PT MRT Jakarta (Perseroda) in 2023, they are as follows:

1. Level of security & safety when arriving at the station (pickpockets, thugs, etc.)
2. Clarity of digital signage and way-finding (directions at stations)
3. Clarity of visual information on train arrival/departure times
4. Ease of getting information on train departure schedules
5. Clarity of signage and way-finding (direction boards at stations)
6. Ease of tapping/scanning tickets on the Passenger gate machine
7. Easy process for purchasing Multi Trip Ticket and Single Trip Ticket cards at the Ticket Vending Machine (TVM)
8. Ease of purchase process and top-up of Electronic Money Cards at Multi Daya Dinamika (MDD)
9. Ease of the inspection process when passing through a metal detector
10. Ease of finding reading room bookshelves that are available for free

According to the on-board indicator process, by PT MRT Jakarta (Perseroda) in 2023, they are as follows:

1. The level of punctuality of train departure schedules
2. Clarity of train position information inside the train
3. Safety on the train
4. Audio sound clarity in the train

The post-journey indicator process, by PT MRT Jakarta (Perseroda) in 2023, are as follows:

1. Ease and response in making customer complaints/input (customer complaints)
2. Diversity of promos offered by the MRT Physical Evidence
Physical Evidence refers to all forms of physical evidence used to promote products or services, such as product design, packaging, or employee appearance.
According to recent experts, physical evidence is very important in service marketing because consumers

tend to rely on physical evidence to evaluate service quality. Therefore, companies need to pay attention to how they can strengthen physical evidence to show the quality of their products or services.

According to the pre-journey physical evidence indicators, by PT MRT Jakarta (Perseroda) in 2023, they are as follows:

1. Cleanliness in the MRT station area
2. Availability of toilets at the station
3. Convenience of toilets at stations
4. Cleanliness of toilets at stations
5. The platform door can open and close normally
6. Cleanliness inside the station (cleanliness of glass/floor)
7. Cleanliness of the prayer room at the station
8. Availability of prayer rooms at stations
9. Various types of cards that can be used
10. Convenience of prayer rooms at stations
11. Cleanliness outside the MRT station area
12. Availability of escalators and lifts in sufficient numbers
13. Availability of parking space
14. Totem (pick up/drop off sign) is easy to find and clearly visible
15. Cleanliness of the Health Post at the station
16. Availability of Health Posts at stations
17. Aromas/fragrances inside the Jakarta MRT station
18. Cleanliness of the Lactation / Breastfeeding Room at the station
19. Clarity of information in the Digital Information System for passengers
20. Convenience of the Health Post at the station
21. Cleanliness of the Women's and Children's Friends Post
22. Availability of Lactation / Breastfeeding Rooms at the station
23. Comfort of the Lactation / Breastfeeding Room at the station
24. A variety of tenancies available at the departure station
25. Distance between the parking lot and station
26. Level of availability of Convenience ATMs
27. Post Friends of Women and Children
28. Condition of access facilities for passengers with non-folding bicycles
29. Availability of Posts for Friends of Women and Children
30. Playing thematic music at the station (for example: on August 17 and DKI's anniversary)
31. Availability of live music entertainment (Marti Music Room and Jamming at Station)

According to the on-board indicators physical evidence, by PT MRT Jakarta (Perseroda) in2023, are as follows:

1. Safety on the MRT train
2. Voice or audio clarity information on the MRT train
3. Protocol implementation health in the MRT train
4. Limitation on the number of passengers in train carriages.

