

# The Impact of Service and Information, Cleanliness and Safety, Transit Fare, and Facilities on Customer Satisfaction: A Case Study of LRT Jabodebek (Dukuh Atas - Jatimulya Route)

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## Abstract

As urban rail systems such as LRT Jabodebek expand to address the mobility demands of the Jabodebek metropolitan region, understanding the factors that shape passenger satisfaction has become essential for sustaining ridership and service quality. This study evaluates the key determinants influencing passenger satisfaction on the LRT Jabodebek operating along the Dukuh Atas - Jatimulya route. Integrating constructs from service quality and servicescape literature, this research examines how Service and Information, Cleanliness and Safety, Transit Fare, and Facility structurally affect Customer Satisfaction. A quantitative methodology was employed, utilising questionnaire data from 154 LRT Jabodebek passengers selected via convenience sampling, with PLS-SEM through SmartPLS 3.0 as the analytical tool. Statistical findings reveal that all four predictors have positive and significant impacts on satisfaction. Facility yields the largest effect ( $\beta = 0.324$ ), with Transit Fare ( $\beta = 0.241$ ), Cleanliness and Safety ( $\beta = 0.176$ ), and Service and Information ( $\beta = 0.175$ ) following in descending order. Together, these predictors account for 64.9% of the variance in Customer Satisfaction ( $R^2 = 0.649$ ). Importance-Performance Map Analysis (IPMA) further identifies Cleanliness and Safety as the top operational priority, given its high importance but comparatively low performance. These findings offer practical insights for transit operators and policymakers to enhance urban public transportation service delivery.

**Keywords:** Customer Satisfaction, Facility, LRT Jabodebek, Service Quality, Transit Fare.

## 1. Introduction

In rapidly growing metropolitan regions such as Jakarta, Bogor, Depok, and Bekasi (Jabodebek), public transportation systems play a crucial role in mitigating severe traffic congestion, reducing urban air pollution, and facilitating daily economic mobility. Transportation mode refers to various means or methods used to move from one place to another, such as cars, buses, trains, airplanes, ships, and bicycles. In the development of urban transportation systems, rail-based modes have become one of the strategic choices because they are able to provide more efficient mass mobility services (Insani et al., 2023). In Indonesia, the development of rail-based transportation is increasing through various services such as Commuter Line, Light Rail Transit (LRT), Mass Rapid Transit (MRT), and high-speed rail.

With an increasingly dense urban workforce, the Indonesian government has invested heavily in modern railway infrastructure, notably the Light Rail Transit (LRT) Jabodebek.



Connecting key urban hubs, the LRT Jabodebek Dukuh Atas - Jatimulya route serves thousands of commuters daily, reducing travel time between Bekasi and central Jakarta to approximately 55 minutes across 13 integrated stations. The Jabodebek region, which includes Jakarta, Bogor, Depok, and Bekasi, is one of the most densely populated metropolitan areas in Indonesia. High population density and complex community mobility are major challenges in the development of urban transportation infrastructure. Therefore, the government introduced LRT Jabodebek as an alternative transportation mode besides Commuter Line and TransJakarta to improve accessibility and reduce the burden on road traffic.

Despite its strategic importance and modern automated infrastructure, maintaining sustained passenger adoption requires transit authorities to deliver consistent service excellence across all passenger touchpoints. Customer satisfaction in public transit is a multi-faceted construct influenced by operational attributes such as punctuality, physical station amenities, ticketing accessibility, pricing fairness, and cleanliness. Prior studies emphasize that public transport choice is heavily contingent upon perceived service quality, comfort, and safety (de Oña & de Oña, 2015; Fonseca et al., 2010; Sinha et al., 2020). However, as LRT Jabodebek represents a relatively new transit system in Indonesia, empirical studies evaluating the joint influence of service information, station cleanliness/safety, fare structure, and facility provisions on passenger satisfaction remain limited.

Customer satisfaction is an important indicator in evaluating the success of public transportation services. This satisfaction is formed through the alignment between user expectations and the actual experience obtained while using the service. In the LRT Jabodebek service, several aspects that potentially influence user satisfaction include service and information quality, cleanliness and safety, perception of transit fare, and supporting facilities.

