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Factors Influencing Public Interest in Continuing to use Urban Transportation (Case Study: GM and MM Routes in Malang City)

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ABSTRACT

The high mobility of urban communities requires more efficient, for example public transportation. Many factors can influence the community in choosing and using public transportation including providing quality services. City transportation (Microbuses) in Malang City has become a marginalized public transportation after the emergence of online-based public transportation in the last few years. Even so, in fact the city transportation (Microbus) still exists or is arguably still needed by some people of Malang City until now. Among the 19 routes that are still operating, GM and MM routes are two routes that still exist on the streets of Malang City today. The purpose of this study is to analyze the factors that influence people's interest in surviving using city transportation, which can later be used as recommendation to public transportation service providers and the City Government of Malang in anticipating an imbalance between supply and demand, namely by seeking planning and improving moving process supporting tools (transportation system) to achieve ideal conditions. The results of this research are characteristics of users who still use city transportation and what factors then influence the interest in surviving using city transportation.

Keywords : Factors, Interests, City transportation

INTRODUCTION

The need for transportation or public transportation is a primary human need for mobility. Rapid population growth in a region significantly impacts community mobility and economic activity, thus increasing the need for transportation facilities and infrastructure. In urban areas, the trend is toward high population growth due to both birth rates and urbanization. This urbanization rate has implications for increasing population density, which directly and indirectly reduces the competitiveness of regional transportation (Susantoro & Parikesit, 2004:14). The reality of public transportation in Malang City, as one of Indonesia's major cities, already demonstrates the complexity of public transportation issues.

Public perceptions of public transportation have been identified as a significant factor in the decision to use public transportation services. According to Black (1995), the public desires good transportation, so it is crucial to involve the public in evaluating public transportation services to obtain recommendations that should be considered by transportation service providers, including aspects of safety, accuracy, regularity, comfort, speed, convenience, and user satisfaction, all of which are taken into account by public transportation users' perceptions.

Malang City is one of the cities where when talking about public transportation, what comes to mind is the blue minibus or commonly known as mikrolet. In 1997, the Malang City Government officially banned bemo from operating. At that time, the mikrolet was also launched as a public transportation to replace bemo on the streets of Malang City. 2015 was a phenomenal year for the development of on-demand transportation services or commonly known as online transportation, the presence of this online transportation made major changes to the public transportation system, including in Malang City, since then city transportation (mikrolet) which was once the mainstay of the people of Malang City has now become a mode of public transportation that is marginalized due to the competition. As mentioned by Oong Ngadiyono, Head of Public Transportation of the Malang City Transportation Agency in Tribun

Jatim (Tuesday, March 19, 2019) the load factor (occupancy) of city transportation passengers is only 40 percent. The number of routes has also decreased from 25 routes to 19 routes. Despite the decline, many public transportation services still operate on both weekdays and holidays. For some residents of Malang, public transportation remains a reliable means of transportation. Despite the availability of online transportation, public transportation remains essential. With its affordable fares, it's highly sought after by those frequenting markets and other economic centers. Furthermore, during a meeting with suryamalang.com (TribunJatim.com) after attending National Santri Day (HSN) at Brawijaya University, Malang, on Sunday (October 21, 2018), Malang Mayor Sutiaji promised that he would not eliminate microlets (minibuses) or public transportation services as part of mass transportation to alleviate traffic congestion. This is already stipulated in the Malang City Spatial Plan (RTRW).

Of the 19 routes still operating, the GM and MM routes are the only two that remain active on Malang's roads today. The GM and MM routes serve the same destination, namely the Mulyorejo terminal. The GM microbus (mikrolet) is an abbreviation for Gadang Mulyorejo. As the name suggests, this minibus operates daily from Gadang Terminal to Mulyorejo Terminal. The MM microbus, an abbreviation for Madyopuro Mulyorejo, operates daily from Madyopuro Terminal to Mulyorejo Terminal. Average passenger numbers for the GM and MM routes are still quite high, meaning demand for both routes remains high. This is due to their frequent routes, which pass through many of Malang's major business centers, including Pasar Besar and Malang City Station. Based on the theoretical background and the background of the problem, the objectives of this study are formulated to determine the factors that influence the interest of users (passengers) to continue using city transportation in Malang City so that it can be a reference for increasing public interest in city transportation in reducing congestion in Malang City.

RESEARCH METHODS

3.1 Data Collection Method

Data collection was conducted through a direct field survey. This was a dynamic survey. This survey involved boarding public transportation during operating hours. The data collected from this dynamic survey included daily passenger numbers and other data. This passenger data will be used to estimate the passenger population of public transportation routes GM and MM. The survey was conducted Monday through Thursday, from 6:00 a.m. to 6:00 p.m. WIB.

To obtain public perceptions of public transportation services on a scale of interest, a questionnaire was distributed to public transportation users (passengers). The questionnaire contained questions and answer options for respondents to choose from. The questionnaire was based on five general dimensions of service quality: reliability, responsiveness, assurance, empathy, and tangibles. Questionnaires were distributed at locations where passengers or potential passengers wait for public transportation, such as terminals, bus stops, and public transportation waiting areas. Questionnaires were also distributed while passengers were on the transportation.

