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Characteristic analysis of sea transportation passenger Kendari Nusantara Port

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Abstract

Indonesia, which is an archipelagic country consisting of islands, sea transportation is an absolute necessity for those living in the archipelago. The port terminal is a tool for the process of moving goods and passengers to transfer modes of movement either through sea transportation or land transportation. The purpose of this study was to determine the characteristics of sea transportation users at the Kendari Nusantara port terminal. The method in this study uses a qualitative descriptive by distributing questionnaires to users of the Nusantara Kendari port terminal who want to travel between islands. The results of the study based on the characteristics of sea transportation users through the Kendari Archipelago port were obtained based on the characteristics of sea transportation users (passengers) at the port terminal. The male gender is 57.33%, the most dominant travel destination is Muna Regency at 38.67%, the reason for using fast express boats is the consideration of travel time by 52%, the purpose of the trip is dominated by educational interests by 32.67%, The frequency of using fast boats is very frequent, which is more than 4 times by 33.33%.

Keywords: Characteristics; Users; Ports; Sea transportation

1. Introduction

Nusantara Kendari Harbor is one of the passenger terminal ports for inter-island travel in Southeast Sulawesi. Geographically, it is located at 03° 58' 25" South Latitude and 125° 11' 00" East Longitude. The role of the Kendari Archipelago port is very important because it is the main node of the economy and as an entry and exit route for goods and passengers across Southeast Sulawesi.

The development of the Kendari Archipelago port in general cannot be separated from the influence of the hinterland which can have direct access to the port such as transportation facilities, which connect areas within Kendari City as well as between regencies and between islands in Southeast Sulawesi. The Kendari Archipelago Port is one of the important and strategic aspects in facilitating the regional economy.

2. Literature review

2.1. Transportation System

Gottfried, B., S., 1984. Transportation is defined as the activity of moving goods and or people from one place to another using certain modes. So a complete transportation system can be defined as a collection of components whose interactions cause the movement of goods or people from one place to another.

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Miro (2012) in general, transportation can be interpreted as an effort to move or move people or goods from a location called the location of origin, to another location or destination, for certain purposes by using certain tools as well. Transportation has several dimensions such as: location (origin and destination), tools (technology), certain needs at the destination location such as social economy and others.

2.2. Sea Port System

Morlok, E., K., 1995, The sea port system is part of the marine transportation system. The sea transportation system itself can be defined as a system for the movement of goods or people from one place to another through marine facilities and infrastructure.

Triatmojo B., 2010, The port consists of several components that interact and form a system and is called a seaport system to distinguish it from an airport. The sea port system consists of 2 (two) main elements, namely elements of port facilities in the form of ships and infrastructure elements in the form of port facilities.

2.3. Transportation User Characteristics

(Morlok, 1991) The behavior of users of transportation modes is influenced by:

- Travel Characteristics Factor, variables that affect the behavior of users of transportation mode services in choosing a mode of transportation, namely: (a) Trip purpose such as work, school, social and others, (b) Time of trip made such as morning, afternoon day, midnight, holidays and others, (c). Trip length is the physical distance (kilometers) between origin and destination, including the length of the route.
- Traveler Characteristics Factor, variables that affect individual travelers, namely: (a). income, in the form of the traveler's purchasing power to finance his trip, (b). Car ownership, in the form of the availability of private vehicles as a means of traveling, (c) Condition of private vehicles (old, bad, new, etc.), (d). Density of settlements (density of residential development), (e). Other socio-economic factors, such as family structure and size, age, gender, type of work, job location.
- Transportation System Characteristics Factor, Variables that affect travel behavior in choosing transportation modes are related to the performance of transportation system services such as relative travel time, relative travel cost, relative level of service, accessibility, reliability.
- Special Characteristics Factor, Variables that affect the Special Characteristics Factor such as the distance from residence to the place of activity. population density.

Manheim, (1979). Attributes for services in the field of transportation from various considerations of consumers have been formulated by These attributes are considered to represent services to consumers and affect each different consumer activity. Examples of attributes formulated by Manheim (1979) are as follows:

- Time whose indicators consist of total travel time, reliability (variation of travel time), transfer time, travel frequency and travel schedule.
- Costs whose indicators consist of direct transportation costs such as tariffs and fuel costs, indirect transportation costs such as maintenance and insurance costs.
- Safety and security whose indicators consist of the possibility of accidents and feelings of security.
- Pleasure and comfort of service users whose indicators consist of travel distance, physical comfort (temperature, cleanliness), travel pleasure (handling baggage, ticketing, food and drink services, other pleasures such as music entertainment).
- Expedition services in the form of loss insurance and return shipping rights.