According to the post-journey indicators physical evidence, by PT MRT Jakarta (Perseroda) in2023, are as follows:

1. Quality of solutions provided by social media admins and call centers
2. Media (call center, social media, means of conveying criticism and suggestions at the station, etc.) provided to carry out customer complaints
3. Availability of signage or directions for tourist attractions or Points of Interest (PoI)

Method: This research uses 2 stages of research methods, stage 1: quantitative method to measure satisfaction and understand user interests, and stage 2: qualitative method through individual discussions

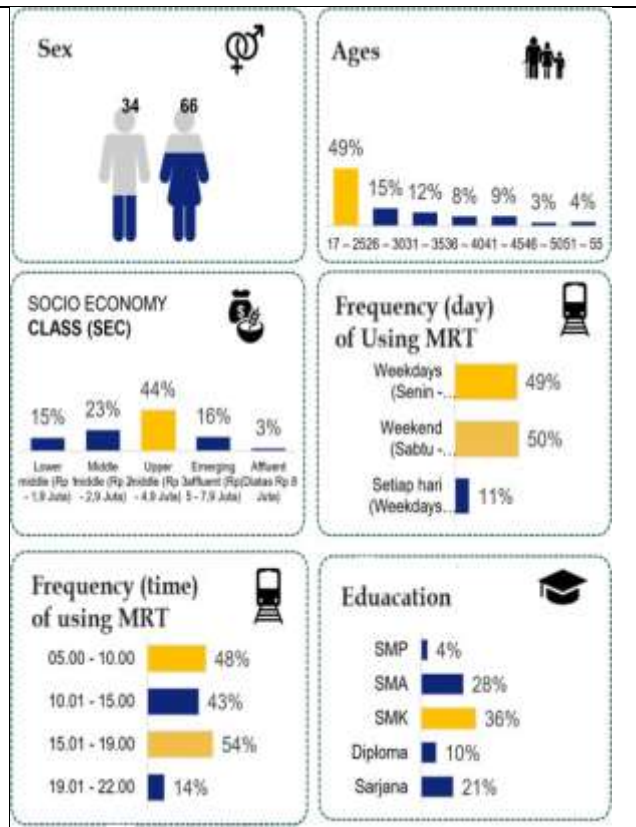
III. RESULT AND DISCUSSION

Data Sampling : Data sampling was carried out by calculating the proportion of passenger traffic at each MRT Jakarta station. With the following survey results:

Table 1 : Data Sampling

Data Sampling Kuantitatif CSI MRT 2022	
MRT Station	Respondent
Lebak Bulus Grab	150
Fatmawati Indomaret	100
Cipete Raya	70
Haji Nawi	70
Blok A	70
Blok M BCA	110
ASEAN	70
Senayan	100
Istora Mandiri	100
Bendungan Hilir	110
Setiabudi Astra	80
Dukuh Atas BNI	250
Bundaran HI	150
TOTAL	1430

Picture 1 : Data Profile



Source: CSI 2022

Based on Table 1 above, the number of respondents was 1430 samples from 13 stations of MRT Jakarta, data sampling was carried out by calculating the passenger traffic at each MRT Jakarta station. From Lebak Bulus station, there are 150 passengers as respondents; from Fatmawati station, there are 100 passengers as respondents; from Cipete Raya station, there are 70 passengers as respondents; from Haji Nawi station, there are 70 passengers as respondents; from Blok A station, there are 70 passengers as respondents; from Blok M BCA station, there are 110 passengers as respondents; from ASEAN station, there are 70 passengers as respondents; from Senayan station, there are 100 passengers as respondents; from Istora Senayan station, there are 100 passengers as respondents, from Bendungan Hilir station, there are 110 passengers as respondents; from Setiabudi Astra station, there are 80 passengers as respondents; from Dukuh Atas station, there are 250 passengers as respondents and from Bundaran HI station, there are 150 passengers as respondent. Data Profile respondents from Picture 1, there were 34% are men and 66% are women. The range of ages was from 17 – 56, there were 49% of respondents aged 17 - 25 years. The socio-economic class of respondents was those with an income of 1.9 million to 8 million per month. 44% of respondents have an income of Rp 3 – 4,9 million. Only 11% use MRT every day, weekday was 49% and weekend was 50%. They used the MRT to go to and from work as seen in the frequency of use, 48% on 08.00 –10.00 and 54% on 15.01 – 19.00. The educational background of respondents is dominated by SMA and SMK up to 64%.