3.2 Sampling Method

The population in this study is the average number of passengers/users of public transportation routes GM and MM, obtained from a preliminary survey during normal times (not during school holidays, national holidays, or during busy times such as events that create abnormal conditions).

Based on the survey results, the average daily passenger count is 160 passengers/day, distributed across approximately 10-15 fleets operating daily. The sampling of public transportation users was determined using the Isaac & Michael table, with α = 10%. The sample size of public transportation users was then calculated using the Slovin method as follows:

$$n = \frac{N}{1 + N(e)^2}$$

where: N = population of route users; n = number of sample route users; e = α = margin of error (10%);

Based on these calculations, 101 passengers were selected as samples in this study. These 110 passengers were then proportionally distributed across the two routes studied, based on the number of fleets operating on each route. The sample was drawn using a probability sampling technique, namely simple random sampling. Thus, each sampling unit, as an isolated element

of the population, was randomly selected to have an equal chance of being included in the sample or representing the population. The following is the sample calculation for this study:

Table 1. Number of Samples in Research

Route	Average number of passengers per day	Presentation	Number of samples
GM	70	44 %	44
MM	90	56 %	57
Total	**160**	**100%**	**101**

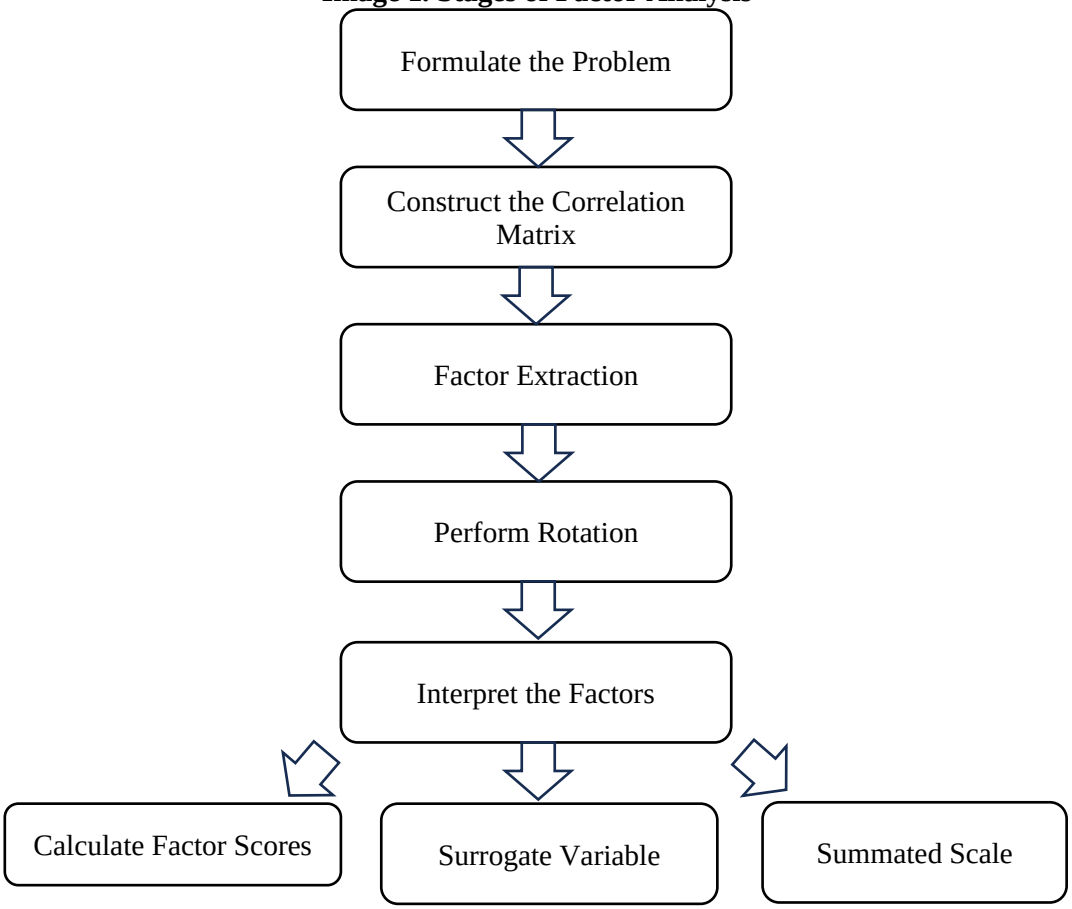
3.3 Data Analysis Method

According to Widarjono (2015:193), the purpose of factor analysis is to find the minimum factor using the principle of parsimony, thus generating correlations across the observed instruments. Within factor analysis, there are two analytical methods that can be used: confirmatory factor analysis (CFA) and exploratory factor analysis (EFA). Confirmatory factor analysis uses a number of variables to form a common factor, based on existing theory. Therefore, this analysis is used to verify the validity of a theory. Meanwhile, exploratory factor analysis is used to construct a theory by identifying a number of variables that will be formed into a common factor for which there is no theoretical basis. Based on the two factor analysis methods mentioned above, the factor analysis used in this study is confirmatory factor analysis (CFA).

