Review Article

Analysis of Selection of The Malabar Train Class Reviewed from Passenger Characteristics and Train Service Facilities

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Abstract - Analysis of Class Selection for Malabar Railway in terms of Class Selection and Railway Service Facilities of PT. Kereta Api Indonesia (Persero), as one of Indonesia's train operators, has presented the Malabar Train. Malabar train is an executive, business, and economy class passenger train service operated by PT Kereta Api Indonesia (Persero) Operation Region VIII Surabaya.

It cannot be denied that passengers have different characteristics, one of which can be seen from their decision to choose the training class. To know the characteristics of Malabar train passengers, the writer used descriptive statistical analysis and Chi-square. The writer used descriptive statistical analysis to determine the characteristics that dominate each class on the Malabar Train. Simultaneously, the Chi-square is used to determine the relationship between passenger characteristics and the selected train class. The author has included several variables studied: age, gender, occupation, income, travel needs, transportation expenses, ownership of motorized vehicles, frequency of train rides, reasons for class selection, mode to the station, mode from the station, and facilities on the train. Malabar

Keywords - Passenger Characteristics, Malabar Train, Train Class

I. INTRODUCTION

A. Background

Malabar train provides tickets at various prices. The price variations mainly depend on the type of passenger class selected. For the executive class, tickets are available in a price range of IDR 365,000 - IDR 465,000 per passenger. Specifically for business class, PT KAI tickets for Malabar train passengers are in the price range of IDR 270,000 - IDR 345,000 per passenger. Meanwhile, for economy class, the Malabar train ticket price range is available from IDR 185,000 to IDR 250,000 per passenger. On-board facilities

are available according to the class of passengers. The main facilities that passengers can enjoy on the way with the Malabar train are fully air-conditioned passenger cars, toilets, comfortable seats, electrical outlets, and paid meal services.

It cannot be denied that train passengers have their characteristics, including those of the Malabar Train. According to the Big Indonesian Dictionary, characteristics can be interpreted as distinctive traits with certain characteristics. In another sense, characteristics are the distinguishing features of a person or thing. Character is innate from heart, soul, character, personality, character, character, personality, temperament, and character. The character can also be defined as personality, character, behavior, character, and character. The characteristics of an individual can influence the decisions taken. This also affects the decision to use transportation services.

Knowing the characteristics of the passengers using the Malabar train can be used as evaluation material for PT. Kereta Api Indonesia (Persero). In the future, PT. Kereta Api Indonesia (Persero) can improve or change several things according to its service users' characteristics. This can then attract other passengers with similar characteristics and could potentially make the Malabar train the main choice of public transportation modes with the routes they have. This can also benefit PT. Kereta Api Indonesia (Persero) is the service provider.

B. Research Purpose

- There are 2 objectives in this research, namely:
- a) Identifying individual characteristics in choosing the Malabar train class.
- b) Conduct a character analysis of the relationship between individual characteristics

C. Literature Review

Analysis of Jabodetabek KRL Passenger Characteristics Based on Train Class Selection (Case Study: Corridor of Depok Station - Jakarta Kota Station was written by Ahmad Fauzi in 2009. This study aims to determine the characteristics of KRL passengers viewed from the selected train class. The method used is in the form of Descriptive statistical analysis, correlation analysis, and factor analysis. The results show that each class's passengers have different characteristics seen from the socio-economic factors and the model used.

Study of Travel Characteristics and Patterns by Nindyo Cahyo 2013 The purpose of this study is to analyze service characteristics, calculate load factors, analyze demand urban public transport, and examine passenger characteristics. The method used is analysis demand and descriptive statistics. The study results are data on the characteristics of passengers who choose Yogyakarta urban transportation as a means of transportation. The research results are data on the characteristics of passengers who choose Yogyakarta urban transportation as a means of transportation.

Passenger Characteristics of KRL Users CommuterLine Jabodetabekby Nazwirman Hulmansyah 2017 The research objective is to analyze and determine the characteristics of passengers Commuter Line. The research method uses descriptive statistical analysis. The research results are data on the percentage of passenger gender, age, education, occupation, income, and the need for using the Commuter Line. The research objective is to analyze and determine the characteristics of passengers Commuter Line. The research method uses descriptive statistical analysis. The results of the research are data on the percentage of passenger gender, age, education, occupation, income, and the need for using the Commuter Line.

