



# Analysis of user Errors in Entering Data Into the Ferizy Application on the Bakauheni - Merak Route

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**Abstract :** The implementation of the Ferizy application system on the Bakauheni – Merak route at the Bakauheni Ferry Port is closely related to the process of collecting data on vehicles and passengers. Information regarding vehicle categories is not only important for administrative and tariff purposes, but also affects dock capacity management, ship scheduling, and port infrastructure needs assessment. The purpose of this study is to identify errors made by service users when entering data to purchase e-tickets on the Ferizy application on the Bakauheni – Merak route. This study is a descriptive study with a quantitative approach. After data analysis, it was found that the most common errors made by service users when entering data on the Ferizy application were errors in entering the vehicle registration number and vehicle class, with the errors made by service users in entering the vehicle registration number and vehicle class being less than 1.00%. The highest number of vehicle registration number errors occurred in February 2025, with 258 units, while the highest number of vehicle class input errors occurred in April 2025, with 292 units. This indicates the need for follow-up actions regarding the dissemination of information on data input or e-ticket purchases through the Ferizy application.

**Keywords:** Ferizy application, vehicle class, input errors

## 1. INTRODUCTION

Based on PM 19 of 2020 concerning the implementation of ferry tickets using e-tickets since 2020 [1][2]. The implementation of the Ferizy application system on the Bakauheni - Merak route at the Bakauheni Ferry Port is closely related to the process of collecting vehicle and passenger data[3][4]. The importance of vehicle and passenger data on the manifest is for legal compliance and to guarantee the rights of service users [5]. In entering vehicle data [6], passengers enter the data independently on the Ferizy application, so there is a possibility of errors [7]. The data entered by service users on the Ferizy application will be verified during e-ticket checks at the passenger and vehicle entry gates [8].

The vehicle categorization system used at Bakauheni Port refers to specific classifications (Class I - Class IX) that distinguish vehicle types based on size and function, such as motorcycles, passenger cars, small trucks, and large trucks with heavy

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loads, based on PM 63 of 2013 on Interprovincial Ferry Transportation Rates [9][10][11]. Information regarding vehicle categories is not only important for administrative and tariff purposes but also impacts port capacity management, vessel scheduling, and the evaluation of port infrastructure needs.

## 2. RESEARCH METHOD

This research is descriptive research with a quantitative approach. This method is commonly used to describe or depict a situation or event objectively. This research is used to provide an overview of data characteristics without drawing general conclusions.

Descriptive quantitative data analysis is a method that helps describe, show, or summarize data in a constructive manner that refers to statistical descriptions that help understand the details of the data by summarizing and finding patterns from the data (Sudirman et al., 2023).

The descriptive statistical analysis in this study to determine the average and percentage of data entry errors in the Ferizy application is as follows

### Mean

$$\bar{x} = \frac{\sum_{i=1}^k f_i \cdot x_i}{\sum_{i=1}^k f_i}$$

where :

$\bar{x}$  : mean

$f_i$  : frequency of i data

$x_i$  : value of i

### Percentage

$$P = \frac{f}{N} \cdot 100\%$$

where :

P : Percentage value

f : frequency or number of data in a category

N : total number of data or samples

## 3. RESULT AND DISCUSSION

### 3.1 RESULT

When purchasing tickets on the Ferizy app, there is data that must be entered. Service users are advised to arrive at the port two hours before their selected boarding time. The

Bakauheni Ferry Port, which is the main ferry port connecting the islands of Sumatra and Java, is accessible to all people, so there is a possibility of data entry errors. Data entry errors that are a significant focus in port service operations include vehicle data such as license plate numbers and vehicle categories. Errors in vehicle category data can affect pricing. The following is an error in entering the vehicle registration number of the service user.

From January to June 2025, there were 1,404,153 vehicles with an average of 234,026 units/month consisting of various types of vehicles. There were errors in entering vehicle registration numbers. During those six (6) months, the average number of errors in entering registration numbers was 100 units per month out of a total of 601 vehicle errors, with the highest number of errors occurring in February 2025 with 258 errors and the lowest in June 2025 with no errors in entering vehicle registration numbers. Errors also occurred in the input of vehicle categories, where the categories input into the Ferizy application were lower than the categories identified at the checkpoints/gates.