3.4 Data Analysis Stages

The objective of factor analysis will be achieved if it is carried out through the correct procedures. The procedure for carrying out this analysis is selecting variables, forming factors, interpreting the analysis results and validating the factoring results. In general, the stages of factor analysis are depicted in the following chart:

Image 1. Stages of Factor Analysis



Tabel 1. Number of Samples in Research

Trayek	Average number of passengers per day	Presentation	Sample size
GM	70	44 %	44
MM	90	56 %	57
Total	**160**	**100%**	**101**

Looking at the routes, GM public transportation passes through various busy public areas/activity centers, including the Malang City Grand Market, which serves as a parking and transfer point. GM public transportation also passes through various educational facilities, office buildings, and other trade and service facilities. Meanwhile, the MM route, which runs from Mulyorejo Term. to Madyopuro Term., passes through various strategic trade and service locations such as the Olympic Garden Mall (MOG) and Ramayana, Malang City Square, Malang City Hall office center, Malang City Station, and various other public facilities. The following is a map of the GM and MM public transportation routes in Malang City.

RESULTS AND DISCUSSION

The GM and MM city transportation routes serve the same destination, the Mulyorejo sub-terminal. However, the difference between the two routes is their route. The MM route runs from the Madyopuro terminal to the Mulyorejo terminal. This differs from the GM route, which has now been split into two due to its length and the route already served by other city transportation routes. Since 2009, the Gadang Terminal has been discontinued, so the stop for this public transportation has been moved to the Hamid Rusdi Terminal at Jalan Mayjend Sungkono No. 11, Kedungkandang District, Malang City. The GM, which previously operated from the Mulyorejo Terminal to the Hamid Rusdi Terminal, only operated as far as Pasar Besar, Malang City. The MM route covers a distance of 15.2 km, while the GM route covers approximately 8 km.

The number of vehicles on these two routes also varies; the GM route typically has fewer active vehicles than the MM route. The GM route itself has a fleet of approximately 35 vehicles. Similar to the GM route, the MM route also currently has a total of approximately 35 active vehicles. This is a drastic decrease compared to before the introduction of online transportation. The presence of online transportation, which offers better and more efficient services, has led to a decrease in demand for public transportation. The lack of interest from users (passengers) of public transportation is one factor causing the reduction in the number of vehicles on these two routes. For more clarity, below is data on the number of active vehicles on both routes before and after the introduction of online transportation in Malang City.

Table 2. Number of Public Transportation Routes GM and MM

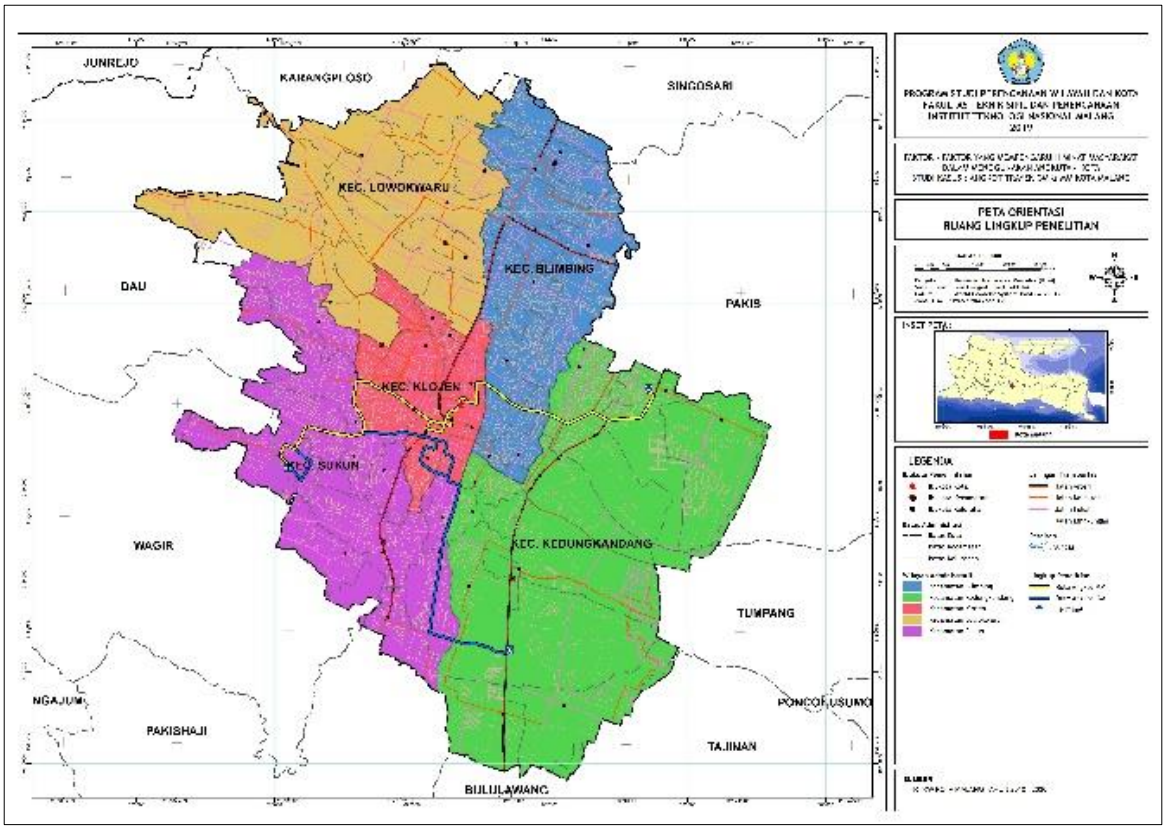
Route	Total Previous Number	Active
GM	62	30 - 40
MM	68	35 - 40

