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Income Analysis of Skipjack Fishermen On Pajenekang Island, Liukang Tupabbiring Sub-District, Pangkep District

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Abstract

This research aims to find out how much costs fishermen incur in the process of catching skipjack tuna and how much income they earn on Pajenekang Island, Liukang Tupabbiring District, Pangkajene and Islands Regency. Purposive sampling and questionnaires were used as data collection tools, and the population at the research location amounted to 10 fishermen. Data analysis methods used include cost, revenue, and income analysis. The results showed that the average cost was IDR. 378,539,947, the average revenue was IDR. 1,419,840,000 per year, the net income was IDR. 1,041,300,053 for a year, so the monthly income was IDR. 86,775,004. Thus, it can be concluded that the fish catch can provide significant benefits for fishermen.

Keywords: ***Income of Skipjack Tuna Fishermen***

INTRODUCTION

Fishermen fish and harvest other marine products to earn an income. The catch obtained by fishermen also determines the level of fishermen's welfare. Addini (2016) said that fishermen are a group that depends on marine products to meet their needs. They earn income by catching fish, squid, crabs, and other aquatic products. In carrying out these activities, they apply various fishing methods.

In 2022, fishermen's catch in Liukang Tupabbiring District, Pangkep Regency was 4,839.90 tons. Then in 2023, it increased slightly to 4,858.60 tons. This figure shows an increase of 0.39% (BPS, Liukang Tupabbiring District, 2023). The large number of marine fish caught usually affects the price of fish in the local market, which also decreases.

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However, climate factors and weather conditions also greatly affect the cost of fish sold in the local market, which indicates the instability of fishermen's income. According to Nurdin & Panggabean (2017), the ideal time to catch fish must be considered based on the season and the size of the fish that have reached optimal growth. In addition, several oceanographic aspects, including salinity, pH, current, water temperature, and the use of appropriate fishing gear, are also important to consider (Talib, 2017).

Based on the survey results, the common problem faced by fishermen is the lack of capital (money) to buy modern fishing infrastructure to increase their catch. The second problem is the range of selling prices for skipjack tuna catches, which has decreased by around IDR 700,000 and IDR 1,200,000, with a catch of 50 - 60 kilograms. Furthermore, the third problem is the change in seasons, which results in a shift in the west or east season pattern and uncertain sea water conditions. Season changes occur due to the revolution of the Earth (Fitriani et al., 2020). A decrease in temperature marks the east season, shifts between the west and east seasons can occur, but fishermen often have difficulty determining the right time to go to sea. The west season is identical to big waves, so fishermen cannot catch fish at sea. Seasonal changes, both lean and fertile seasons, in Indonesian waters, especially in the Makassar Strait bordering the west coast of Pare-Pare City, have an impact on changes in catch production, productivity, and fluctuations in catch prices (Rahim, 2018), as well as regional catch income (Rahim & Hastuti, 2016). These factors influence household economy changes (Jeyarajah & Santhirasegaram, 2015; Rahim, 2018), especially for small-scale coastal fishermen. As a result, the number of sea days fluctuates, which impacts fishermen's income (Fitriani et al., 2020).

In theory, the income received by fishermen is the result of a business that cannot be separated from many factors that influence it. Thus, several elements such as capital, weather conditions, season, effectiveness of fishing gear, fishing location, fish price, and the amount of catch play a role in determining fishermen's income (Apidar, 2019). Income can be defined as compensation for labor, investment, and the natural outcome of a particular activity, after deducting the costs incurred from the value of production (Rahim et al., 2018).

Based on this background, the study's objectives are to find out how much it costs to catch skipjack tuna and how much income is earned on Pajenekang Island, Liukang Tupabbiring District, Pangkajene, and Kepulauan Regency.

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LITERATURE REVIEW

Fisherman

In Indonesian, "fisherman" means fishermen or fishers. The term includes individuals whose livelihoods depend on fisheries and marine resources, as well as their way of life as a community (Andemora et. al, 2021). Fishermen are a handful of people who depend entirely on marine products, including capture or cultivation activities (Rahayu et.al, 2017). They are economically, socially, and politically marginalized (Sondakh et al., 2017).

Costs

Fishermen's costs are all the expenses fishermen incur in fishing and other related activities. These costs can be divided into two main categories: fixed and variable. Cost is a form of sacrifice of economic resources expressed in units of money, where it has occurred or may occur in a company's efforts to obtain goods or services (Purwanti, 2010). The opinion expressed by Nurdin, (2010) says that production costs are defined as all production factors sacrificed in the production process.

