

# **USER PERCEPTION STUDY OF RIVER TRANSPORT MODE (CASE STUDY: MODE OF RIVER TRANSPORTATION IN KUANTAN QUIET VILLAGE - MEDAN CITY VILLAGE, INDRAGIRI HULU REGENCY)**

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## **ABSTRACT**

The historical development of Riau Province is inseparable from the waters, one of which is a river. The river is the only mode of transportation used. Indragiri Hulu Regency is one of 9 regencies/cities in Riau Province which is crossed by a river with a length of 500 km with a depth of 6-8 meters, namely the Indragiri River. River mode of transportation is an alternative mode currently connecting areas separated by rivers. Kuantan Tenang Village and Medan City Village, Indragiri River is the barrier between the two villages. The river mode of transportation is still the transportation used by these two villages as a liaison to get to the village. The purpose of this study is to describe people's perceptions as users of river transportation modes with case studies of river transportation modes in Kuantan Tenang Village and Medan City Village, Indragiri Hulu Regency. The method used in this study uses field observations through a questionnaire questionnaire given to users of river transportation modes in the case study location. The number of respondents is 50 respondents based on 9 characteristics. User perceptions of river transportation modes linking Kuantan Tenang Village, Rakit Kulim District with City Village Medan, Kelayang District, Indragiri Hulu Regency based on a study of perceptions of the level of service quality where the results of the analysis were obtained with a mean number of 4.33, with a good category, perceptions of tariff analysis where the results of the analysis were obtained with a mean number of 4.67, with a very good category, and perceptions on Mode Satisfaction where the results of the analysis are obtained with a mean number of 4.25 with a Good Category so that the results of the study of user perceptions of river transportation modes in Kuantan Tenang Village - Medan City Village with a mean number of 4.42 in the Good category are needed. The link to river transportation, especially those along the Indragiri River, is the construction of completeness facilities, namely the pier.

**Keywords:** *Perception, User, Mode of Transportation, Likert Scale, SPSS*

## **1.INTRODUCTION**

### **1.1 BACKGROUND**

Riau Province has a history of development that cannot be separated from the river, in ancient times the river was the only transportation route used. In the mainland area of Riau Province there are 15 rivers that are considered important 4 rivers that are important for infrastructure related to between 6 M to 12 M. The river in Riau has a length ranging from 300 Km to the longest 500 Km namely the Indragiri River (D. Rohmat, et al 2015).

Indragiri Hulu Regency is crossed by a river that has a length of 500 km with a depth of 6-8 meters, namely the Indragiri River, the Indragiri River originates at Lake Singkarak, West Sumatra Province and the estuary part of this river is the Indragiri Hilir Regency, Riau Province (Putra et al., 2015).

Transportation is one of the basic needs of the community in carrying out activities, including geographically separated areas such as rivers. River transportation used to be the only transportation that connected areas separated by rivers.

In particular, Kuantan Tenang Village and Medan City Village, the Indragiri River is the barrier between these villages. The government strives for smoothness and convenience in the field of transportation by actively building roads and pedestrian bridges. On the other hand, traditional transportation is still being pursued by the community and for the community itself, especially river transportation.

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**1.2. PROBLEM FORMULATION**

1. What is the user's perception of the existence of river Transportation Mode in Kuantan Tenang Village – Medan City Village?

**1.3. RESEARCH OBJECTIVES**

The objectives of this research are:

1. Describes public perceptions of services for river transportation needs and perceptions about the existence of transportation use on the Indragiri River specifically in Kuantan Tenang Village and Medan City Village.
2. Provide appropriate policy input for the current existence of river transportation.

**1.4. LIMITATION OF PROBLEM**

1. The scope of this study of river transportation modes is limited by the spatial scope of the Indragiri River which limits Kuantan Tenang Village and Medan City Village.
2. This study discusses the factors that influence the existence and perception of the people of Kuantan Tenang Village and Medan City Village on river transportation modes.

**2. LITERATURE REVIEW**

**2.1. TRANSPORT**

The definition of transportation in general is the business of moving or moving goods or people from one location to another (in terms of transportation it is called from the location of origin to the location of destination) for certain purposes / reasons / interests by using certain tools.

From some of the definitions above, it can be seen that there are five main elements in transportation, namely (Munawar, 2005: 2):

- a. There are humans, as those in need of transportation,
- b. There are things that people need,
- c. There is a vehicle as a means of transportation,
- d. Roads as infrastructure, and
- e. Organization as a transportation manager.

Transportation or travel does not only apply on land but also in waters or rivers. According to Law No. 21 of 1992, it is stated that river, lake and crossing transportation is transportation using ships carried out in rivers, lakes, reservoirs, swamps, floodwaters, canals and canals to transport passengers, goods and/or animals organized by river transport companies and a lake whose management is arranged in an integrated manner, intra and intermodal, which is an integral part of the national transportation system, and uses fixed and regular routes equipped with irregular and irregular routes.

