Production Cost Analysis of Small-Scale Fisheries at Batukaras Pangandaran, Indonesia

Nora Akbarsyah[1], Aulia Andhikawati[2], Sheila Zallesa[3]

[1,2] Perikanan K. Pangandaran, Faculty of Fisheries and Marine Sciences, Universitas Padjadjaran [3]Marine Sciences, Faculty of Fisheries and Marine Sciences, Universitas Padjadjaran

ABSTRACT

This research was conducted in June 2022, at TPI Batukaras, Cijulang, Pangandaran. The purpose of this study was to determine the feasibility of the fishermen's business in TPI Batukaras. The method used is a survey method. The composition of catches at TPI Batu Karas with a total of 50 vessels in 2020 reached 209,823.41 kg. The highest catch was layur fish with a total catch of 43,526.95 kg. While the lowest catch was baronang fish with a total catch of only 2.70 kg. The estimated revenue for each vessel reaches Rp.206,079,164. For initial capital and fishing effort using arad nets and mini purse seines, it is still considered profitable (feasible) because it has been analyzed using Revenue Cost Ratio, Payback Period, and Return of Investment with a payback period of 1.04 years where the economic period of fishing gear is 1 year.

Keywords: *Batukaras, Fishermen, Small Scale, Business, Indonesia*

1. Introduction

Batukaras is one of the beach in Pangandaran which holds a lot of potential and diversity of marine and fishery resources. This potential can be used as the main capital for regional development to encourage economic growth and increase community welfare. Based on data from TPI Batukaras during 2020, it is known that arad nets and purse seine mini are the most common fishing gear, which are operated with 50 vessels. Based on the 2020 TPI Batukaras annual report, the income earned by fishermen is Rp. Rp.206,079,164 per year. The number of catches also has a big influence on the income of fishermen, on the income of current fishermen. Based on this description, it is necessary to conduct research on productivity and business feasibility in TPI Batukaras whether it is feasible or not feasible to continue.

2. Research Methods

Location and Time of Data

Collection Data collection were carried out by going directly to the field, by interviewing fishermen, and the management of the Batukaras Pangandaran Fish Auction Place (TPI) located in the Pangandaran Regency. Time of data collection with interviews conducted in June 2022.

Analysis of Productivity and Production Costs

Total Cost Total Cost

(Total Cost) is the total cost incurred during the production process, both fixed and variable costs.

Investment

Costs Investment costs are initial costs incurred when running a business, namely in the first year of business, where the amount is relatively large and cannot be exhausted in one production period.

Production

Costs Fixed
Costs Fixed Costs are fixed costs that do not change due to the influence of the amount of production, these costs consist of taxes and equipment depreciation costs, and others, (Darmawan, MR, & Rahim, MA, 2019) .

Variable Costs
Variable costs are costs that vary according to the amount of production. These costs consist of the cost of raw materials, labor and others. This fee is in the form of cash which is actually paid, in Darmawan, MR, & Rahim, MA (2019).

Depreciation Cost
According to Hery (2014: 138), "Depreciation is a periodic and systematic allocation of the cost of assets during different periods that benefit from the use of the assets concerned". According to Syahyunan (2013: 232) in order to be able to calculate the exact amount of depreciation that must be allocated in a certain period, there are 3 factors that must be considered, namely:

- The acquisition price is all costs related to the procurement of the activity
- Residual value or residual value of a fixed asset which is depreciated is an estimate of the value of assets
- . The useful life or economic life is the period of use of fixed assets which is expected by the company to be influenced by the way of maintenance, other policies determined by the management.

The formula for depreciation expense is:

Initial cost - Residual price

Total Revenue (TR)
Total Revenue (TR) is the merchant's revenue from the sale, Total Revenue (TR) is the result of the number of outputs multiplied by the selling price of the product's output.

Analysis

Cost
According to Suratiyah (2015) to calculate the total cost (*Total Cost)* is obtained by adding up the fixed costs (*Fixed Cost)* and variable costs (*Variable Cost)* with the formula:

$$TC = FC + VC$$

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

Profit
According to Suratiyah (2015) income is the difference between revenue (TR) and total cost (TC) and is expressed by the formula:

$$I = TR - TC$$

Where:
I = *Income* (income)
TR = *Total Revenue* (Total Revenue)
TC =*Total Cost* (Total Cost)

Profit itself can be interpreted if the income is worth greater than the initial capital issued.