Fishermen's Revenue

Revenue is one of the leading indicators in economic and business analysis. Revenue is one of the leading indicators in economic and business analysis. According to Mankiw, (2020) the explanation, total revenue is the price (P) multiplied by the number of products sold (Q). In other words, to calculate total revenue, we multiply the selling price of each product by the number of products sold. Revenue is calculated by multiplying the units sold by the cost per unit. So, revenue is the amount of money the company receives from the sale of products produced (Lisabeth et al., 2021).

Income

Income is the inflow of economic resources a business receives from its main activities, such as selling products, providing services, or conducting other business activities. An opinion that Farisa et. al, (2017) states that the income obtained by fishermen's families is the total of all income received by fishermen and their family members. This income includes the results of fishing and other activities. According to the opinion, variations in the amount of income fishermen obtain on each trip can increase their income. On the other hand, fishermen's income means the money each fishing household receives after fishing in a specific period.

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RESEARCH METHODS

In this study, the informants chosen were aware of the problem and had data. Determination of informants using the purposive sampling technique. In this study, the informants to be taken amounted to 10 fishing boat owners on Pajenekang Island, Mattiro Deceng Village, Pangkep Regency. Types of research data based on their nature are divided into qualitative and quantitative data. The data sources used in this study were two types of data sources: primary and secondary. The data collection technique in this study uses the collection method of observation, interviews, and documentation. The data analysis techniques used in this study are as follows:

Cost Analysis

The costs referred to in this study are all the costs incurred by fishermen to conduct fishing. Cost analysis was used to determine the total costs incurred by fishermen (Soekartawi, 2002).

$$TC = VC + FC$$

Where:
TC = Total Cost (Total Cost)
VC = Variable Cost (Variable Cost)
FC = Fixed Cost (Fixed Cost)

Revenue

Revenue is the total type of fish caught with all fishing gear multiplied by the price. The equation is used to find out the total revenue obtained by fishermen using fishing gear (Soekartawi, 2002).

$$TR = P.Q$$

Where:
TR = Total Revenue (IDR)
P = Selling Price (IDR/kg)
Q = Quantity of Fish Sold (kg)

Income

Fishermen's income is the result received by the entire fishing community after carrying out fishing activities at a specific time. The net income can be calculated using the formula (Nuraini, 2016).

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$$\pi = TR - TC$$

Where:
π= Fisherman's Income (IDR)
TR = Total Revenue (IDR)
TC = Total Cost (IDR)

RESULTS AND DISCUSSION

Cost Analysis

Fishermen's cost analysis involves identifying and calculating two main types of costs incurred in fishing activities: fixed and variable.

Depreciation Costs

Depreciation reduces the value or price of a tool or fixed asset over time due to usage, age, or other technical factors. Table 1 shows the depreciation costs incurred by fishermen.

Table 1. Average Depreciation Cost of Skipjack Fishermen

No	Fixed Costs	Average (IDR)
1	Boat	16,956,863
2	Engine	3,272,727
3	Net	4,337,500
4	Anchor Rope	15.000
5	Anchor	80,000
6	Jergen	66,857
7	Generator	52,000
8	Tent	87,000
	Total	24,867,947

Source: Primary Data After Processing, 2025

Table 1 above explains that the average depreciation cost of tools, such as boat purchases, is IDR. 16,956,863, engines IDR. 3,272,727, nets IDR. 4,337,500, anchor ropes IDR. 15,000, anchors IDR. 80,000, Jerry cans IDR. 66,857, generators IDR. 52,000

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and tents IDR. 87,000. So it can be concluded that the average depreciation cost of equipment incurred by skipjack fishermen is IDR. 24,867,947 per year. This follows the opinion that expenditure in fishing operations is influenced by the average value of inputs spent by fishers each time they go fishing. This includes costs for production equipment, labor, and tool depreciation, which are calculated after each input's price per unit. Different from the results of previous research, the fixed costs incurred by fishermen were lower at IDR. 323,889 per month in Girisubo District, Gunungkidul Regency (Adisti Regita Ramadani, Endang Siti Rahayu, 2024). Meanwhile, the results of prior research Soga et al., (2024) stated that fishermen's fixed costs were also lower by 20,546,667 in Malambe Village, Ponelo Kepulauan District, North Gorontalo Regency.

Variable Costs

Costs that change are called variable costs. These costs depend on how often fishing activities are carried out and how much yield is obtained. Table 2 shows the variable costs incurred by skipjack fishermen.