Although research on public transportation user satisfaction is increasingly developing, there are still several gaps that need further examination. Previous research shows that service quality, price, facilities, safety, and punctuality are important factors that influence public transportation user satisfaction (de Oña & de Oña, 2015; Fonseca et al., 2010; Sinha et al., 2020). However, most studies still focus on transportation modes that have long been operating or use a general service quality approach. For example, research on rail-based mass transportation in Indonesia widely uses the SERVQUAL method, Customer Satisfaction Index (CSI), and Importance Performance Analysis (IPA) to evaluate user perceptions, but has not extensively tested the simultaneous influence of specific service attributes on satisfaction (Sahfitri & Dayi, 2023; Utama & Alizar, 2024). In the context of LRT Jabodebek, previous research has discussed the influence of service quality, punctuality, price, and perceived value on customer satisfaction, but is still limited in integrating the aspects of Service and Information, Cleanliness and Safety, Transit Fare, and Facilities as the main determinants of user satisfaction in a single research model (Sani & Susanto, 2025; Saputra, 2025). In addition, research on LRT Jabodebek is still relatively new because this service only began operating commercially in 2023, so further studies are needed to understand the service factors that most influence the user experience (Christiani & Kayrra, 2024; Lackman & Almassawa, 2025).

This study offers novelty by integrating four service dimensions into a single model and applying IPMA to identify managerial priorities. Unlike previous research that more often evaluates service quality in aggregate or only assesses the relationship between service quality and price on satisfaction, this study breaks down service attributes based on the actual experience of modern rail transportation users. In addition, the use of Importance-Performance Map Analysis (IPMA) provides a practical contribution by determining the priority of service aspects that have a high level of importance but still require performance improvement. Thus, this study not only enriches the literature on public transportation user

satisfaction but also provides strategic recommendations for LRT Jabodebek management in improving service quality and maintaining the sustainability of urban mobility.

Therefore, this study aims to empirically examine the structural relationships between Service and Information, Cleanliness and Safety, Transit Fare, and Facilities on Customer Satisfaction among passengers travelling on the LRT Jabodebek Dukuh Atas - Jatimulya line. Furthermore, using Importance-Performance Map Analysis (IPMA), this study provides managerial priorities to guide operational strategies and infrastructure resource allocation.

## 2. Literature Review

### 2.1. Customer Satisfaction in Public Transit

Customer satisfaction is defined as an individual's comparative evaluation of perceived performance against prior expectations (Kotler & Keller, 2016). In the context of public transportation, passenger satisfaction reflects the overall cognitive and affective evaluation of the transit experience, encompassing both in-vehicle journey quality and station environments (Anderson et al., 1994). High passenger satisfaction reinforces public transport loyalty, encouraging modal shift from private vehicles to rail transit.

### 2.2. Service and Information

Service and Information refers to the timeliness, clarity, accuracy, and accessibility of transit operational details provided to commuters, including schedule timetables, line maps, ticketing procedures, and real-time station announcements (Parasuraman et al., 1988). Clear communication reduces commuter uncertainty, stress, and transit effort, thereby directly fostering passenger satisfaction.

### 2.3. Cleanliness and Safety

Cleanliness and Safety encompass the visual and hygienic condition of train cars and platforms, alongside perceived freedom from criminal activity, physical risk, and accidents (Wakefield & Blodgett, 1996). A clean station and train interior enhance aesthetic comfort, while active surveillance (CCTV, security staff) provides psychological peace of mind, making passengers feel secure throughout their trip.

### 2.4. Transit Fare

Transit Fare denotes the monetary fee charged for travel and the passenger's perception of value for money relative to travel speed, distance, and comfort (Monroe, 1990; Parasuraman et al., 1988). When passengers perceive ticket prices as fair, transparent, and aligned with travel convenience, their overall satisfaction increases significantly.

### 2.5. Facilities

Facilities represent the tangible physical environment and supporting amenities provided within transit stations and train cars, including seating, retail stores, parking spaces, and universal design elements for passengers with disabilities (Bitner, 1992). Well-maintained facilities reduce physical discomfort and improve overall travel experience.

