



Subsidy Review of Inland Waterways Pioneer at KMP. Lohoraung in Likupang - Biaro Tracking, North Celebes Province

Hartanto¹, Ong Argo Victoria², & Meila Permata Sari³

Abstract

The ferry port of Likupang is the path that connects the island of Celebes with Sitaro Islands District, which is managed by the Department of Transportation North Minahasa. The ferry port of Likupang still a pioneer and still get subsidies from the government each year. In the calculation of subsidies to local authorities still use the subsidy calculation based Director General of Land Transportation Regulation No. SK.218 / AP.204 / DrJD / 2018 on Income and Cost Component Counts In Operation Activity ferries transport Pilot which has been repealed and replaced by Director General of Land Transportation Regulation No. SK.5856 / AP.204 / DrJD / 2018 regarding Calculation and Transport Subsidy Funding Procedures Pioneer Ferries.

Therefore, it warrants further evaluation regarding ferry transport subsidies KMP Lohoraung in Likupang-Biaro Tracking North Celebes using the calculation of SK 5856 / AP.201 / DrJD / 2018. The research method used is observation and interview vessel operators as well as literature.

Based on the analysis of the government should provide subsidy in accordance with applicable regulations, namely Director General of Land Transportation Regulation No. SK.5856 / AP.204 / DrJD / 2018 on Procedures Calculation and Pioneer Ferries transport Subsidy Funding for Rp.3.145.418.407, - and writer suggest the making of leaflets in the form of a schedule and departure times are propagated to the service user to increase the size of the load factor so that the vessel can potentially increase the income of the ship itself.

Keywords: Harbor Ferries; Subsidies; Ferries Transport.

1. Introduction

Indonesia is an archipelagic nation, which means that countries that have many archipelago bounded by the ocean. Thus ferries transport plays a very important in the transport activity.

Ferries transport the floating bridge connecting the road cut off by the waters, and also as a means of distribution of goods from one place to another in order to boost the economy. This requires the provision of adequate transport services and smoothly, so reliable as supporting the economy in terms of giving the service the mobility of people, goods, and services.

North Celebes is one of the provinces in Indonesia which consists of 11 Districts, some districts in the form of the Islands District as the District Sangihe, Talaud Islands and the Islands District Tanggulandang Biaro Siau that ferry transport is needed in activities that support the distribution of the region's economy.

North Celebes has 13 Ferries one of its ports is ferry port of Likupang located in the village of Munte Likupang Western District of North Minahasa regency of North Celebes province. The ferry port of Likupang still a pioneering ferry ports managed by the Department of Transportation North Minahasa. Ferryboat transport used in Ferries port manifold Likupang Ro-

¹ Director of Inland Water And Ferries Transport Polytechnic of Palembang, email : hartantosatya@gmail.com

² International Researcher of International Islamic University Malaysia, email : argovictoriaupin@gmail.com

³ Alumni of Inland Water And Ferries Transport Polytechnic of Palembang, email: Meilapermata12@gmail.com



Ro ships. On Likupang harbor there are 3 (three) ships that each - each serving vessel 1 (one) tracks are:

- KMP Tarusi, this ship is managed by PT ASDP Indonesia Ferry (Persero) serving trajectory Likupang - Pananaru - Melonguane
- KMP Lohoraung, this ship is a ship owned by the government and managed by PD Sailing Sitaro. This vessel serves Likupang - Biaro Tracking - Tangulandang - Makalehi - Siau.
- KMP Watunapato. This ship is a ship owned by the government and managed by PD Talaut Islands. This vessel serves trajectory Likupang - Melonguane - Marapit - Miangas.

When operating load conditions in KMP Lohoraung not too much. This condition causes the income does not correspond to vessel operating expenses incurred. Tracks Likupang - Biaro - Tagulandang - Makalehi - Siau is the path of the pioneer. Tracks existing pioneer in umunya organized with a view to opening the isolated areas, developing economic growth more evenly and increase the resilience and national security, as well as to foster the development activities in remote areas and also help expedite the wheels of government in the area, pioneer transport is expected to encourage and promote the economy of remote areas so that the government is responsible to organize it in a way to provide subsidies to the manager of the pioneering transport services.