Source: Survey Results, 2020

Figure 2. Public Transportation Routes GM and MM

Looking at the routes traveled, GM public transportation passes through various busy public activity centers, including the Malang City Grand Market, which serves as a parking and transfer point. GM public transportation also passes through various educational facilities, office buildings, and other trade and service facilities. Meanwhile, the MM route, which runs from Term. Mulyorejo to Term. Madyopuro, passes through various strategic trade and service locations, such as the Olympic Garden Mall (MOG) and Ramayana, Malang City Square, Malang City Hall office center, Malang City Station, and various other public facilities. The following is a map of the public transportation routes GM and MM in Malang City.

Figure 3. GM and MM Routes



ANALYSIS OF RESULTS

5.1 Characteristics of Public Transportation Users

The characteristics of public transportation users (passengers) are necessary in this study, which aims to determine the relationship between consumers, or in this case, users, and the assessment of attributes in the questionnaire. The diverse characteristics of public transportation users will influence their mindset regarding the level of importance and quality of service for the attributes offered. The characteristics of public transportation users examined in this study are based on private vehicle ownership status, public transportation usage habits, ease of access, which includes distance from the waiting area and access to online transportation, income, trip purpose, and travel time.

A. Based on Private Vehicle Ownership Status

Public transportation user characteristics based on private vehicle ownership status are dominated by those who own private vehicles but still use public transportation (85%). One of the most important reasons is that the trip purpose aligns with the public transportation route and the trip is not urgent.

Table 3. Characteristics of Public Transportation Users Based on Private Vehicle Ownership Status

Status of Private Vehicle Ownership	Number of Responses	Presentase
Don't own a private vehicle	15	15%
Own (cost savings)	31	31%
Own (broken/borrowed)	4	4%
Own (other reasons)	51	50%
Number	**101**	**100%**

Source: Analysis Results, 2020

The characteristics of public transportation users based on their transportation usage habits are dominated by people who frequently use public transportation every day, with a percentage of 43%.

Table 4. Characteristics of Public Transportation Users Based on Usage Habits Usage Habits Number of Responses Percentage

Habits of Use	Number of Responses	Presentase
First time	8	8%
1–3 times a week	26	26%
3–5 times a week	23	23%
Every day	44	43%
Number	**101**	**100%**

Source: Analysis Results, 2020

When viewed from the ease of access, the first is based on the distance to the public transportation waiting area, dominated by users who live less than 100 m away (43%).

Table 5. Characteristics of Public Transportation Users Based on Distance to Public Transportation Waiting Area

Distance to City Transportation Waiting Area	Number of Responses	Presentase
0 – 100 m	44	43%
100 – 300 m	35	35%
300 – 500 m	10	10%
> 500 m	12	12%
Number	**101**	**100%**

Source: Analysis Results, 2020

Secondly, based on ease of access, online transportation is dominated by users who have access but choose to save costs, with a percentage of 50%.

Table 6. Characteristics of City Transportation Users Based on Access to Online Transportation

Gadget/Smartphone Ownership	Number of Responses	Presentase
Don't have	16	16%
Have (don't have the app to access it)	28	28%
Have (don't have internet quota)	6	6%
Have (other reasons)	51	50%
Number	**101**	**100%**

Source: Analysis Results, 2020

Furthermore, the characteristics of transportation users based on income/earnings are dominated by those with subscriptions under Rp. 1,000,000, with a percentage of 25%.

Table 7. Characteristics of City Transportation Users Based on Access to Online Transportation

Revenue	Number of Responses	Presentase
< Rp. 1.000.000	25	25%
Rp. 1.000.000 – Rp. 3.000.000	13	13%
> Rp. 3.000.000	3	3%

Others (Students & No Response)	60	59%
Number	**101**	**100%**

Source: Analysis Results, 2020

User characteristics based on trip purpose are dominated by students, with 33% traveling to school.

Table 7. Characteristics of Public Transportation Users by Trip Purpose/Intent Trip Purpose Number of Answers Percentage

Travel Destination	Number of Responses	Presentase
Work	31	31%
School	34	33%
Shopping	27	27%
Others	9	9%
Number	**101**	**100%**

Source: Analysis Results, 2020

And finally, user characteristics The most dominant travel time is in the afternoon, with a percentage of 32%.