### 2.6. Hypothesis Development

Cleanliness and safety are important aspects in shaping user perceptions of public transportation service quality. In mass transportation services, customers not only consider punctuality and travel efficiency, but also evaluate the physical environment conditions, comfort level, and sense of security while using the service. A clean station and vehicle environment can increase user comfort, while a good safety system is able to reduce risk

perception and increase trust in the transportation operator. Research Caggiani et al. (2021) as well as Janjevic and Winkenbach (2020) show that service quality attributes in the form of cleanliness, comfort, and safety have a positive relationship with customer satisfaction because they are able to create a better travel experience. In addition, the increasing attention to health and safety aspects after the pandemic strengthens the role of cleanliness as an important factor in public transportation user decisions and satisfaction (Tirachini & Cats, 2020). De Oña et al. (2020) also explain that safety perception is one of the main determinants in the evaluation of transportation service quality because users tend to feel more satisfied when they obtain a guarantee of safety during the trip. Therefore, the higher the level of cleanliness and safety provided by the LRT Jabodebek service, the higher the level of customer satisfaction.

**H1:** Cleanliness and Safety positively influence Customer Satisfaction

The provision of facilities is an important element in enhancing customer experience in public transportation services. Facilities such as comfortable waiting rooms, station accessibility, payment systems, travel information facilities, and other supporting amenities play a role in creating convenience and comfort for users. Based on the concept of service quality, physical aspects (tangibles) are one of the main indicators that shape customer perceptions of the professionalism and ability of service providers to meet user needs (McTigue et al., 2020). A study by Abbas (2023) shows that facility quality has a positive influence on transportation user satisfaction because adequate facilities are able to increase comfort and reduce obstacles during the trip. Furthermore, De Vos (2020) found that the quality of infrastructure and supporting facilities is an important factor that influences the perception of service quality and public transportation passenger satisfaction. In the context of modern transportation systems such as LRT Jabodebek, the availability of complete and easy-to-use facilities can enhance the value of the customer experience. Thus, the better the facilities available, the higher the level of customer satisfaction felt.

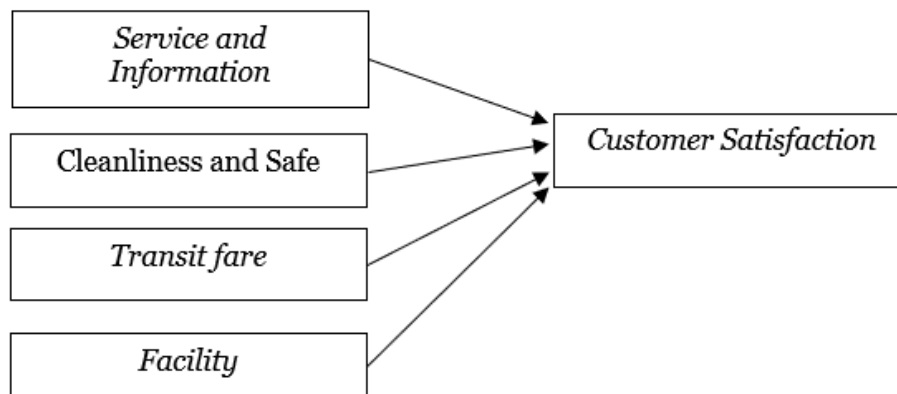
**H2:** Facility provisions positively influence Customer Satisfaction

Service and information are strategic factors in building public transportation user satisfaction because they relate to the operator's ability to meet customer needs effectively. Service quality includes aspects of staff friendliness, response speed, ease of obtaining assistance, and the operator's ability to provide solutions to user problems. Meanwhile, accurate and easily understood travel information, such as departure schedules, operational changes, travel routes, and payment systems, can reduce customer uncertainty while using the service. Lai and Chen (2011) state that service quality has a significant influence on transportation user satisfaction because customers will give a positive evaluation when the service is able to meet or exceed their expectations. Similarly, research of Henriquez-Jara et al. (2025) also shows that travel information quality plays an important role in enhancing the user experience because it provides a sense of control and certainty during the trip. In addition, Wang et al. (2020) found that responsive service and clear information contribute to increased urban transportation customer satisfaction. Therefore, the better the quality of service and information provided by the LRT Jabodebek operator, the higher the level of customer satisfaction.