3. Methodology

3.1. Method Approach

This study uses a descriptive qualitative method referring to literature references data collection in the field is carried out by observation and distributing questionnaires to users of sea transportation at the passenger port terminal at the port of Nusantara Kendari. (Nazir, 1999) random sampling analysis technique with the following equation:

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

Where

n = number of questionnaire data

N = Number of users of inter-island sea transportation passengers

e = error value of data collection accuracy (5%)

3.2. Research data

The population in this study are users of passengers at the Nusantara Kendari port terminal who want to travel on sea voyages. Data from the survey results of passengers (users) at the Nusantara Kendari port terminal was carried out over a period of 1 month, with a total of 150 respondents.

3.3. Data analysis techniques

Data analysis is used in this study with a combination theory approach, namely calculations and graphs, in the form of calculated numbers and graph formulations.

4. Results and discussion

4.1. Characteristics of users of the Kendari Nusantara port terminal

4.1.1. Gender

Gender is a measurement tool for user travel characteristics to determine the percentage of users to gender, as for the gender of the users of the Kendari Nusantara ship port terminal as shown in table 1 below:

Table 1 Gender

Number	Variable	Total	Percentage
1	male	86	57,33%
2	female	64	42,67%
Total		150	100%

Source: Data Analysis Results

Table 1. Users of express fast boat modes through the port of Nusantara Kendari by gender, male 57.33%, female 42.67%.

4.1.2. By Age

Based on the age of the users are sea transportation passengers who carry out the administrative process of sea trips at the Kendari Nusantara port terminal, which can be seen in table 2 below:

Table 2 Based on age

Number	Variabel	Total	Percentage
1	< 17 Years	6	4,00%
2	17 - 40 Years	126	84,00%
3	> 40 Years	18	12,00%
Total		150	100%

Source: Data Analysis Results

Table 2 users of express fast boat modes through the Kendari Archipelago port by age, > 17 years 4%, 17-40 years 84%, and > 40 years 12%.

4.1.3. Travel Destination

The purpose of the trip is to find out the distribution of movement from origin to destination as shown in Table 3 below:

Table 3 Based on Travel Destinations

Number	Variable	Total	Percentage
1	Muna District	58	38,67%
2	West Muna Regency	12	8,00%
3	South Buton Regency	2	1,33%
4	Wakatobi District	4	2,67%
5	Smelly City	31	20,67%
6	Buton District	8	5,33%
7	other	35	23,33%
Total		150	100%

Source: Data Analysis Results

Table 3 Users of express fast boat modes through the port of Nusantara Kendari based on the purpose of the trip, Kab. Muna 38.67%, Kab. West Muna 8.00%, Kab. South Buton, 20.67%, Kab. Wakatobi 20.67%, Kota Baubau 20.67% Kab. Buton 5.33%, others 23.33%.

4.1.4. Based on Education

Education is a characteristic part of human resources who want to travel as shown in Table 4 below:

Table 4 Based on Last Education

Number	Variabel	Total	Percentage
1	Primary school	0	0,00%
2	Junior high school	0	0,00%
3	Senior High School	99	66,00%
4	Diploma	4	2,67%
5	Bachelor	31	20,67%
6	Master	11	7,33%
7	Doctor	5	3,33%
Total		150	100%

Source: Data Analysis Results

Table 4. based on the respondent's latest education, Elementary school 0%, Junior high school 0%, Senior high school 66%, Diploma, 2.67%, Bachelor 20.67%, Masters 7.33%, Doctoral/S 3.33 %.