The calculation of the amount of subsidy must be in accordance with applicable regulations, namely the Director General of Land Transportation Regulation No. SK.5856 / AP.204 / DrJD / 2018 concerning the calculation and Transport Subsidy Funding Procedures Pioneer Ferries. But local governments still use the calculation of operating costs for the subsidy is based on the previous regulations that the Director General of Land Transportation Regulation No. SK.218 / AP.204 / DrJD / 2018 on Income and Cost Component Counts In Operation Activity Pioneer Ferries transports so there are some differences in vessel operating cost components with interviews BOK

Given the importance of policies can subsidies for development and improvement of people's welfare, it is necessary to quantify the subsidy KMP Lohoraung Likupang - Biaro Tracking. assuming another track remains.

2. Research Method

This research will use the several methods of analysis of the existing conditions and analysis of the condition of the plan.

a. Analysis of existing conditions

Analysis of conditions in this study will analyze some of the calculations are calculations based subsidies 2019 Director General of Land Transportation Regulation No. SK.218 / AP.204 / DrJD / 2018 on Income and Cost Component Counts In Ferries Pioneer Activity Equipment Operation, Analysis and Analysis loadfactor loadfactor 2018 survey results.

In 2019 the subsidy analysis author just calculate the amount of subsidy that the government has to track Likupang dikelurkan - Biaro using weights calculated the amount of subsidy on the track Likupang - Biaro.

In 2018 the author uses the analysis loadfactor annual productivity data obtained from the PD. Sitaro cruise operator as KMP Lohoraung and used in the calculation loadfactor 2018.

In the analysis of the survey results loadfactor authors used data derived from direct observation in the field is the author directly involved spaciousness and survey productivity to passengers and vehicles in ferry ports Likupang. After the author obtained the data that is then carried out data processing loadfactor calculation results of the survey

b. Condition Analysis Plan



In the analysis the authors analyze the condition of the plan large vessel operating expenses, revenues and subsidies based Director General of Land Transportation Regulation No. SK.5856 / AP.204 / DrJD / 2018 regarding Calculation and Procedures Financing Pioneer Ferries Transport Subsidy.

3. Results And Discussion

a. Existing Condition Analysis

1) Subsidy Analysis 2019

Based on the calculation Director General of Land Transportation Regulation No. SK.218 / AP.204 / DrJD / 2018 on Income and Cost Component Counts In Operation Activity ferries transport PilotSelf-Estimated price subsidies in 2019 pioneering ferries transport large subsidy that is given to KMP Lohoraung in Likupang-Biaro Tracking ofRp.2.814.289.200, -.

2) Load Factor Analysis 2018

Calculation of load factor of the ship in 2018 based on the productivity of transportation for one (1) year based on data obtained from PD Sailing Sitaro.

In determining the load factor of the ship, previously had to know SUP SUP used on ships and available on the ship, before calculating the amount that must be known SUP payload capacity of passengers and vehicles in units SUP.

a) Passenger

(1) load factorarrival (unloading) passengers on KMP Lohoraung can use the formula:

$$\begin{aligned}
 LF &= \frac{\text{SUP Terpakai}}{\text{SUP Tersedia}} \times 100\% \\
 &= \frac{3593}{15.840} \times 100\% \\
 &= \mathbf{22.68\%}
 \end{aligned}$$

(2) load factordeparture (loading) passengers on KMP Lohoraung can use the formula:

$$\begin{aligned}
 LF &= \frac{\text{SUP Terpakai}}{\text{SUP Tersedia}} \times 100\% \\
 &= \frac{3358}{15.840} \times 100\% \\
 &= \mathbf{21.20\%}
 \end{aligned}$$

So the average load factor Passenger KMP Lohoraung in Likupang-Biaro Tracking are as follows:

$$\begin{aligned}
 &= \frac{\text{Lf departure} + \text{Lf arrival}}{2} \\
 &= \frac{22,68\% + 21,20\%}{2} \\
 &= \mathbf{21.94\%}
 \end{aligned}$$

b) Vehicle

(1) load factorarrival (unloading) of vehicles in KMP Lohoraung can use the formula:

$$\begin{aligned}
 LF &= \frac{\text{SUP Terpakai}}{\text{SUP Tersedia}} \times 100\% \\
 &= \frac{18.630,2}{65.502,36} \times 100\% \\
 &= \mathbf{28.44\%}
 \end{aligned}$$

(2)load factorDepartures (Load) vehicles in KMP Lohoraung can use the formula:

$$\begin{aligned}
 LF &= \frac{\text{SUP Terpakai}}{\text{SUP Tersedia}} \times 100\% \\
 &= \frac{16.140,6}{65.502,36} \times 100\%
 \end{aligned}$$