**H3:** Service and Information positively influence Customer Satisfaction

Transit fare is one of the economic factors that influences customer perception of perceived value and the level of user satisfaction. In using public transportation, customers will compare the cost they must pay with the benefits obtained, such as comfort, safety, time efficiency, and service quality. A fare that is considered reasonable, transparent, and in accordance with the quality of service will create a perception of price fairness that has a positive impact on customer satisfaction (Ali et al., 2021). Research by Purnandika and Septiana (2023) shows that fare perception is one of the factors that influences user evaluation of public transportation services, especially when customers assess whether the travel cost is comparable to the benefits received. Fauzi et al. (2023) and Firatmadi (2017) also found that price perception has a positive relationship with transportation user satisfaction because customers tend to feel satisfied when they obtain quality service at an appropriate cost. In the context of LRT Jabodebek, a competitive fare that is in accordance with the quality of service provided can increase the perception of benefits and encourage customer satisfaction. Thus, the more the transit fare aligns with user expectations, the higher the level of customer satisfaction.

**H4:** Transit Fare positively influences Customer Satisfaction



**Figure 1. Conceptual Framework**  
Source: Authors' compilation (2026)

Figure 1 presents the conceptual framework linking Service and Information, Cleanliness and Safety, Transit Fare, and Facility to Customer Satisfaction, consistent with H1 through H4.

### 3. Methods

#### 3.1. Research Design

This study uses a quantitative approach with a deductive perspective through a cross-sectional survey design (Bougie & Sekaran, 2019). The quantitative approach was chosen because it allows for the collection of numerical data from a large number of respondents and the objective testing of relationships between variables using statistical analysis. This research is correlational in nature with the aim of analyzing the influence of Service and Information, Cleanliness and Safety, Transit Fare, and Facility on Customer Satisfaction among LRT Jabodebek users. Data collection was carried out during one time period using a structured questionnaire so as to comprehensively describe passenger perceptions of LRT Jabodebek service quality.

### 3.2. Unit of Analysis

The unit of analysis in this study is individuals who have used the LRT Jabodebek service, particularly on the Dukuh Atas-Jatimulya route. The selection of individuals as the unit of analysis is based on the consideration that each passenger has direct experience of the service quality provided, so that they are able to provide an assessment of the aspects of service and information, cleanliness and safety, transit fare, facility, and the level of satisfaction felt. Data was collected through the distribution of an online questionnaire using Google Form, distributed through social media such as WhatsApp and Instagram, as well as offline through direct distribution at Dukuh Atas and Jatimulya Stations to passengers who had used the LRT Jabodebek service.

### 3.3. Population and Sample

The population of this study is all LRT Jabodebek passengers on the Dukuh Atas-Jatimulya route. The target population includes individuals who have used or frequently used the LRT Jabodebek service as a daily transportation mode. Purposive convenience sampling was used to select 154 respondents who had experience using the LRT Jabodebek service, namely the selection of respondents based on ease of access and willingness to participate in the study.

The determination of the sample size refers to the recommendation of Hair et al. (2010) for Structural Equation Modeling (SEM) analysis. With a total of 13 indicators and 5 latent variables, the minimum number of respondents required is 90 people. This study successfully obtained 154 valid respondents, thus exceeding the minimum number required for PLS-SEM analysis. This number is considered adequate to produce stable parameter estimates and increase statistical power in model testing. In addition, this sample size approaches the recommendation of Kock and Hadaya (2018) as well as Memon et al. (2021), which states that PLS-SEM research generally obtains more stable results with a sample size of around 160 respondents or more.

### 3.4. Data Collection Procedure

This study uses primary data and secondary data. Primary data was obtained through the distribution of a structured questionnaire to LRT Jabodebek users using two methods, namely online using Google Form distributed through WhatsApp and Instagram, and offline through direct distribution of questionnaires at stations, particularly Dukuh Atas and Jatimulya Stations. The combination of these two methods was carried out to expand the reach of respondents and obtain more diverse characteristics of LRT Jabodebek users. Meanwhile, secondary data was obtained from various sources, such as government publications, statistical reports, official company websites, scientific articles, and various other relevant references as a theoretical foundation and support for the interpretation of research results (Bougie & Sekaran, 2019).