Table 2. Average Variable Costs of Skipjack Tuna Fishermen

No	Variable Cost	Average (IDR)
1	Solar	3,680,000
2	Gasoline	1,500,000
3	Oil	60,000
4	Consumption	73,992,000
5	Boat Repair	5,700,000
6	Labor	258,456,000
	Total	353,672,000

Source: Primary Data After Processing, 2025

Table 2 explains that the average variable costs, such as diesel purchases, are in IDR. 3,680,000, gasoline of IDR. 1,500,000, oil purchases of IDR. 60,000, consumption of IDR. 73,992,000, boat maintenance of IDR. 5,700,000, and the Labor of IDR. 258,456,000. So it can be concluded that skipjack fishermen respondents must incur the average variable cost of IDR. 353,672,000. Different from the results of previous studies, the variable cost is higher than the variable cost incurred by fishermen of Rp. 4,853,889 in Girisubo District, Gunungkidul Regency (Adisti Regita Ramadani, Endang Siti Rahayu,

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2024). Meanwhile, the results of previous research explained that traditional fishermen's variable costs in Malambe Village, Ponelo Kepulauan District, North Gorontalo Regency were IDR 4,410,000 (purchase of fuel, cigarettes, and ice cubes).

Revenue

Fishermen's revenue is the product of the production obtained and the selling price of skipjack. The average revenue of skipjack fishermen can be seen in Table 3.

Table 3. Average Income of Skipjack Tuna Fishermen

Description	Total (IDR/kg)	Value (IDR)
Catch Results	167,040	
Price (Rp)		8,500
Total Revenue (TR)		1,419,840,000

Source: Primary Data After Processing, 2025

Table 3 above shows the average income of respondent fishermen for skipjack tuna with a production volume of 167,040 per kilogram, the selling price is IDR 8,500 per kilogram. So, the income is IDR 1,419,840,000 per year, or IDR 118,320,000 per month, which is quite large. Looking at the comparison of the results of previous research Hendrik, (2011) explains that fishermen's income is relatively low, ranging from IDR 1,100,000-1,500,000, with an average harvest of IDR 1,719,000 per month. Meanwhile, the results of previous research are presented. Meanwhile, the results of prior research Soga et al., (2024) explain that the income of respondent fishermen in a month is IDR 380,140,000, with an average of IDR 7,919,58 per fisherman. The results of previous observations found that fishermen's income in Lamuru Village, Tellu Siattinge Subdistrict, Bone Regency was greater than IDR. 30,372,680,000 per year (Risna et al., 2024).

Income

The income received by skipjack fishermen is the difference between the amount of money earned from the sale of skipjack and the costs incurred during the fishing process. The income of skipjack fishermen can be seen in Table 4.

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Table 4. Average Income of Skipjack Tuna Fishermen

Description	Value (IDR)
Total Revenue	1,419,840,000
Total Cost	378,539,947
Income	1,041,300,053

Source: Primary Data After Processing, 2025

` Table 4 explains the income of skipjack fishermen respondents obtained from subtracting the income from the total cost of the fishing business. Revenue is known to be Rp. 1,041,300,053 per year, then reduced by skipjack fishing costs of Rp. 378,539,947 per year. So that fishermen's income from the skipjack catch per month averages Rp. 86,775,004 or a year of Rp. 1,041,300,053, so it can be concluded that fishermen's income from the skipjack catch can be very profitable.

Previous research on fishermen's income is relatively low, with income ranging from IDR. 1,000,000 to IDR 2,000,000, with an average income of IDR. 1,582,833 per month (Hendrik, 2011). This is different from what was found by the research results by Abdullah et al. (2015) with a low household income of IDR. 52,948,092/year (Abdullah, 2015). Previous research shows fishermen's income is quite low in Lumpur Village, Gresik Regency, with an average net income of IDR. 351,729 in one fishing boat owner can be considered relatively low (Faruk et al., 2019). Previous research shows that fishermen's income is relatively low, with an average of IDR. 4,571,630 per month or around IDR. 46,700,478 per year (Latief et al., 2021). In addition, the results of other studies reveal that the income of fishermen's households is at IDR. 2,405,714 per month, which is categorized in the moderate income group (Erlansyah, 2022). The results of previous observations found that fishermen's income in Lamuru Village, Tellu Siattinge Subdistrict, Bone Regency was greater than IDR. 26,766,239,332 or with an average of IDR. 2,676,623,933/unit (Risna et al., 2024). In addition, previous research findings show that net fishermen's income is IDR. 287,130,000 with an average of IDR. 5,981,875 per fisherman is relatively low in Malambe Village, Ponelo Islands Sub-district, North Gorontalo Regency (Soga et al., 2024).

CONCLUSION

The average cost was IDR. 378,539,947, the average revenue was IDR. 1,419,840,000 per year, the net income was IDR. 1,041,300,053 for a year, so the monthly income was IDR. 86,775,004. This figure shows that skipjack fishing is very

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profitable. If cost management is done more efficiently, the profit earned will also be greater for one year.

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