

ANALYSIS OF SALTED FISH PROCESSING BUSINESS IN HAJORAN VILLAGE, CENTRAL TAPANULI REGENCY, NORTH SUMATERA

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ABSTRACT

The salted fish processing industry was one of the small and medium-sized business sectors that played an important role in supporting the economy of coastal communities. Salted fish products not only have a relatively high economic value, but also increase the durability of marine catches through traditional preservation processes. However, amidst fairly broad market opportunities, salted fish processing business actors often faced various challenges, especially regarding production cost efficiency, raw material price transmission, and income instability. This study analysed production costs, revenues, and profits from salted fish processing. The method used in this study was the survey method. Based on the results of the research that had been conducted, it was found that the average cost incurred by salted fish entrepreneurs was IDR 47,702,088 per month, with revenues of IDR 56,612,500 per month. The average profit was approximately IDR 8,910,412 per month.

Keywords: Business Analysis, Salted Fish, Business Profit, Business Capital

1. INTRODUCTION

Central Tapanuli is one of the regencies in North Sumatra, which has a sea area of 4,000 km²^[1]. Fishery production in Central Tapanuli has the potential to grow, where in 2021 it increased by 55% or around 64,428 tons compared to 2020, which was 41,436 tons².

Fish is the most crucial commodity for the fisheries subsector. Fish is also one-third of the amount of animal protein consumed by Indonesians. Humans need fish protein, because the protein in fish is not only easy to digest but also has an amino acid pattern contained in the human body³.

Fish is a food ingredient more susceptible to spoilage than other foods. This spoilage is generally caused by chemical processes (oxidation), microbiological processes, especially bacteria, and biochemical processes (enzymes). These processes occur together after the fish dies.

Fish is also one of the foods that is very easily decomposed. Therefore, the processing of fishery products for preservation requires good quality fresh water for fish until it reaches the hands of consumers. So it is not uncommon for massive losses to occur when production is abundant.

Processing aims to extend the shelf life and processed fishery products. The fish processing process can be carried out through various processes, one of which is by salting and drying fish simply. The orientation of this study is to dissect the financial aspects related to income, production costs, profits, and efficiency levels of the salted fish processing business, which focuses on salted fish business actors in Hajoran Village. The existence of fisheries businesses in Central Tapanuli Regency is supported by its location on the

west coast of Sumatra, so it has great potential in the fisheries sector⁴.

In recent years, it has been known that salted fish processing businesses have experienced different selling price fluctuations, the differences are caused by the availability of salted fish raw materials, and some of those who have these businesses have not carried out economic calculations properly and do not even match the costs incurred. In general, most salted fish processing businesses aim to obtain profit or gain⁵.

With the salted fish processing business carried out by fishermen in Hajoran Village, Pandan District, this business can contribute to the income of fishermen's households in meeting their needs. Fishermen are not a group that surrenders to circumstances, they try and think hard to utilize existing resources to survive in life⁶. This study aims to analyse the production costs, revenues, and profits from the salted fish processing business.

2. RESEARCH METHOD

Time and Place

This study was conducted in July 2024 in Hajoran Village, Central Tapanuli Regency, North Sumatra. The location was chosen intentionally (purposively) considering that most of the population depends on fisheries, especially the salted fish processing business.

Method

This study uses a quantitative approach, where research data is obtained through a survey of respondents with the help of a questionnaire. Respondents in the study were obtained using the census method, with a total of 34 salted fish processing households. Census is a sampling technique where all population members are used as the samples⁷.

Procedures

The data in this study were analyzed using a quantitative descriptive approach. This approach is a statistical analysis used to

describe, summarize, and analyze quantitative data⁸. We also use Microsoft Excel to process research data. There are several formulas used in business analysis calculations, namely⁹:

The production cost formula is as follows: $TC = FC + VC$

Where TC is the total cost in processing salted fish, FC is the fixed costs in salted fish processing, and VC is the variable costs of salted fish processing. Next, the acceptance formula is as follows: $TR = Q \times P$

Where TR is Total revenue in the salted fish processing business, Q is the amount of salted fish production, and P is the price of salted fish. Next, the profit formula is as follows: $I = TR - TC$.

Where I is income from the salted fish processing business, TR is total receipts, and TC is total cost.

3. RESULT AND DISCUSSION

Salted Fish Processing Production Costs

Production costs, including all direct and indirect costs, are attached to the product and can be identified with raw material processing activities¹⁰. Production cost components form the total costs incurred to produce a product or service. Production costs in research are divided into fixed and variable costs.

Fixed Costs in Salted Fish Processing Business

Fixed costs and variable costs influence production costs. Fixed costs are total costs not limited to changes occurring in each production¹¹. Business actors require fixed costs for labour and damaged equipment. The following is the average fixed cost.

Based on Table 1, it is known that the average most considerable fixed cost in one month in the salted fish processing business is labor costs of IDR 5,361,470 which is divided into three, namely splitting and washing of IDR 1,384,242 (25.82%), soaking and drying IDR 3,521,765 (65.69%), and packaging IDR 339,434

(6.33%). The workforce in the fish processing business consists of family workers and non-family workers. Non-family workers are usually relatives, neighbours, or from salted fish processing businesses with experience in the production process. Family labour wages are determined based on the wages of non-

family workers; the wages given are in the form of daily wages. The wage level of workers is around IDR 50,000 to IDR 65,000 per day. Generally, fishing households in coastal areas optimize the role of family members to participate in earning a living. This action is a form of utilizing human capital owned by fishing families¹².