### 3.5. Research Variable Measurement

The research instrument consists of 13 indicators representing five latent variables, namely Service and Information (3 indicators), Cleanliness and Safety (2 indicators), Transit Fare (2 indicators), Facility (3 indicators), and Customer Satisfaction (3 indicators). Each construct was operationalized based on conceptual and operational definitions that have been adjusted to the context of the LRT Jabodebek service. All indicators were measured using a five-point Likert scale, with a value range of 1 = Strongly Disagree/Very Poor to 5 = Strongly Agree/Very Good. The use of the Likert scale aims to measure respondents' perceptions,

attitudes, and level of assessment of service quality more objectively. Respondents were asked to choose one answer that best suited their experience for each indicator presented.

### 3.6. Data Analysis Technique

The analysis was performed using SmartPLS 3.0 and the PLS-SEM framework. This approach was deemed appropriate owing to its suitability for examining causal relationships between latent constructs, its ability to handle intricate research models, and its robustness in producing dependable estimates with relatively moderate sample sizes.

Two principal stages governed the analytical process. The first stage encompassed measurement model evaluation, incorporating convergent validity (outer loadings and AVE), discriminant validity (HTMT), and construct reliability (Composite Reliability and Cronbach's Alpha). Acceptable convergent validity requires outer loadings above 0.70 and AVE above 0.50, whereas reliability thresholds are set at 0.70 for Composite Reliability and 0.60 for Cronbach's Alpha. HTMT values below 0.90 indicate satisfactory discriminant validity.

The second stage involved structural model (inner model) evaluation, conducted through path coefficient, t-statistic, and p-value testing via bootstrapping with 5,000 resamples. Model assessment additionally incorporated the coefficient of determination ( $R^2$ ) to gauge exogenous variables' explanatory power over endogenous constructs, alongside Variance Inflation Factor (VIF) to detect multicollinearity. As an extended analysis, Importance-Performance Map Analysis (IPMA) was applied to identify service attributes with high importance yet low performance, thereby informing priority setting for LRT Jabodebek service quality enhancements aimed at increasing customer satisfaction (J. Hair et al., 2017).

## 4. Results and Discussion

### 4.1. Research Results

#### 4.1.1. Respondent Profile

Demographic breakdown of the 154 respondents revealed a balanced gender distribution of 51% female (79 respondents) and 49% male (76 respondents). The majority of commuters belonged to the younger workforce age groups: 21-25 years (36%) and 26-30 years (35%). In terms of primary occupation, private sector employees formed the largest group (39%), followed by BUMN employees (14%), undergraduate students (14%), and high school students (11%). Regarding usage frequency, 34% reported traveling occasionally (*'kadang-kadang'*), 32% frequently (*'sering'*), 19% once/rarely (*'pernah'*), and 15% very frequently (*'sangat sering'*).

#### 4.1.2. Measurement Model Evaluation

Evaluation of the measurement model addressed indicator reliability, convergent validity, and discriminant validity. Table 1 demonstrates that all outer loadings surpass the recommended 0.70 criterion, varying from 0.823 to 0.896. Moreover, each construct's AVE exceeds 0.50, with values between 0.723 and 0.797, thus affirming adequate convergent validity (Hair et al., 2010).

**Table 1. Measurement Model Evaluation (Outer Loading & AVE)**

| Construct                    | Indicator             | Outer Loading | AVE   | Evaluation     |
|------------------------------|-----------------------|---------------|-------|----------------|
| Service and Information (SI) | SI 1 (Fare Info)      | 0.860         | 0.790 | Valid/Reliable |
|                              | SI 2 (Access Map)     | 0.874         |       | Valid/Reliable |
|                              | SI 3 (Ticketing Ease) | 0.862         |       | Valid/Reliable |