**2.2. RIVER**

This river is a water irrigation system from the beginning to the spring until the mouth with the left and right are limited by the river border along its flow (Sudaryoko, 1986). This river is a natural feature and ecological integrity, which is useful for survival (Brierly, 2005).

According to the Ministry of Public Works, the river as a water source has a very important function for life and livelihood. while PP. 35 of 1991 concerning rivers, rivers are places and containers as well as a network of water flow from the spring to the estuary with limited rights and left and as long as the flow is by a border line. This river is part of the earth's surface that is located lower than the surrounding land and into the flow of fresh water to the sea, lake, swamp, or to other rivers (Hamzah, 2009). The left - right bank of the border area affected by the river / flooded river water. The function of the flow along the river is where most of the river discharges during flooding (high waterways) (Yodi Isnaini, 2006). According to Law no. 35 1991 on the river, said understand River Plate is the soil on both sides along the riverbed calculated from the bank to the embankment

of the inner foot. Thus, the prohibition on the banks of the river in the trash and erecting buildings for shelter. (Polantolo, 2008).

### 2.3. RIVER TRANSPORT

Transportation is basically a means to move people or goods from one place to another. The process can be carried out using a means of transportation in the form of a vehicle or without a vehicle (transported by people) (Warpani, 1990: 170). River transportation is a transportation that grows and develops naturally in Indonesia due to natural geographical conditions which have many rivers. Roads for water transportation are not only natural (sea, river, lake), some are man-made (canals, watersheds, artificial lakes). This transportation is also known as "inland water transportation" (Chandrawidjaja, 1998: 5).

### 2.4. Scoring Method with Likert Scale Method

Likert scale analysis is used to measure attitudes, opinions and perceptions of a person or group of people about social phenomena. In this study, the Likert scale was used to measure people's attitudes and perceptions about the current livelihood.

Table. 1. Likert scale

No	Simbol	Keterangan	Skor
1	SS	Sangat Setuju	5
2	S	Setuju	4
3	KS	Kurang Setuju	3
4	TS	Tidak Setuju	2
5	STS	Sangat Tidak Setuju	1

Source: Riduwan (2009,88)

### 2.5. SPSS METHOD

SPSS is an application used to perform advanced statistical analysis, data analysis with machine learning algorithms, string analysis, and big data analysis that can be integrated to build a data analysis platform. SPSS stands for Statistical Package for the Social Sciences. SPSS is very popular among researchers and statisticians to help perform calculations related to data analysis. SPSS provides a library for statistical calculations with an interactive interface that makes it the most popular advanced data analysis software in universities, agencies, and companies.

## 3. RESEARCH METHOD

The method used in this research is field observation which is a method of direct observation to the study site, to collect data and information related to research and use the method of distributing questionnaires/questionnaires which is used to measure people's perceptions and attitudes with the number of respondents 50 people.

## 4. RESULTS AND DISCUSSION

### 4.1. Analysis of Service Quality Level

Service is a very important thing and needs great attention especially to the owners of river or kompong transportation modes to users.

The purpose of the public transport service itself is to provide safe, comfortable, secure, short, and low-cost services for the mobility of an increasing number of people, most importantly for coercion in carrying out their activities.

From the description of the respondent's response table about the presence of kompong which helps public services in driving, it is 4.6 or can be rounded up to 5 (Very Good), it can be concluded that the existence of kompong which helps public services in driving with a very good rating.

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**Table 4.37.**Recapitulation of Service Quality Level Analysis Assessment Results

No	Question	Score	Category
1	Question 1	5	Very good
2	question 2	4	Well
3	Question 3	4	Well
4	Question 4	4	Well
5	Question 5	4	Well
6	Question 6	5	Very good
7	Question 7	3	Not good
8	Question 8	5	Very good
9	Question 9	5	Very good
Average value		4.33	Well

*Source: Processed Data Research Results, (2021)*

Based on 9 questions about the analysis of the level of service quality given to 50 respondents, it was found that the respondents' responses that the mode of transportation (kompang) currently used was in good condition with an average achievement rate of 4.33 4 (Good). However, the facilities for this mode of transportation are not yet built or do not exist, namely the pier.

**4.2. Tariff Analysis**

Transportation fares are a list containing prices for users of transportation services which are compiled regularly. Tariff is the cost of transportation services that have been paid by users of public transportation services, either through the mechanism of rental agreements, bargaining, or decisions from the government. The cost of transportation services that have been determined through the tariff system, takes place in general and there are no other provisions that bind public transportation companies and service users or goods owners except for the rules that have been written in the tariff book.