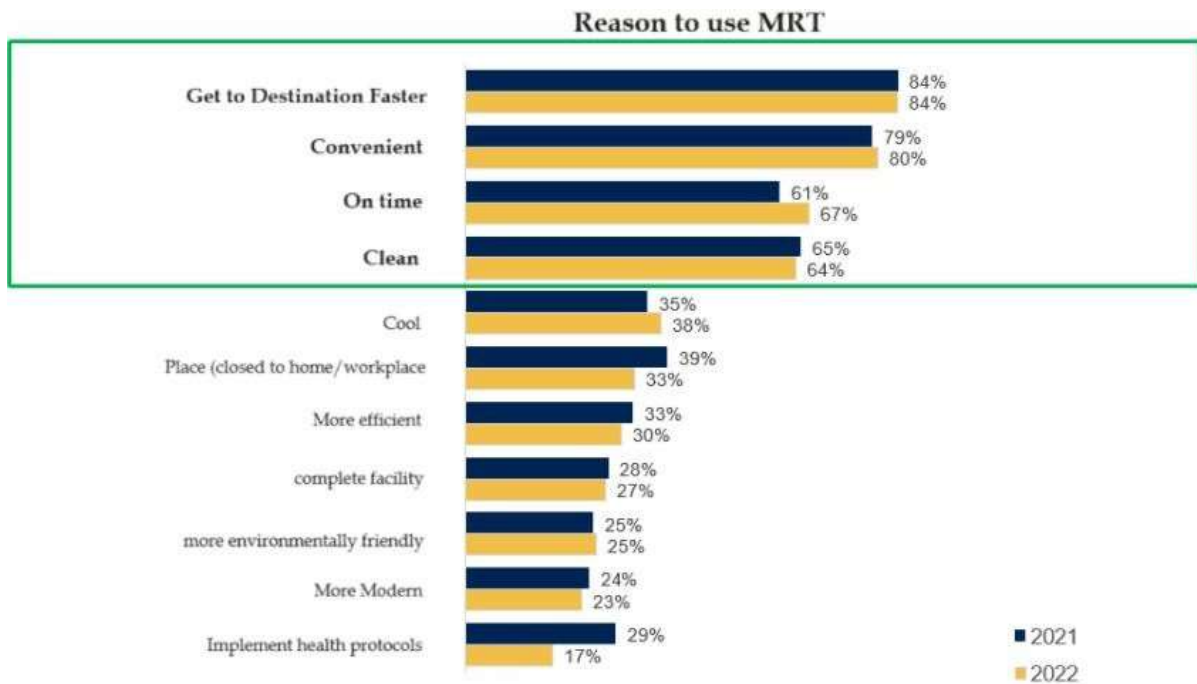
Research Framework

Picture 2: Research Framework



Source: CSI 2022

Picture 3 : Reason to Use MRT



Source: CSI 2022

There were many reasons for MRT users, however, Getting to their destination faster, Convenience, On time, and Clean were the main reasons they used MRT. 84% in 2021 and 2022 to Get to their destination faster, 79% in 2021 and 80% in 2022 to Convenience, 61% in 2021 and 67% in 2022 to On-Time Schedule, and 65% in 2021 and 64% in 2022 to Clean. The remaining less than 40% stated that the MRT was Cool, Place (close to home/workplace), More Efficient, Complete Facility, More Modern, and Implement Health Protocols.