Benefit Cost Ratio

B/C is the value or benefit obtained from each unit of the cost incurred. Where B/C is obtained by dividing the total revenue by the total expenditure. Kadariah and Gray (1987), stated that to determine the level of efficiency of a business, parameters can be used, namely by measuring the amount of income divided by the amount of expenditure, where:

B/C = Total Revenue: Total Cost

With the criteria:
B/C > 1: Efficient
B/ C = 1: Break
B/C < 1: Inefficient

Payback Period

Payback period is the period of return on investment that will be paid through profits earned by a business. The faster the payback time, the better to work on it. The formula used according to Pasaribu (2005) is

PP = I/Bt

Where:
I = Total Investment
Bt = Net benefit on average each year

Return of Investment

Return Of Investment (ROI) is the ratio of profit to investment. ROI is useful for showing the ability of an investment to generate profit. ROI *(Return of Investment)* is to determine the rate of return on investment from the benefits (income) received by the owner, calculated by the formula;

ROI = Benefit/Investment x 100%

Profit is obtained from the difference between total revenue and investment. The higher the ROI percentage value, the higher the success of the investment invested.

Investment Costs

costs are the initial costs incurred when running a business, namely in the first year of business, where the amount is relatively large and cannot be exhausted in one production period.

3. DISCUSSION

Fixed Cost

Fixed costs are costs that do not affect the increase or decrease of a business. Fixed costs are included in depreciation costs such as (buildings, machinery, vehicles, and other fixed assets), salaries and wages that are paid regularly, rental costs, insurance costs, taxes, and other costs whose amount is not affected by sales volume. In every business activity there is a fixed cost.

Variable Cost

Variable costs are costs whose amount varies according to the size of the amount of production. Variable costs are costs that change in proportion to business activities. Variable cost is the sum of the marginal costs of all units produced. It can also be considered a normal cost. Fixed costs and variable costs make up the two components of total costs. Direct costs, however, are costs that can be easily associated with a particular cost object. However, not all variable costs are direct costs. For example, variable manufacturing overhead costs are variable costs which are indirect costs, not being an indirect cost. Variable costs are sometimes called unit-level costs because they vary with

the number of units produced. Variable costs include several things in production activities such as (raw materials, daily labor wages, costs for meeting the needs of production equipment and others).

Depreciation and Maintenance Costs

According to Setiadi (2020) depreciation is also known as depreciation, namely the allocation of fixed assets due to a decrease in the value of fixed assets. While maintenance costs are costs that include all activities involved in maintaining system equipment in the work rules for that it must be kept to a minimum so that it is more adequate. Based on the results of the study, the cost of depreciation and maintenance costs incurred by fishermen is Rp. 20,103,750.

Net Income

In doing a business there will definitely be income, either net income or gross income. Net income or also called (*Net Income*) is income which is often referred to as net income namely the income of a business minus the cost of production (HPP), expenses, depreciation, amortization, interest, and taxes. Likewise with the fishermen who are at the Batukaras TPI who get net and gross income. After the total income is reduced by the total expenditure, the total revenue at TPI Batukaras in 2020 is Rp. 164,863,331, while the total net revenue at TPI Batukaras is Rp. 58,491,581.

Revenue Cost of Ratio

If the R/C value is more than 1, it can be concluded that the business is profitable and feasible, otherwise if it is less than one, the business is not feasible, and if the R/C value is 1, the business is break-even, which means it is not. profit and no loss. Based on the R/C value obtained, it can be concluded that the business at TPI Batu Karas is profitable, so it is feasible to operate.

Payback Period* (PP) and *Return of Investment

From the calculation of the *payback period* , the result is 1.04, which means that the return on capital for fishermen's businesses at TPI Batu Karas is relatively fast because the value of the results is less than 3 years. So it can be interpreted that the fishing business at TPI Batu Karas is able to return the value of the initial capital or investment that has been issued for Rp. 60,940,000 in 1 year and 4 days. From the calculation of return on investment, the return on investment can be 96%, which means that the return on investment in fishing business at TPI Batukaras in 1 year is 96%.

Investment

Investment / capital costs are usually incurred when starting a business. Investment costs are the initial costs that must be incurred by business actors to purchase the main supporting equipment in the fishing business. The equipment invested is in physical form, has a depreciation value, and also has a useful life or can be used for a long period of time so it does not always make a repurchase. The investment invested in the capture fisheries business of TPI Batukaras is Rp. 60,940,000.00 consisting of boats, engines, fishing gear, generators, batteries, LED lights, anchors, and mines. The biggest investment in this fishing business is machinery.

4. CONCLUSIONS

Based on the results of research on business feasibility analysis at TPI Batukaras, it has an R/C value of 1.93. The return on investment in fishing business at TPI Batukaras in 1 year is 96%. And the total investment cost that has been spent is Rp . 60,940,000. The results of this data processing show that the fisheries business at TPI Batukaras in 2020 can be said to be feasible to continue.

5. REFERENCES

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