From the description of the table of respondents' responses to the comparison of tariffs using a kompang with road or bridge access of 4.94 or can be rounded to 5 (Very Good), it can be concluded that the comparison of tariffs using a kompang by using road or bridge access is very good.

**Table 4.44.**Recapitulation of Tariff Analysis Assessment Results

No	Question	Score	Category
1	Question 1	5	Very good
2	Question 2	4	Well
3	Question 3	5	Very good
Average value		4.67	Very good

*Source: Processed Data Research Results, (2021)*

Based on 3 questions about the tariff analysis given to 50 respondents, it was found that the respondents' responses showed that the kompang fare provided by the kompang transportation mode provider was very affordable. So that people still use the Kompang mode of transportation compared to using road and bridge transportation access with an average achievement value of 4.67 5 (Very Good).

**4.3. Analysis of Public Transport Satisfaction**

Irawan (2003) states that customer satisfaction and indirectly reflects how far the company has responded to the wishes and expectations of the market. In the short term often, there is no visible relationship between customer satisfaction and the level of profit, because satisfaction is a strategy

of lasting satisfaction, it is the ability to retain customers that ultimately affects profits in the short term.

From table description Respondents' responses to satisfaction about the condition of the Kompong used by the driver are 4.54 or can be rounded up to 5 (Very Good), so it can be concluded that the respondents' responses to satisfaction about the conditions used by the driver are very good.

**Table 4.53.**Recapitulation of the Results of the Public Transport Satisfaction Analysis

No	Question	Score	Category
1	Question 1	4	Well
2	question 2	4	Well
3	Question 3	4	Well
4	Question 4	5	Very good
Average value		4.25	Well

*Source: Processed Data Research Results, (2021)*

Based on 4 questions about satisfaction analysis given to 50 respondents, it was found that the respondents were satisfied with the service, performance and poor conditions with an achievement rate of 4.25 4 (Good).

## DISCUSSION RESULT

### 4.4. COMMUNITY PERCEPTION OF THE EXISTENCE OF THE USE OF RIVER TRANSPORTATION

The level of efficiency of time and distance traveled is an important part to be assessed by the community individually and objectively. This study took 50 respondents who used river transportation and asked them to fill out 16 questions related to service quality, tariffs, and satisfaction. From the results of the survey and filling out the questionnaire, it was found that the people classified this simple and traditional river transportation as having good mode of service, even though in reality there are still facilities that need to be built, namely the pier, where the current condition of the pier does not exist. This is evidenced by the results of the author's data processing of 50 questionnaires that have been given to respondents.

One of the reasons that are considered by the community to still use river transportation modes is the condition of the main road facilities between Kuantan Tenang Village and Medan City Village which still need repairs. The community also assesses the distance traveled if using river transportation is more time efficient than using the main road facility. Therefore, the community considers that the existence of river transportation is still very necessary for the people of Kuantan Tenang Village to carry out their activities in Medan City Village.

### 4.5. POLICY DIRECTIONS ON THE EXISTENCE OF RIVER TRANSPORTATION

The development of ferry transportation in the long term will be harmonized with the development of road transportation, the existence of ferry transportation in a place will end when there are bridge facilities available. Therefore, the development of ferry transportation in the long term will be adjusted to the development of roads and bridges through substitution strategies and complementary strategies. The substitution strategy is carried out if crossing transportation activities are no longer needed so that it is necessary to relocate to another place that is more necessary.

In this case, the policy direction taken for the government sees the condition of river transportation as a derived demand, namely to be able to optimize the elements in the ferry transportation system so that people can feel safe and comfortable using river transportation.

## 5.CLOSING

### 5.1. CONCLUSION

Based on the research analysis and discussion, some conclusions can be drawn as follows:

1. Identification of factors influencing the use of river transportation states that there are five reasons people use river transportation. These factors are the purpose of the trip, travel time, price, time effectiveness and convenience. From the results of the survey and filling out the

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questionnaire, it was found that the people classified this simple and traditional river transportation as having good mode of service, even though in reality there are still facilities that need to be built, namely the pier, where the current condition of the pier does not exist.

2. Of the 16 questions given to respondents, there is 1 question that is a weakness of the service level analysis with question number 7, namely the respondent's response to the condition of the pier. At this time the condition of the pier at the crossing of Kuantan Tenang Village and Medan City Village is not yet available. This is something that must be considered and made into a policy by the government, because with the existence of a river transportation transportation dock, it becomes better with the availability of river transportation transportation infrastructure.

**5.2. SUGGESTION**

From the results of field surveys and analysis of transportation data, transportation is still the choice of transportation for some people. Improved transportation systems and good management by the government of Indragiri Hulu Regency can make river transportation a cheap, safe, comfortable, and efficient transportation option.

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