| Construct                   | Indicator                    | Outer Loading | AVE   | Evaluation     |
|-----------------------------|------------------------------|---------------|-------|----------------|
| Cleanliness and Safety (CS) | CS 2 (Announcement System)   | 0.881         | 0.739 | Valid/Reliable |
|                             | CS 3 (Platform Cleanliness)  | 0.896         |       | Valid/Reliable |
| Transit Fare (TF)           | TF 2 (Fare per Time/Dist)    | 0.892         | 0.723 | Valid/Reliable |
|                             | TF 3 (Payment Methods)       | 0.894         |       | Valid/Reliable |
| Facility (FA)               | FA 1 (Retail Stores)         | 0.865         | 0.749 | Valid/Reliable |
|                             | FA 2 (Disability Access)     | 0.880         |       | Valid/Reliable |
|                             | FA 3 (Parking & Access)      | 0.834         |       | Valid/Reliable |
| Customer Satisfaction (KP)  | KP 2 (Fair Value)            | 0.823         | 0.797 | Valid/Reliable |
|                             | KP 3 (Recommendation)        | 0.871         |       | Valid/Reliable |
|                             | KP 4 (Station/Train Comfort) | 0.856         |       | Valid/Reliable |

Source: Processed data (2026)

Reliability was confirmed through Cronbach's Alpha and Composite Reliability (CR). Every construct records Cronbach's Alpha above 0.70 (CS = 0.734, FA = 0.824, KP = 0.808, SI = 0.833, TF = 0.745) and Composite Reliability above 0.80, ranging from 0.883 to 0.900. HTMT values for all construct pairs fall beneath the conservative 0.85/0.90 criterion (Henseler et al., 2015), thereby establishing discriminant validity and ensuring construct distinctiveness.

#### 4.1.3. Structural Model Evaluation and Hypothesis Testing

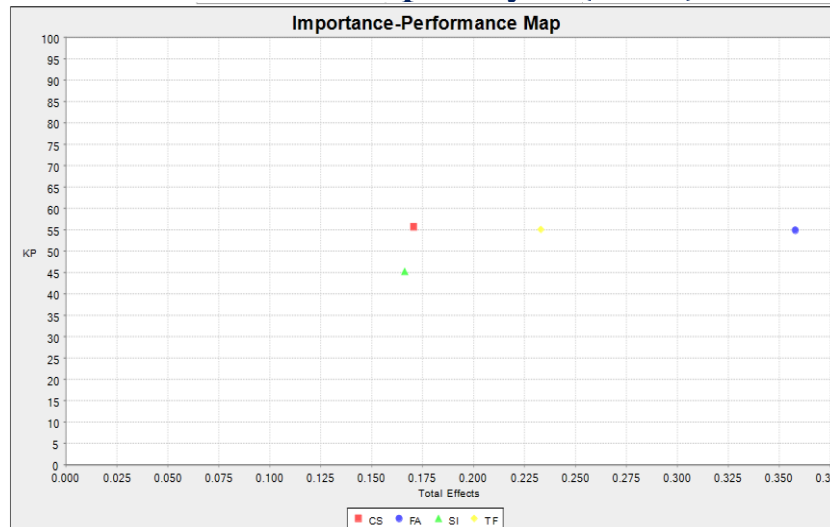
The structural model exhibited strong predictive capacity, yielding an  $R^2$  value of 0.649 (Adjusted  $R^2 = 0.639$ ) for Customer Satisfaction. This indicates that 64.9% of the variance in passenger satisfaction on LRT Jabodebek is explained by the four structural variables. Full collinearity tests showed inner VIF values ranging between 1.967 and 3.960, well below the rule-of-thumb maximum of 5.0, ruling out severe multicollinearity. The results of structural model evaluation and hypothesis testing are summarized in Table 2.

| Table 2. Structural Model Path Coefficients & Hypothesis Testing Results |                     |         |             |         |           |
|--------------------------------------------------------------------------|---------------------|---------|-------------|---------|-----------|
| Hypothesis & Structural Path                                             | Original Sample (O) | Std Dev | T Statistic | P Value | Decision  |
| H1: Cleanliness & Safe -> Satisfaction                                   | 0.176               | 0.081   | 2.180       | 0.015   | Supported |
| H2: Facility -> Satisfaction                                             | 0.324               | 0.080   | 4.065       | 0.000   | Supported |
| H3: Service & Info -> Satisfaction                                       | 0.175               | 0.071   | 2.470       | 0.007   | Supported |
| H4: Transit Fare -> Satisfaction                                         | 0.241               | 0.066   | 3.631       | 0.000   | Supported |