II. METHODOLOGY

Technique sampling is a way to determine a sample whose number corresponds to the sample size that will be the actual data source by considering the characteristics and distribution of the population to obtain a representative sample. Sampling aims to obtain information about the passenger population by observing only a portion of that population. Sampling is based on the assumption that there are differences or deviations between members of the population, differences between the characteristics of the members, and the population's general characteristics. A good sample requirement is to represent as many population characteristics as possible.

Code	Variable	Scale
Age	Passenger Age	1 = 16-20
		2 = 21 - 25
		3 = 26-30
		4 = >30
Expense	Trabsportation	1 = < 100.000
	Expenses	2 = 100.000-300.000
		3 = 300.000 - 500.000
		4 = 500.000 - 1.000.000
		5 = >1.000.000

Tabel 1. Contoh table 2x2

A. Basic Concepts

The sampling technique is carried out randomly, and there is no bias in determining the sample; the population size does not affect. The formula for determining the number of samples according to the Slovin formula is:

$$n = \frac{N}{1 + Ne^2}$$

Description:

E = desired(sample error sampling error). For example, the sampling error of 5% or 0.05

Variable	Group		Combination
	Ι	Π	Combination
+	А	В	A+B
-	С	D	C+D
Total	A+C	B+D	Ν

N = population

Test *Fisher's* is a nonparametric test used to analyze two independent samples with a nominal or ordinal scale if they are small (usually less than 20). The data are classified into two independent groups so that a 2x2 contingency table will be formed. Groups I and II are any groups. The (+) and (-) signs are any two classifications. A, B, C, and D denote the frequency. Sugiyono (2011)

This test can be used to determine whether groups I and II differ significantly in the proportions (+) and (-). The test can also be used to determine which proportion is greater. The exact probability of arising from the observed frequency in the 2x2 table if the marginal number is assumed to be constant is obtained using the hypergeometric distribution:

$$p = (\underline{A+B})! (\underline{C+D})! (\underline{A+C})! (\underline{B+D})! \\ N!A!B!C!D!$$

Information:

A, B, C, D = cells resulting from crosses of two variables N = number of respondents

Passenger characteristics are grouped into two variables, namely nominal data and ordinal data. Nominal data is data that includes grouping, categorizing, identifying events or phenomena into classes or categories so that what falls into one class or category is the same data in terms of attributes or characteristics. Meanwhile, ordinal data is data whose numbers indicate a gap or ranking (Kadir, 2015: 11). To facilitate data input into the SPSS application, the authors have categorized the data as follows:

Table 2 Code, Variable, and passenger characteristic scale

Code	Variable
Gender	Gender
Profession	Profession
Necessary	Travel Necessities
Cause	Reason for Choosing the Class
Train Class	Train Class
Moda 2	Transport to the Station
Moda 1	Shuttles From the Station
Cause	Used Train Facilities

Table 3. Code and Passenger Characteristic Variable

B. Survey Results And Sample Characteristics

The respondents' survey was conducted for 1 week from the beginning of February 2020 to the end of February 2020. At the end of the survey, 300 questionnaires had been filled in by respondents and can be used for analysis.







Percentage (%) Income







Percentage (%) Work Needs



Percentage (%) Expense







Percentage (%) Transportation to the station





0%



Percentage (%) Vehicle Ownerships

Percentage (%) Reason choosing mode







Fig. 2: Income, Vehicle Ownership, Reasons for choosing the mode, Travel Frequency, Mode to the Station, Mode from the Station, Railway Service Facilities.

Based on **Figures 1** and **2** above, it can be observed that the sample used is quite balanced in terms of gender but tends to lead to young respondents (under 30 years old) with employment status as private workers, earning Rp. 3,000,000.00 s / d Rp. 5,000,000.00 per month, have a purpose of travel for work purposes, choose the training class for reasons of cost and service, own a motorbike and a car, use a motorbike as a mode of going to and transportation *online* from the station, and the frequency of trips is <2 times a month.

III. RESULTS AND DISCUSSION

From the results of the descriptive statistical analysis of the variables that affect train class choice, it can be seen that for economy class trains, the dominant passenger category is male,> 31 years old, has an income of Rp. 2,000,000.00 to Rp. 3,000,000. 00 works as a student, has work needs, the amount of transportation expenses per month is IDR 100,000 to IDR 300,000, chooses classes based on cost, uses a motorbike as a mode of getting to and online transportation from the station, owns a motorbike, and the frequency of train use <2 times a month and feel that economy class services have met operational standards.