Result

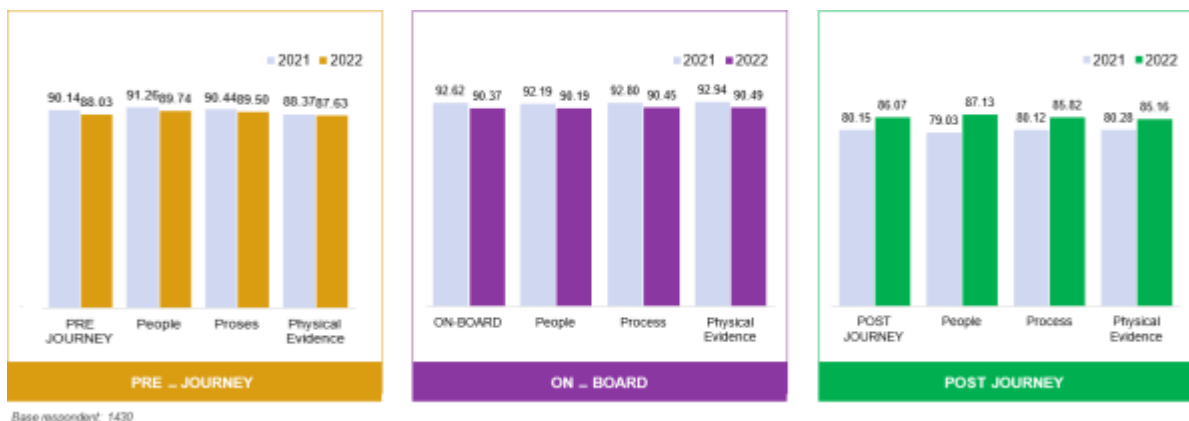
Picture 4 : Customer Satisfaction MRT



Source: CSI 2022

Overall, MRT visitor satisfaction in 2022 experienced a slight increase compared to 2021, and this increase was due to an increase in Post-Journey performance in 2022 from 86.07% compared to the previous year of 80.15% in 2021. Meanwhile, Pre-Journey performance decreased from 90.14% in 2021 to 88.03% in 2022 and On-Board performance also decreased from 92.62% in 2021 to 90.37% in 2022.

Picture 5 : MCI Based On People, process, and Physical Evidence



Source: CSI 2022

In general, pre-journey performance in 2022 has decreased compared to pre-journey performance in 2021, this can be seen by the decline in the customer satisfaction index from 90.14 to 88.03. This is due to the decline in all aspects of indicators in people, process, and physical evidence, namely in the people indicator, performance in 2022 fell to 89.74 from 91.26 in 2021. The process performance indicator also experienced a decline with an achievement of 90.44 in 2021 to 89.55 in 2022, and the physical evidence indicator also fell from 88.37 in 2021 to 87.63 in 2022.

Meanwhile, on board performance in 2022 has also decreased compared to on board performance in 2021, this can be seen by the decrease in the customer satisfaction index from 92.62 to 90.37. This is due to the decline in all aspects of indicators in people, process and physical evidence, namely in the people indicator, performance on board in 2022 fell to 92.19 from 90.19 in 2021. The process performance indicator on board also decreased with an achievement of 92, 80 in 2021 to 90.45 in 2022, and the physical evidence indicator also fell from 92.94 in 2021 to 90.49 in 2022.

The increase in post-journey performance in 2022 is quite high compared to post-journey performance in 2021, this can be seen by the increase in the customer satisfaction index from 80.15 to 86.07 in 2022. This is due to the increase in all aspects of indicators in people, process and physical evidence, namely the people indicator, post-journey performance in 2022 rose to 82.13 from 79.03 in 2021. The process indicator for post-journey performance also increased with an achievement of 80.12 in 2021 to 85.82 in 2022, and the physical evidence indicator also increased from 80.28 in 2021 to 85.16 in 2022.

IV. CONCLUSION

Driving Factors for Choosing MRT Transportation:

- ✚ Time efficiency – the fastest mode of public transportation.
- ✚ Pride as an Indonesian citizen with modern transportation that provides a new experience in using public transportation
- ✚ Comfort and security – facilities that are clean, not too crowded, and safe from crime
- ✚ On time – accurate departure time as stated
- ✚ Prices that are comparable to the facilities and benefits provided

Overall passenger satisfaction with the MRT in 2022 shows a slight increase and tends to be stable compared to the previous year. The increase in performance is influenced by the increase in the Post Journey aspect. However, performance improvements are required in Pre-Journey on On-Board which will see a slight decrease in 2022

Conflict of Interest : In Novembriansyah's (2016) research, it was found that perceived value has a positive and significant effect on consumer satisfaction. Consumers' actions and purchasing behavior are based on their perceptions, not on existing objective reality. In this case, perception is influenced by the needs, desires, values, and personal experiences of each individual.

SATISFACTION WITH THE MRT: Overall, passengers are satisfied with the experience of using the MRT transportation mode, both during pre-journey, on-board, and post-journey

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