Source: Processed data (2026)

Hypothesis testing using bootstrapping with 5,000 samples confirmed that all four hypotheses were empirically supported at  $p < 0.05$  (Table 2). Facility provisions exerted the strongest positive effect on Customer Satisfaction ( $\beta = 0.324$ ,  $T = 4.065$ ,  $p = 0.000$ ), supporting H2. Transit Fare also had a highly significant positive impact on Customer Satisfaction ( $\beta = 0.241$ ,  $T = 3.631$ ,  $p = 0.000$ ), supporting H4. Cleanliness and Safety positively influenced Customer Satisfaction ( $\beta = 0.176$ ,  $T = 2.180$ ,  $p = 0.015$ ), supporting H1. Similarly, Service and Information positively influenced Customer Satisfaction ( $\beta = 0.175$ ,  $T = 2.470$ ,  $p = 0.007$ ), supporting H3.

#### 4.1.4. Importance-Performance Map Analysis (IPMA)



**Figure 2. IPMA Test Results**  
Source: Processed data (2026)

To provide targeted actionable recommendations, Importance-Performance Map Analysis (IPMA) was executed using Customer Satisfaction as the target construct. As shown in Figure 2, the analysis segments the four predictors into four quadrants based on their relative importance (total effect on Customer Satisfaction) and performance (average construct score), positioned as follows. Quadrant I, characterized by high importance and high performance, includes Transit Fare, indicating that passengers consider fare structures and diverse payment options highly important and are generally satisfied with the current pricing. Quadrant II, characterized by low importance and high performance, includes Service and Information, suggesting that information access and ticket purchasing convenience perform well but have a relatively lower impact on overall customer satisfaction. Quadrant III, characterized by low importance and low performance, includes Facility, indicating that station amenities currently demonstrate both low importance and low performance, making them a lower priority for resource allocation. Quadrant IV, characterized by high importance and low performance, includes Cleanliness and Safety, demonstrating that these aspects are crucial passenger priorities but currently underperform, making them the top operational priority for immediate improvement.

#### 4.2. Discussion

The research results show that all hypotheses are accepted, so that Cleanliness and Safety, Facility Provisions, Service and Information, and Transit Fare are proven to have a positive and significant effect on Customer Satisfaction of LRT Jabodebek users on the Dukuh Atas-Jatimulya route. Customer satisfaction arises from a comprehensive travel experience across multiple service attributes, starting from entering the station, making payment, waiting for the train's arrival, taking the trip, until reaching the final destination. Nevertheless, the magnitude of the path coefficients shows that customers give different weights of assessment to each service attribute. This difference indicates that LRT Jabodebek users prioritize aspects that directly affect the comfort and ease of daily mobility more than other attributes that have been considered as service standards.

This condition can be seen from Facility Provisions being the variable with the greatest influence on customer satisfaction. This finding shows that when using LRT Jabodebek, customers first evaluate the quality of the physical experience they feel during the trip. The

availability of complete facilities, easily accessible stations, comfortable waiting rooms, facilities for persons with disabilities, well-functioning escalators and elevators, and integration with other transportation modes provide convenience that is directly felt by users. Given the characteristics of the majority of LRT Jabodebek passengers as commuters who travel routinely, this convenience becomes an important part in reducing time, effort, and discomfort during the trip. Therefore, the better the quality of facilities provided, the higher the customer's perception of overall service quality. This research result strengthens the findings of McTigue et al. (2020), Abbas (2023), and De Vos (2020), which show that physical facility quality is an important determinant in shaping public transportation user satisfaction.