4.1.5. Based on Job

Employment is how important the trip is based on the job as shown in the following table 5 below:

Table 5 Based on Occupation

Number	Variabel	Total	Percentage
1	civil servant	18	12,00%
2	State-owned enterprises/regional-owned enterprises	6	4,00%
3	Indonesian National Army/Republic of Indonesia Police	1	0,67%

4	Farmer	2	1,33%
5	entrepreneur	10	6,67%
6	Contract/Honorary Workers	11	7,33%
7	Student/Student	102	68,00%
8	Fisherman	0	0,00%
Total		150	100%

Source: Data Analysis Results

Table 5. Based on the work of respondents using terminal users via fast boat mode, namely civil servant 12%, State-owned enterprises/regional-owned enterprises 4%, Indonesian National Army/Republic of Indonesia Police 0.67%, Farmer 1.33%, Entrepreneurs 6.67%, Contract/Honorary Workers 7.33 %, Students/Students 68%, Fishermen 0%.

4.1.6. Reasons for choosing fashion

The choice of transportation mode on a trip where the port of Nusantara Kendari is a passenger port of fast express ships as part of the consideration of how important it is among transportation modes to travel by sea based on reasons for using fast boat modes as shown in the following table 6 below:

Table 6 Respondents' Perjans Based on Reasons for Using Fast Boat Mode Mod

Number	Variable	Total	Percentage
1	Speed/time considerations	78	52,00%
2	Safety/security considerations	12	8,00%
3	Convenience considerations	9	6,00%
4	Consideration of convenience	22	14,67%
5	Price considerations (cheap)	21	14,00%
6	Other	8	5,33%
Total		150	100%

Source: Data Analysis Results

Table 6. on the reasons for using the fast boat mode, considerations of speed/time 52%, considerations of safety/security 8%, considerations of comfort 6%, considerations of convenience 14.67%, considerations of price (cheap) 14%, Others 5.33%.

4.1.7. Respondent's Travel Purpose

The purpose of passenger travel is a measurement of how important it is to travel by sea transportation mode, as for the purpose of passenger travel as shown in Table 7 below:

Table 7 Purpose of Travel

Number.	Variable	Total	Percentage
1	Business / work	17	11,33%
2	Education	49	32,67%
3	Shopping	0	0,00%
4	Vacation / Recreation	42	28,00%
5	Other	42	28,00%
Total		150	100%

Source: Data Analysis Results

Table 8. Regarding the respondents' travel intentions, 17 people work/work or 11.33%, education 32.67%, 0%, vacation/recreation 28%, Others 28%.

4.1.8. By Trip Frequency

The frequency of user trips which is part of the consideration of how important the travel cycle through sea transportation modes through the Nusantara port is to measure the transfer of transportation modes as for the frequency of passengers through the Kendari Nusantara port as in Table 8 below:

Table 8 Frequency of trips

Number	Variable	Total	Percentage
1	the first time	30	20,00%
2	twice	46	30,67%
3	third time	16	10,67%
4	fourth time	8	5,33%
5	more than four times	50	33,33%
Total		150	100%

Source: Data Analysis Results

Table 8. on the frequency of passengers using the fast boat mode, 1 time 20%, 2 30.67%, 3 times 10.67%, 4 times 5.33%, more than 4 times 33.33%.

4.1.9. Based on Income

The income of sea transportation users is measured how important it is for travelers to use sea transportation modes based on economic considerations as for user income as shown in the following table 9 below:

Table 9 User income

Number	Variable	Total	Percentage
1	< Rp. 1.000.000,-	99	66,00%
2	Rp. 1.000.000 – Rp 1.500.000,-	10	6,67%
3	Rp. 1.500.000-Rp.2.500.000,-	5	3,33%
4	> Rp. 2.500.000,-	36	24,00%
Total		150	100%

Source: Data Analysis Results

5. Conclusion

Characteristics of users (passengers) of sea transportation at the port terminal the most dominant is the male gender by 57.33%, the age of the passengers is dominated by the age of 17-40 years 84%, the highest travel destination is Muna Regency at 38.67%, the activity or work is dominated by students at 68% , the reason for using express fast boats is the consideration of travel time by 52%, the purpose of travel for educational purposes is 32.67%, the frequency of travel using fast boats through the port of Nusantara Kendari is very frequent, which is more than 4 times by 33.33%. User income is less than Rp. 1,000,000 by 66%,

Recommendations

The determination of the characteristics of inter-island sea transportation passengers is based on the reasons for using this mode of transportation. It is hoped that further research can analyze a more comprehensive sea transportation development model in determining the performance of inter-island sea transportation services.

Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest in this research.

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