= 24.64%

So the average load factor KMP Lohoraung in Running Vehicles on Likupang - Biaro in 2018 are as follows:

$$\frac{\text{Lf departure} + \text{Lf arrival}}{2}$$

$$\frac{28,44\% + 24,64\%}{2}$$

$$= 26.54\%$$

3) Load Factor Analysis Survey Results

Calculation of load factor at the time of the survey is based on the productivity of freight for 14 trips made on the location of the Job Training (PKL) in track Likupang - Biaro. KMP Lohoraung only operates three (3) times a week, namely on Monday, Wednesday, and Friday.

a) Passenger

Load Factor Survey Results Departures And Arrivals Passenger At KMP Lohoraung

date	Arrival (Unloading)		
	Hood. used up	Hood. Available	load factor
06/03/19	82	120	68.3%
06/05/19	43	120	35.8%
07/06/19	67	120	55.8%
10/6/19	55	120	45.8%
12/6/19	46	120	38.3%
14/6/19	50	120	41.6%
17/6/19	54	120	45%
19/6/19	41	120	34.2%
21/6/19	56	120	46.6%
24/6/19	58	120	48.3%
26/6/19	64	120	53.3%
28/6/19	46	120	38.3%
07/01/19	60	120	50%
03/07/19	59	120	49%
Total	781	1680	46.48%

date	Departures (Load)		
	Hood. used up	Hood. Available	load factor
31/5/19	55	120	45.8%
06/03/19	64	120	53.3%
06/05/19	42	120	35%



07/06/19	55	120	45.8%
10/6/19	62	120	51.6%
12/6/19	53	120	44.2%
14/6/19	75	120	62.5%
17/6/19	90	120	75%
19/6/19	74	120	61.6%
21/6/19	72	120	60%
24/6/19	60	120	50%
26/6/19	63	120	52.5%
28/6/19	66	120	55%
07/01/19	57	120	47.5%
Total	888	1680	52.85%

So the average load factor Passenger KMP Lohoraung in Likupang-Biaro Tracking at the time of the survey are as follows:

$$\begin{aligned}
 &= \frac{Lf \text{ departure} + Lf \text{ arrival}}{2} \\
 &= \frac{46,48 \% + 52,85 \%}{2} \\
 &= 49.66\%
 \end{aligned}$$

b) Vehicle

Load Factor Survey Results Departures And Arrivals Vehicle At KMP Lohoraung

date	Arrival (Unloading)		
	Hood. used up	date	Hood. used up
06/03/19	281.25	06/03/19	281.25
06/05/19	2.8	06/05/19	2.8
07/06/19	162.59	07/06/19	162.59
10/6/19	240.12	10/6/19	240.12
12/6/19	154.19	12/6/19	154.19
14/6/19	137.49	14/6/19	137.49
17/6/19	230.95	17/6/19	230.95
19/6/19	214.92	19/6/19	214.92
21/6/19	355.11	21/6/19	355.11
24/6/19	57.93	24/6/19	57.93
26/6/19	352.31	26/6/19	352.31
28/6/19	407.44	28/6/19	407.44
07/01/19	305.68	07/01/19	305.68
03/07/19	5.6	03/07/19	5.6
Total	2908.4	Total	2908.4



date	Departure (Load)		
	Hood. used up	Hood. Available	load factor
31/5/19	182.2	496.23	36.71%
06/03/19	158.18	496.23	31.87%
06/05/19	140.2	496.23	28.25%
07/06/19	11.2	496.23	2.25%
10/6/19	71.5	496.23	14.4%
12/6/19	270.47	496.23	54.5%
14/6/19	144.61	496.23	29.14%
17/6/19	174.64	496.23	35.19%
19/6/19	229.25	496.23	46.19%
21/6/19	143	496.23	28.81%
24/6/19	266.4	496.23	53.68%
26/6/19	226.88	496.23	45.72%
28/6/19	158.18	496.23	31.87%
07/01/19	220.85	496.23	44.5%
Total	2397.56	6947.22	34.51%

So an average load factor of vehicles in KMP Lohoraung in Likupang-Biaro Tracking at the time of the survey are as follows:

$$\begin{aligned}
 &= \frac{lf \text{ departure} + lf \text{ arrival}}{2} \\
 &= \frac{41,86\% + 34,51\%}{2} \\
 &= 38.18\%
 \end{aligned}$$

4) Analysis of Ship Operating Costs

Calculation of Operating Costs in question are the costs incurred in organizing ferry transport. In the calculation of vessel operating expenses, the authors use a combination of secondary data and primary data obtained by interviewing the crew KMP Lohoraung, PD employees. Cruise Sitaro and Branch Office Employees PD. Sitaro cruise at the Port Ferries Likupang and of the Office of Regional BPTD XXII North Celebes province. The data - the data KMP Lohoraung which is data in the calculation of Ship Operating Costs as follows:

Vessel Operating Cost Components At KMP Lohoraung

COMPONENT	VARIABLE VALUE
No. of days in the contract	365 days
Total ABK	18 People
salary ABK	Rp.3.051.061 / month / person
Health benefits	Rp.410.625 / month
Cost of Eating / day	Rp.60.000 / day
Equipment costs ABK	Rp.1.300.000 / org
Price Freshwater / liter	Rp 50



ABK laundry costs	Rp.5.000
No. of Employees Army	15 People
Employee Salary Army	Rp.3.051.061 / mo
Cost of Employee Army Spot	Rp.60.000
Supplies landline employees	Rp.1.300.000
Annual Docking Fees	Rp.783.763.900
Ship Insurance Costs	Rp.225.163.900
Total Engineering Parent	2 unit
Parent Power Engineering	829 HP
Fuel consumption coefficient	0.10 Liter / PK / hour
Fuel price	Rp.5.150
Total Machines Help	2 Units
Auxiliary Power Engineering	129 HP
Working Hours Auxiliary engine	12 hours
Operating days / year	330 days
Usage Coefficient of Lubricants	0.0033 Liters / PK / hour
Price Lubricants	40,000
Use of Fat	30 kg
Price Fat	Rp.74.900
distance Running	114 miles away
Total trip	264 trip
GT Ship	458 GT
Old ship hours of rest	8 hour

b. Condition Analysis Plan

1) Analysis of Ship Operating Costs and Subsidies

Operational cost calculation Ships (BOK) and Subsidies KMP Lohoraung 2019 based on analysis of the author with the adjusted calculation basis by the Director General of Land No. SK.5856 / AP.204 / DrJD / 2018 about Calculation and Transport Subsidy Funding Procedures Pioneer Ferries by Revenue (Likupang - Biaro) of Rp.875.148.912, -

Because of the scope of the study authors only for track Likupang - Biaro It can be computed weighted Ship Operating Costs for the track Likupang - Biaro as follows:

$$\begin{aligned}
 \text{BOK weights Likupang-Biaro Tracking} &= \frac{\text{Jarak Lintasan Likupang-Biaro}}{\text{Jarak Lintasan Keseluruhan}} \\
 &= \frac{43 \text{ mil}}{43 \text{ mil}} \\
 &= \frac{43 \text{ mil} + 25 \text{ mil} + 24 \text{ mil} + 22 \text{ mil}}{43 \text{ mil}} \\
 &= \frac{114 \text{ mil}}{43 \text{ mil}} \\
 &= 0.3772 \text{ } 100\% \times \\
 &= \mathbf{37.72\%}
 \end{aligned}$$



Ship Operating Costs Calculation Results KMP Lohoraung Trackslikupang – Biaro

TYPE OF COSTS	BOK Full (114 Miles)	BOK Tracks Likupang - Biaro (43 miles) 37.72%
(1)	(2)	(3)
Fixed cost		Rp.814.445.177,4
Salary costs ABK	Rp.659.029.176	Rp.248.585.805,2
Welfare costs ABK	Rp.88.695.000	Rp.33.455.754
Dinner costs ABK	Rp. 394 200 000	Rp.148.692.240
Cost of Work Equipment	Rp.23.400.000	Rp.8.826.480
Cost Freshwater ABK	Rp.65.700.000	Rp.24.782.040
Wash fees ABK	Rp.4.680.000	Rp.1.765.296
Employee Salary Costs Army	Rp.549.190.980	Rp.207.154.837,7
Cost of Employee Army Spot	Rp. 77.76 million	Rp.29.331.072
Employees Army Equipment Costs	Rp.19.500.000	Rp.7.355.400
Ships Daily Care Costs	Rp. 52,034,542.52	Rp.19.627.429,44
Ship Insurance Costs	Rp.225.163.900	Rp.84.931.823,08
Variable cost		Rp.2.453.992.236
Parent Engine Fuel Costs	Rp.4.539.992.635	Rp.1.712.485.222
Auxiliary Engine Fuel Costs	Rp. 557 735 112, -	Rp.210.377.684,2
Costs Parent Engine Oils	Rp.1.097.781.696, -	Rp.414.083.255,7
Cost Auxiliary Engine Oils	Rp. 134 861 760, -	Rp.50.869.855,87
Cost Fat	Rp. 24.717 million, -	Rp.9.323.252,4
Freshwater Passenger Fees		Rp.7.471.886,4
Premium costs ABK	Rp. 43,757,445.6, -	Rp.16.505.308,48
Ships Service Cost Break	Rp.60.456.000, -	Rp.22.804.003,2
Ships Service Cost Sandar	Rp.24.182.400, -	Rp.9.121.601,28
Cost signs	Rp.2.519.000, -	Rp.950.166,8
Docking fees	Rp. 693,763,900.2	Rp.261.687.743,2
Overhead costs		Rp.326.843.441,4-
profit Margin		Rp. 163,421,720.7, -
Operating costs		Rp.3.268.434.414, -
Pioneer Compensation Per Year		Rp. 2883550664
Compensation Pioneer / trip		Rp. 10,922.540,39, -
Total Compensation Pioneer		Rp.3.145.418.407, -
Subsidy per trip per mile		Rp. 254 012, -