The dominant influence of facilities also illustrates that customers do not only assess the quality of the trip while inside the train, but evaluate the entire travel process (door-to-door experience). After the need for physical comfort is fulfilled, customer attention then shifts to the economic aspect, namely whether the benefits obtained are in accordance with the costs that must be incurred. This explains why Transit Fare becomes the factor with the second largest influence on customer satisfaction. This finding shows that LRT Jabodebek customers do not always look for the cheapest fare, but rather consider the alignment between the fare and the quality of service received. When the trip takes place comfortably, on time, safely, and integrated with other transportation modes, the fare paid will be perceived as a reasonable cost. Conversely, if service quality decreases, customers will be more sensitive to fare changes. Thus, fare is essentially not evaluated separately, but is always compared to the benefits obtained while using the service. This interpretation is in line with research by Ali et al. (2021), Purnandika and Septiana (2023), Fauzi et al. (2023), and Firatmadi (2017), which explains that the perception of fare fairness is formed through a comparison between the cost paid and the benefits received by the customer.

Although facilities and fare are the two most dominant factors, the research results show that both cannot stand alone in shaping customer satisfaction. A comfortable travel experience will be difficult to achieve if the travel environment is not clean or customers feel unsafe while using the service. This is reflected in the positive influence of Cleanliness and Safety on customer satisfaction. Although its influence coefficient is lower than that of facilities and fare, the significance of this relationship shows that the aspects of cleanliness and safety remain a component that cannot be ignored. This condition indicates that LRT Jabodebek users have placed cleanliness and safety as a service standard that should indeed be available. In other words, customers may not explicitly give high appreciation when the condition of the train and station is clean or the security system runs well, but will immediately give a negative assessment if these two aspects are not fulfilled. This phenomenon explains why its influence is relatively smaller than facilities, but remains significant in shaping customer satisfaction. This interpretation is consistent with the findings of Caggiani et al. (2021), Janjevic and Winkenbach (2020), Tirachini and Cats (2020), and De Oña et al. (2020), which place cleanliness and safety as fundamental elements in public transportation service quality.

A good travel experience is further strengthened by the quality of interaction between the operator and customers. The research results show that Service and Information also has a positive and significant influence on customer satisfaction. This finding shows that although most travel activities have been supported by digital technology, customers still need responsive service and clear information when facing certain situations, such as schedule changes, operational disruptions, or the need for assistance at the station. Accurate information provides certainty during the trip, thereby reducing uncertainty that can affect the perception of service quality. On the other hand, the staff's ability to provide assistance quickly and professionally strengthens customer trust in the operator. Thus, service and

information function as factors that perfect the travel experience after customers obtain adequate facilities, appropriate fares, and a safe and clean travel environment. This result supports research by Lai and Chen (2011), Henriquez-Jara et al. (2025), and Wang et al. (2020), which shows that service quality and clarity of information are factors that strengthen public transportation user satisfaction.

Ultimately, the results of this study show that the formation of LRT Jabodebek customer satisfaction takes place gradually and is interrelated. Customers initially evaluate facility quality as the most tangible representation of the service received. After that, customers consider whether the travel benefits obtained are comparable to the fare paid. This experience is then strengthened by a clean and safe travel environment, and supported by responsive service and information. Thus, customer satisfaction is not determined by a single dominant factor alone, but is an accumulation of various experiences during the travel process. Practically, these results suggest that facility improvements should be prioritized, while cleanliness and safety require urgent operational attention, and efforts to improve customer satisfaction need to be carried out in an integrated manner through facility development, value-oriented fare management, maintenance of cleanliness and safety standards, and improvement of service quality and information systems so that the travel experience of LRT Jabodebek users becomes increasingly optimal.

## 5. Conclusion

This study investigated the factors driving passenger satisfaction on the LRT Jabodebek Dukuh Atas - Jatimulya line. Facilities exert the strongest influence on satisfaction, followed by transit fare, cleanliness and safety, and service information, together accounting for 64.9% of the variance in Customer Satisfaction. IPMA highlights cleanliness and safety as urgent priorities for improvement.

Based on these insights, transit managers and local authorities should prioritize regular hygiene protocols, enhanced platform security/CCTV coverage, expansion of station parking facilities, and continued seamless multi-payment integration. This study is limited to one route and convenience sampling; future research should expand to other routes and employ probability sampling. Future studies are recommended to utilize probabilistic sampling methods and incorporate additional transit constructs such as train arrival frequency, schedule reliability, and first-mile/last-mile feeder connections across broader LRT network routes.

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