Table 8. Characteristics of Public Transportation Users by Travel Time

Travel Time	Number of Responses	Presentase
Morning (6:00 a.m. – 8:00 a.m.)	21	21%
Afternoon (12:00 p.m. – 2:00 p.m.)	28	28%
Evening (4:00 p.m. – 6:00 p.m.)	33	32%
Others	19	19%
Number	**101**	**100%**

Source: Analysis Results, 2020

5.2 Analysis of Factors Influencing Public Interest in Remaining in Using Public Transportation

Factor analysis in this study was used to group user responses from 22 questions. These questions represent variables related to the quality of public transportation services, which were used to analyze the factors influencing public interest in continuing to use public transportation. These variables are:

1. Punctuality of public transportation arrival and departure times (X1)
2. Waiting time to get public transportation (X2)
3. Travel time for public transportation (X3)
4. Waiting time at bus stops (X4)
5. Provision of accurate information (X5)
6. Availability of public transportation schedules and routes (X6)
7. Driver discipline (driver compliance with traffic regulations) (X7)
8. Driver skill (X8)
9. Clarity of driver and vehicle identity (X9)
10. Availability of transportation when needed (X10)
11. Passengers do not exceed vehicle capacity (X11)
12. Passenger density (no crowding) (X12)
13. Public transportation routes are not too long (X13)
14. Ease of changing routes and modes of transportation (X14)
15. Passenger safety while on public transportation (X15)
16. Safety Passengers when stopping at a bus stop or terminal (X16)
17. Safety while on board the vehicle and stopping at a bus stop or terminal (X17)
18. Comfort while on board the vehicle (X18)
19. Good service from the driver (Friendly, polite, caring) (X19)
20. Cleanliness/tidiness of the vehicle (X20)
21. Fleet suitability (passenger cars) (X21)
22. Travel costs (fares) (X22)

5.1 Questionnaire Results: Public Interest in Using Public Transportation

The object of this research is the quality of public transportation services on the GM and MM routes and its relationship to the interest of city transportation users (passengers). For this purpose, closed and open questionnaires were distributed to randomly selected respondents (service users). The number of respondents was 101, with 22 questions for each, and the expected answers used a five-level Likert scale.

The Likert scale was used because it allows respondents to choose answers that are not simply "yes" or "no," but rather offer a wider range of options. This allows the results to be more representative of the respondents' feelings and more accurate, as expected in this study. The following table presents the questionnaire results for each variable, providing an overview of public transportation users' assessments of the quality of public transportation services, as presented on an interest scale.

Table 9. Results of the Public Transportation Service Quality Questionnaire on an Interest Scale

Variables (Statements)	Explanation (Response)					Number
	Not very influential	No Effect	Quite Influential	Influencing	Highly Influential	
X1	2	11	31	51	6	101
X2	1	15	30	51	4	101
X3	0	21	23	55	2	101
X4	2	17	30	46	6	101
X5	0	14	32	54	1	101
X6	0	35	19	44	3	101
X7	2	2	34	57	6	101
X8	2	7	33	50	9	101
X9	2	0	37	57	5	101
X10	0	15	38	48	0	101
X11	0	11	47	41	2	101
X12	2	11	47	35	6	101
X13	0	4	47	49	1	101
X14	2	2	37	47	13	101
X15	2	0	19	71	9	101
X16	2	0	17	77	5	101
X17	0	2	17	79	3	101
X18	2	2	4	86	7	101
X19	2	0	30	59	10	101
X20	1	4	49	43	4	101
X21	1	5	47	45	3	101
X22	1	0	6	82	12	101
Jumlah	**26**	**178**	**674**	**1227**	**117**	**2222**
Presentase	**1%**	**8%**	**31%**	**55%**	**5%**	**100%**

Based on the table, the majority of respondents, 55%, stated that the quality of public transportation services (a total of 22 variables questioned) influences their intention to continue using public transportation. 31% stated that it has a moderate influence, 5% said it has a strong influence, 8% said it has no influence, and 1% said it has no influence.

5.2 Stages of Analysis of Factors Influencing Public Intention to Continue Using Public Transportation

Before conducting the analysis, variables need to be selected and screened. Next, the feasibility of the variables is tested by conducting validity and reliability tests on the initial variables.

These variables will then be further analyzed to determine the adequacy of the correlation between the initial variables. This correlation can be seen in the correlation matrix between the initial variables. The statistical tests used were the Measure of Sampling Adequacy (MSA), the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, and the Bartlett test of sphericity.

- Measure of Sampling Adequacy (MSA)

The Measure of Sampling Adequacy (MSA) is used to determine whether a variable is adequate for further analysis. This value can be seen in the anti-image correlation matrix. If the MSA value is greater than 0.5, the variable is adequate for analysis.

s further. If there is an MSA value of the initial variables that is less than 0.5, they must be removed one by one from the analysis, sorted from the variable with the smallest MSA value and not used again in further analysis. The following table shows the MSA values based on the analysis results:

Table 10. Measure of Sampling Adequacy (MSA) Values

Variable	*anti-image correlation matriks*
X1	0,893
X3	0,896
X4	0,912
X5	0,936
X6	0,894
X7	0,885
X8	0,859
X9	0,929
X10	0,947
X11	0,928
X12	0,923
X13	0,879
X14	0,906
X15	0,917
X16	0,851
X17	0,845
X18	0,866
X19	0,869
X20	0,897
X21	0,916
X22	0,862

Based on The SPSS output shows that 22 variables each have an MSA value greater than 0.5. Therefore, it can be concluded that the variables are adequate for further analysis.