For business class trains, have a male passenger category,> 30 years old, have Rp's income. 3,000,000.00 - Rp. 5,000,000.00, work as a private employee, have work needs, choose the training class because of service reasons, owning a motorbike and a car, using a motorbike as a mode to go to and online transportation from the station, the transportation expenses of Rp. 100,000 to Rp. 3,000,000 per month, and frequency of trips of ≤ 2 months and feel that business class service meets the standard operational.

For executive class trains, having a male passenger category,> 30 years old, having an income of IDR 3,000,000.00-IDR 5,000,000.00, works as a private employee, has work needs, chooses the training class because cost of service reasons, owning motorbikes and cars, using online transportation as a mode of getting to and motorbikes from the station, transportation expenses of Rp. 100,000 to Rp. Three million per month and frequency of trips of ≤ 2 months feel that executive class service has met the standard operational.

Table 4.	Characteristic	Malabar	Passenger
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	Ekonomi	Bisnis	Eksekutif
Gender	Male	Male	Male
Age	21-25 Years Old	>30 Years Old	>30 Years Old
Income	Rp.2.000.000,00	Rp.3.000.000,0	Rp.3.000.000,0
	s/d	0	0 s/d
	Rp.3.000.00,00	s/d	Rp.5.000.000,0
		Rp.5.000.000,0	0
		0	
Profession	Student	Private	Private
Vehicle	Motorcycle	Motorcycle &	Motorcycle &
		Car	Car
Necessary	Go to Work	Go to Work	Go to Work
Expense	Rp.100.000,00-	Rp.100.000,00-	Rp.100.000,00
	Rp.300.000,00	Rp.300.000,00	-Rp300.000,00
Reason	Cost	Cost & Service	Cost & Service
Frequency	≤2 times	≤2 times	≤2 times
Depart	Motorcycle	Motorcycle	Online
			transportation
Return	Online	Online	Motorcycle
	transportation	transportation	
Service	Done	Done	Done
Facilities			

A. CORRELATION ANALYSIS

The analysis used in this study is the Chi-Square Test which is used to determine whether or not there is a relationship between two variables, namely the independent variable and the dependent variable (choice of train class). The following are the steps in correlation analysis:

- 1. Determine the significance of the correlation results:
 - Determine the hypothesis
 - a. H0: the relationship between the dependent variable and the independent variable is not significant
 - b. H1: the relationship between the dependent variable and the independent variable is significant
 - Determine the result
 - a. If the calculated significance <0.05, then there is a significant relationship between the two variables
 - b. If the calculated significance> 0.05, then there is an insignificant relationship between the two variables

Information: 0.05 = statistical significance

- 2. Determine hypothesis testing decisions
 - Determine the hypothesis
 - a. H0: the relationship between the dependent variable and the independent variable is not significant
 - b. H1: the relationship between the dependent variable and the independent variable is significant
 - Hypothesis testing is carried out using the following criteria:
 - a. If the probability or significance value <0.05, H0 is rejected and H1 is accepted
 - b. If the probability or significance value> 0.05, H0 is accepted and H1 is rejected

IV. CONCLUSION

a. Malabar train passengers in economy class are passengers who have dominant male characteristics, productive age> 30 years with an income of IDR 2,000,001.00 to IDR 3,000,000.00, profession as a student, with a large monthly transportation expense of IDR 100 .001.00 s / d Rp.300,000.00, have travel needs for work purposes, choose classes on the grounds of

cost, use a motorbike as a mode of getting to and transportation *online* from the station, has a motor, and a frequency of trips ≤ 2 times a month.

- b. Malabar train passengers in business class have dominant male characteristics,> 30 years old, and have an income of Rp. 3,000,000.00 to Rp. 5,000,000.00 per month, has a job as a private worker, has a purpose of travel for work purposes, chooses the training class for reasons of cost and service, owns a motorbike and a car, uses a motorbike as a mode of getting to and transportation *online* from the station, and the frequency of trips ≤2 times in one month.
- c. Executive class Malabar train passengers have dominant male characteristics,> 30 years old, and have an income of Rp. 3,000,000.00 to Rp. 5,000,000.00 per month, has a job as a private worker, has a purpose of traveling for work purposes, chooses the training class for reasons of cost and service, owns a motorbike and car, uses transportation *online* as a mode of getting to and motorbikes from the station. The frequency of travel is as much as ≤2 times in one month.

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