Based on the analysis that has been carried out following perhitungan difference subsidy based SK.218 / AP.204 / DrJD / 2018 on Income and Cost Component Counts In Pioneer Ferries



Event Transport Operation and SK.5856 / AP.204 / DrJD / 2018 regarding Calculation and Financing procedure Pioneer Ferries transport subsidies:

The amount of subsidy is the difference KMP Lohoraung Track of Likupang – Biaro

SK.218 / AP.204 / DrJD / 2018	SK.5856 / AP.204 / DrJD / 2018	DIFFERENCE
Rp.2.814.289.200, -	Rp.3.145.418.407, -	-Rp.331.129.207

Based on the above table it can be seen that the difference in subsidy of Rp.331.129.207, - assuming another track remains.

4. Closing

a) Conclusion

Based on the results of the data analysis and discussion of the problems in the previous chapter, it can be concluded as follows:

KMP Lohoraung in Likupang-Biaro Tracking still worth getting subsidies from the government in terms of load factor of 2018 less than 60%.

The calculation of vessel operating expenses and subsidies for KMP Lohoraung on the track Likupang - Biaro not comply with the Regulation SK General of Land No. 5856 / AP.204 / DrJD / 2018 concerning the calculation and Transport Subsidy Funding Procedures Pioneer Ferries

Massive government subsidies for KMP Lohoraung smaller than the amount of subsidy the analysis that refers to the General Regulation of Land Transport Decree No. 5856 / AP.204 / DrJD / 2018 regarding Calculation and Procedure Financing Pioneer Ferries transport Subsidy

b) Suggestion

The magnitude of vessel operating expenses and subsidies by 2019 at KMP Lohoraung in Likupang-Biaro Tracking to be calculated pursuant to Rule General of Land Transportation Decree No. 5856 / AP.204 / DrJD / 2018 regarding Calculation and Procedure Transport Subsidy Funding Pioneer Ferries. The subsidy should be issued by the government for KMP Lohoraung in Likupang-Biaro Tracking should be raised to Rp.3.145.418.407, -

To increase the income of KMP Lohoraung it is necessary to manufacture such leaflets and departure time schedule distributed to service users in order to increase the magnitude of the load factor of the ship so can potentially increase the income of the ship itself.

5. References

- 1) MN Nasution, MStr.APU, 2008, *Manajemen Transportasi, Edisi 3*, Jakarta
- 2) Miro, Fidel, 2002, *Perencanaan Transportasi*, Jakarta : Erland
- 3) Act No. 17 of 2008 on the Voyage
- 4) The Regulation of the Minister of Transportation No. 18 of 2012 on Jo. Transportation Minister Decree No. 58 of 2003 on Determination Mechanism and Ferries Transportation Tariff Calculation Formulation.



- 5) The Regulation of the Minister of Transportation No. 104 of 2017 on the Implementation of Ferries transport
- 6) General of Land Transportation Regulation No. SK.5856 / AP.204.DRJD / 2018 regarding Calculation and Transport Subsidy Funding Procedures Pioneer Ferries
- 7) General of Land Transportation Regulation No. SK.5704 / AP.204.DRJD / 2018 on Stipulation of Ferries Pioneers Fiscal of 2019,
- 8) North Celebes Governor Regulation No. 22 of 2016 on concerning Stipulation of Ferries transport Economy Class On Antar Lintas districts / municipalities in North Celebes, North Celebes Regional News No. 19
- 9) North Minahasa Regency Regulation No. 1 of 2018 On Levies, North Minahasa Regency Regional Gazette No. 01 Noreg North Minahasa Regency Regulation North Celebes,