 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test

The steps taken after each initial variable to be included in the analysis are obtained include testing sample adequacy using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy index and the significance value of the Bartlett's Test of Sphericity. This index is used to assess the appropriateness of factor analysis. If the KMO value is between 0.5 and 1 and the significance value of the Bartlett's Test of Sphericity is less than the significance level (μ), factor analysis is appropriate. Table 4 shows the results of the KMO and Bartlett's Test of Sphericity.

Table 11. KMO and Bartlett's Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.914
Bartlett's Test of Sphericity	Approx. Chi-Square	2567.980
	df	231
	Sig.	.000

The SPSS output shows a KMO value of 0.914 and a Bartlett's Test of Sphericity significance value of 0.000. Therefore, it can be concluded that factor analysis is appropriate for simplifying the set of 22 variables.

B. Factor Formation

After the variables have been determined and selected, and the correlation calculations have met the requirements for analysis, the next step is to form factors to discover the underlying structure of the relationships between the initial variables. The method used in factor formation is principal component analysis. Principal component analysis (PCA) is a statistical procedure that uses orthogonal transformations to transform a set of potentially correlated variable observations into a set of nonlinear

variable values called principal components. The two main steps in factorization are determining the number of factors and rotating the resulting factors. Determining the Number of Factors

The number of factors to be formed is determined by combining several criteria to obtain the number of factors that best fits the research data.

Table 12. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.352	56.147	56.147	12.352	56.147	56.147	7.089	32.224	32.224
2	2.539	11.541	67.688	2.539	11.541	67.688	4.799	21.813	54.038
3	1.136	5.164	72.852	1.136	5.164	72.852	4.139	18.814	72.852
4	.928	4.216	77.068						
5	.843	3.830	80.897						
6	.655	2.977	83.875						
7	.596	2.711	86.586						
8	.533	2.425	89.011						
9	.441	2.004	91.015						
10	.323	1.468	92.483						
11	.266	1.211	93.693						
12	.237	1.077	94.770						
13	.222	1.008	95.778						
14	.162	.736	96.514						
15	.155	.703	97.217						
16	.132	.601	97.818						
17	.107	.488	98.306						
18	.092	.420	98.726						
19	.085	.389	99.115						
20	.074	.338	99.453						
21	.065	.294	99.747						
22	.056	.253	100.000						

The first criterion used is the eigenvalue. Factors with eigenvalues greater than 1 will be retained, while factors with eigenvalues less than 1 will be excluded from the model. The table above shows eigenvalues greater than 1 for 1 factor, 2 factors, and 3 factors. This criterion resulted in a total of 3 factors.

The second criterion is the determination based on the percentage of total variance explained by the number of factors to be formed. The table above can be interpreted in relation to the cumulative total variance of the sample. If the variables are summarized into several factors, the total explained variance is as follows:

• If the 22 variables are extracted into 1 factor, the total explained variance is 12,352/22 x 100% = 56.147%.

• If the 22 variables are extracted into 2 factors, the total explained variance is 2.539⁄22 x 100% = 11.541%, and the cumulative total variance for the 2 factors is 56.147% + 11.541% = 67.688%.

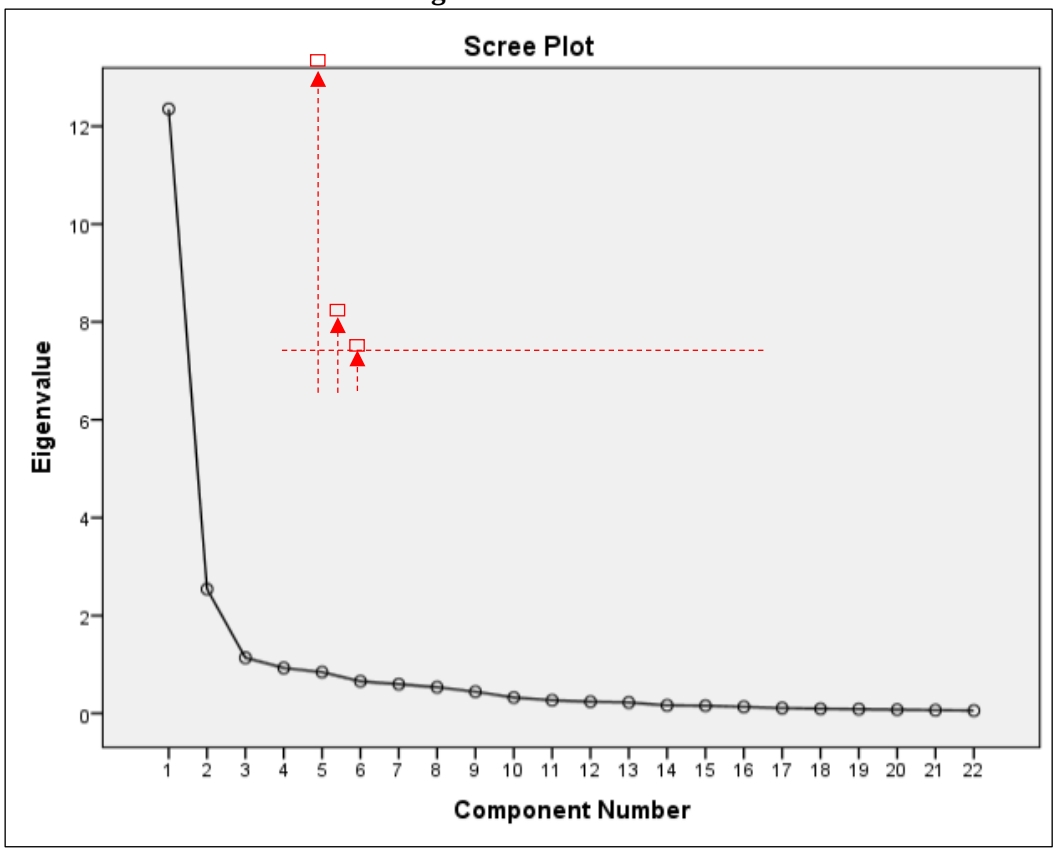
• If the 22 variables are extracted into 3 factors, the total explained variance is 1.136⁄22.