Errors also occurred when service users entered vehicle categories. From January to June 2025, there were 1,196 vehicles that entered categories on the Ferizy application that were lower than the vehicle categories validated by the checkpoint/gate at the ferry port. The cost difference was IDR 621,000,542. The highest number of errors occurred in May 2025, with 0.110% or 214 vehicles and a price difference of IDR 119,003,539. The lowest number of errors occurred in April 2025, with 0.059% or 224 vehicles and a price difference of IDR 103,500,090.

From January to June 2025, there were 313 vehicles that entered a higher vehicle class on the Ferizy app than the validation results at the port crossing checkpoints/gates. The price difference amounted to IDR 98,989,992. The highest number of errors occurred in April 2025, with 68 vehicles and a price difference of IDR 19,894,327. The lowest number of errors occurred in June 2025, with 40 vehicles and a price difference of IDR 13,426,998, representing 0.017% of the total.

### **3.2 DISCUSSION**

Errors in entering vehicle registration numbers do not have a direct impact on ferry port revenue, but they do affect the vehicle manifest data of service users. From January to June 2025, the number of service users who made errors in entering vehicle registration numbers tended to decline. This can be seen in June 2025, when there were no service users who made errors in entering vehicle registration numbers. Vehicle registration number data synchronization is carried out by checking the registration number on the e-ticket and the registration number of the vehicle to be transported. If there is a discrepancy in the data and vehicle class, the vehicle will be separated for re-registration. This results in disruption to the smooth flow of vehicles boarding the ship. Errors also occur in the input of vehicle classes. These errors can affect the revenue of the ferry port and the capacity of the ship to transport vehicles. From January to June 2025, there were 1,509 vehicle class errors, consisting of 1,196 vehicles with a lower

vehicle class and 313 vehicles with a higher vehicle class than the actual vehicle size (based on the inspection by the post/gate officer).

Errors in inputting vehicle classes, both higher and lower than the actual class, were below 1.00%. This shows that input errors occurred in a small number of service users. The highest number of errors in entering lower classifications occurred in classification VB, with 367 vehicles, which are goods vehicles (cars, trucks, or tankers) measuring less than 7 meters, followed by classification VIB, with 335 vehicles in the goods vehicle category (cars, trucks, tankers, tractors without trailers) measuring less than 10 meters. If the category input by service users on the Ferizy application is lower, then service users must upgrade their category. The price difference for service users who upgrade their vehicle category is IDR 621,000,542. Service users who upgrade their vehicle category are required to pay the price difference.

Errors in inputting higher vehicle categories occurred among service users with IVA vehicle category, totaling 134 vehicles in the passenger vehicle category (cars, jeeps, sedans, minicabs, minibuses, mikrolet, station wagons) measuring less than 5 (five) meters and the lowest in vehicle class VIII, totaling 3 (three) vehicles in the category of vehicles (goods vehicles, tractor trucks, tankers, tow trucks with trailers, heavy equipment vehicles) measuring less than 16 meters. If the category entered by the service user on the Ferizy application is higher, then the service user must downgrade the category. The price difference for service users who downgrade their vehicle category is IDR 98,989,992. For service users who downgrade their vehicle category, the Bakauheni Ferry Port will refund the funds within a maximum period of 30 working days to the service user's account.

Based on the results of interviews conducted by the researcher, data entry errors occurred due to a lack of understanding by service users regarding the importance of personal and vehicle data during the administrative process. When entering the vehicle category, service users did not fully understand the condition of their vehicles and assumed that any errors would be corrected at the port.

## **4. CONCLUSION AND RECOMMENCATION**

### **4.1. CONCLUSION**

Based on the results of the analysis and discussion, the following conclusions were reached:

1. The most common errors made by service users when entering data into the Ferizy application were errors in entering vehicle registration numbers and vehicle classes.
2. Errors made by service users in entering vehicle registration numbers and vehicle classes were less than 1.00%. The highest number of license plate errors in February 2025 was 258 units, while the highest number of vehicle class input errors in April 2025 was 292 units.

## 4.2. RECOMMENDATION

Based on the researchers' findings in the field, the recommendation for further research is to test the effectiveness of using media to disseminate information on how to determine the vehicle category of service users.

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