22 x 100% = 5.164%, and the cumulative total variance for the three factors is 56.147% + 11.541% + 5.164% = 72.852%.

By extracting the initial variables into three factors, a relatively large cumulative total variance of 72.852% was obtained. This means that the three factors formed can represent 22 variables influencing public interest in using public transportation, explaining approximately 72.852% of the variables influencing public interest. Therefore, the extraction of the three factors obtained can be stopped and the second criterion has been met.

The third criterion is the determination based on a scree plot. A scree plot is a plot of eigenvalues against the number of extracted factors. The point at which the scree begins to appear indicates the appropriate number of factors. This point occurs when the scree begins to appear flat. The following is a scree plot based on the analysis results:

Figure 3. Scree Plot



Based on the SPSS analysis output above, it can be concluded that there is a strong correlation or relationship between the tested variables. This is because these variables are indicators for measuring the quality of public transportation services. Furthermore, the background/characteristics and responses of GM and MM city transportation users have a significant influence on the formation of these factors. This means that the level of service quality perceived by users is the level of assessment of the service experienced by the users themselves. Therefore, good quality city transportation services will create a positive image and value for users, while conversely, poor service quality will lead to a negative image and assessment for users. This is closely related to the theory of customer satisfaction levels. According to Jen et al., satisfaction is the bridge connecting service quality and loyalty. This statement is supported by the fact that customer satisfaction is one of the main factors related to customer loyalty and the continuous relationship between the two.

- Communality

Communality is essentially the amount of variance in a variable that can be explained by the existing factors. This communalities table shows whether the values of the studied variables are able to explain the factors. A variable is considered capable of explaining a factor if its Extraction value is >0.50. Based on the analysis results, all variables have Extraction values >0.50. Therefore, it can be concluded that the 22 variables can be used to explain the factor.

- Component Matrix

Once 3 factors are identified as the optimal number, the component matrix table shows the distribution of the 22 variables across the three factors. The numbers in the table are factor loadings, indicating the magnitude of the correlation between a variable and factors 1, 2, and 3. Determining which variables to assign to which factors is done by comparing the correlation values for each row.

From the analysis results, the variable "Punctuality of Public Transportation Arrival and Departure" (X1) has a correlation of 0.839 with factor 1, -0.222 with factor 2, and 0.068 with factor 3.

The interpretation of the other variables is the same as for "Punctuality of Public Transportation Arrival and Departure" (X1).

 Rotation

The rotation process in this research aims to obtain factors with sufficiently clear factor loadings for interpretation. The rotated component matrix is a correlation matrix that shows a clearer and more realistic distribution of variables than the component matrix. More details can be seen in Table 6 below:

Table 13. Rotated Component Matrix

Rotated Component Matrix	Component		
	1	2	3
Punctuality of arrival and departure of public transportation (X1)	.745	.318	.320
Waiting time to obtain public transportation (X2)	.738	.143	.110
Travel time of public transportation (X3)	.890	.105	.161
Waiting time at the bus stop (X4)	.841	.145	.392
Provision of accurate information (X5)	.739	.055	.456
Availability of public transportation schedules and routes (X6)	.838	-.012	.347
Driver discipline (driver compliance with traffic regulations) (X7)	.326	.359	.766
Driver skill in driving (X8)	.409	.240	.747
Clarity of driver and vehicle identity (X9)	.388	.316	.757
Availability of transportation when needed (X10)	.807	.279	.089
Passengers not exceeding vehicle capacity (X11)	.747	.346	.168
Passenger density (not overcrowded) (X12)	.626	.423	.477
Public transportation routes not too long (X13)	.633	.471	.099
Ease of switching routes/trajectories and modes of transportation (X14)	.370	.460	.467
Passenger safety while on public transportation (X15)	.272	.810	.301
Passenger safety when stopping at a bus stop or terminal (X16)	.153	.870	.271
Safety while on the vehicle or stopping at a bus stop or terminal (X17)	.139	.821	.100
Comfort while on the vehicle (X18)	.154	.721	.492
Good service from the driver (friendly, polite, caring) (X19)	.142	.628	.460
Cleanliness/neatness of the transportation (X20)	.513	.498	.346
Fitness of the fleet (passenger vehicles) (X21)	.494	.465	.384
Cost (transportation fare) of the journey (X22)	.090	.285	.642

The results obtained indicate that the factor loading values between one variable and several factors have been sufficiently differentiated and are ready for interpretation. All variables have a high factor loading on one factor and a relatively small factor loading on the other factors. In determining the factor loading values, the importance of the variables and the correlation between them are the most influential. Of all the variables or instruments analyzed, they play a role in the assessment of transportation users. Consequently, it can be seen that almost all variables or instruments analyzed correlate strongly with the three factors formed, whether they are correlated with factors 1, 2, or 3.

Of all the variables analyzed using factor analysis, three variables were not included in the factor formation: ease of changing routes and modes of transportation (X14), cleanliness/tidiness of transportation (X20), and fleet suitability (passenger cars) (X21).

C. Interpretation of Factor Analysis Results

The next step is to determine the significance of the factor loading values to determine the grouping of variables into appropriate factors. According to multivariate experts, a factor loading value of 0.55 is considered significant for a sample size of 110 respondents at a significance level of $\mu = 0.05$. Based on this, in the interpretation of all factor loadings, a value of 0.55 or greater will be considered significant. The following is a grouping of the initial variables into the three established factors.

Based on Table 13, the variable "Punctuality of arrival and departure of public transportation" (X1) has the highest factor loading value on factor 1, namely 0.745. According to the guidelines above, this value is considered significant because it is greater than 0.55. Meanwhile, the factor loading values for factors 2 and 3 are smaller than those for factor 1, so this variable is included in factor 1. This is possible because there is a strong correlation between the variable "Punctuality of arrival and departure of public transportation" and the other variables formed in factor 1, and its high level of importance in

the factors influencing public interest in continuing to use public transportation. Based on existing conditions, it is known that users of both GM and MM routes are those who highly expect good service quality from public transportation providers. They are long-time users of public transportation services, so punctuality and arrival of public transportation are not a problem for them, who already know and understand the arrival and departure times of public transportation. More specifically, the variable of punctuality of public transportation arrivals, according to them, significantly influences their interest in continuing to use public transportation.

The variable Waiting time to get public transportation, X2, has the highest factor loading value on factor 1, namely 0.738. According to the guidelines above, this value is considered significant because it is greater than 0.55. Meanwhile, the factor loading values for factors 2 and 3 are very small, so this variable is included in factor 1. Based on existing conditions, this can occur because there is a strong correlation between the variable Waiting time to get public transportation and the other variables formed in factor 1, which has a high level of importance in the factors influencing people's interest in continuing to use public transportation. The same applies to determining the other variables.

The Fleet Feasibility (Passenger Car) variable (X21) has the highest factor loading value in Factor 1, namely 0.494. According to the guidelines above, this value is not significant because it is less than 0.55. Therefore, this variable was not included in the grouping of variables into the formed factors. Based on existing conditions, this could occur because there is no strong correlation between the Fleet Feasibility (Passenger Car) variable and the other variables formed in Factor 1, and its low level of importance to the factors influencing public interest in continuing to use public transportation. The following is Table 7 showing the results of grouping variables into factors.

Table 14. Results of Grouping Variables into Factors

Factors	Variable
1	X1,X2,X3,X4,X5,X6,X10,X11,X12,X13
2	X15,X16,X17,X18,X19
3	X7,X8,X9,X22

CONCLUSION

The results of the descriptive statistical analysis show that the characteristics of public transportation users based on private vehicle ownership status are dominated by those who own private vehicles but still use public transportation (85%). The characteristics of public transportation users based on their habits are dominated by people who frequently use public transportation every day (43%). Based on ease of access, the first is based on the distance to public transportation waiting areas, dominated by users who have a distance of less than 100 m (43%). Second, based on ease of access to online transportation, dominated by users who have access but choose to save costs (50%). Furthermore, the characteristics of public transportation users based on income/revenue are dominated by those with incomes below Rp. 1,000,000 (25%).

The characteristics of users based on trip purpose are dominated by students/university students with the purpose of traveling to school (33%), and finally, the characteristics of users based on the most dominant travel time, namely in the afternoon (32%). Furthermore, the factors that influence people's interest in continuing to use public transportation are identified. Based on the results of the factor analysis, it is known that the number of factors formed is 3 factors, where these factors are the result of a generalization of the variables that most influence people's interest in continuing to use public transportation. These factors, according to their level of importance, are reliability, safety and empathy, and finally, responsiveness and cost (travel fares) of public transportation. The most fundamental things that form these three factors according to Zeithaml (2006) include service quality, perceived value, and customer satisfaction.

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