Table 1. Average fixed costs of the salted fish processing business

Types of Fixed Costs		Average (IDR/ Month)	Percentage (%)
Labor	Splitting and Washing	1.384.242	25,82
	Soaking and Drying	3.521.765	65,69
	Packaging	339.434	6,33
Equipment Depreciation		116.029	2,16
Total		5.361.470	100

Fixed costs other than labor include equipment depreciation. The amount of monthly equipment depreciation costs is IDR 116,029 (2.16%). Salted fish entrepreneurs need equipment to produce salted fish. The equipment used is elementary, which has a long service life. The equipment is a knife, bucket, soaking tub, and a gutter/place for drying fish.

Variable Costs in Salted Fish Processing

Variable costs are costs incurred by business actors whose value can change with the number of fish to be produced. Variable costs consist of the cost of providing fish, salt, packaging costs, and transportation costs. The following is about the variable costs of salted fish processing business.

Table 2. Average variable costs of salted fish processing

Types of variable costs		Average (IDR/Month)	Percentage (%)
Fish		36.681.324	86,65
Coarse salt		2.787.500	6,58
Packaging		642.206	1,52
Transportation		2.220.588	5,25
Total		42.331.618	100,00

Based on Table 2, it can be seen that the variable costs incurred per month average IDR 42,331,618. The most significant variable cost incurred by business actors is for providing the primary raw material, namely fish, with IDR 36.681.324 per month (86.65%). The types of fish used as the main raw material in salted fish processing are diverse and have varying prices. Data related to the types of fish and prices can be seen in Table 3.

Fluctuations in the price of the main raw material, namely fish, are greatly influenced by the conditions of the fishing season. During the storm season or extreme

weather, most fishermen choose not to go to sea for safety, so that the supply of fish from the sea experiences a significant decline. This condition causes a shortage of fish in the market and directly impacts the increase in fish prices, including the types of fish commonly used as raw materials in salted fish processing businesses. This price increase can increase production costs and reduce the profits of small business actors, especially home industries that depend on local supplies. Conversely, fishing activities return to normal when entering the calm season or friendly weather. The supply of fish in the market also increases and causing

fish prices to become more stable and affordable. Weather conditions and fishing seasons are external factors that greatly determine the sustainability and efficiency of fisheries businesses, especially in coastal areas¹³.

Table 3. Types and prices of fish

Types of Fish	Fish Price (IDR/Kg)
Anchovy	18.000
Small Shrimp	6.000
Indian Mackerel	8.000
Small Indian Mackerel	15.000
Maco Fish	5.000
Barracuda	18.000
Croaker	18.000
Shrimp Scad	11.000
Rabbitfish	9.000
Skipjack Tuna	6.000
Sardine	13.000

In addition to fish as the main ingredient, salt is a vital raw material in salted fish processing. Salt functions as a natural preservative that can extend the shelf life of fish while providing a distinctive taste to the final product. In practice, the ratio between salt and fish is around 1:3, meaning that every 1 part salt is used for three parts fish weight. This proportion is considered ideal to ensure that the salting process runs optimally, both in terms of flavour absorption and in preventing the growth of microorganisms that can damage fish. The cost incurred for purchasing salt each month reaches IDR 2,787,500 or around 6.58% of

the total variable costs. The type of salt used in this salted fish processing business is coarse salt at IDR 2,700 per kg. Salt is the second largest variable in the cost structure after the main raw material, fish.

Packaging costs are the lowest costs incurred by business actors. The average cost of salted fish packaging is around IDR 642,206 (1.52%). The types of packaging used by business actors are plastic, cardboard, and bamboo baskets. The packaging is chosen because it is practical and can maintain the quality of salted fish so that it remains dry and undamaged until it reaches consumers.

The average transportation cost per month is IDR 2,220,588 (5.25%). The average monthly transportation cost incurred by business actors is used for transportation costs in purchasing raw fish materials and shipping costs outside the city. The types of transportation used are pedicabs, pick-ups, public transportation and motorbikes.

Total Costs in Salted Fish Processing Business

Based on Table 4, it can be seen that the average cost incurred by business actors is IDR 47,702,088 per month. The largest cost incurred by business actors is the variable cost of IDR 42,331,618 per month (88.74%). The average fixed cost incurred by business actors is IDR 5,370,470 per month (11.26%). The large variable cost incurred is due to the increase in the price of fresh fish as the main raw material and the decreasing availability of fresh fish in the traditional Sibolga market.

Table 4. Average total costs of the salted fish business in Hajoran Village

Total Cost Type	Average (IDR/ Month)	Percentage (%)
Fixed Cost	5.370.470	11,26
Variable Costs	42.331.618	88,74
Total	47.702.088	100,00

Income from Salted Fish Processing Business

Revenue in the salted fish business is the multiplication of the salted fish

production by the selling price of salted fish. The following data on revenue from the salted fish processing business

Table 5. Average income from sales of salted fish (month)

Types of Fish	Kg	Selling Price	Total
Salted Anchovy	300	55.000	16.500.000
Salted Mini Shrimp	500	45.000	22.500.000
Salted Indian Mackerel	150	20.000	3.000.000
Salted Small Indian Mackerel	250	45.000	11.250.000
Salted Maco Fish	150	20.000	3.000.000
Salted Barracuda	3.500	52.000	182.000.000
Salted Croaker	2.000	70.000	140.000.000
Salted Shrimp Scad	3.000	52.000	156.000.000
Salted Rabbitfish	2.200	28.000	61.600.000
Skipjack Tuna	4.000	18.000	72.000.000
Sardine	500	15.000	7.500.000
Sea Cat Fish	200	20.000	4.000.000
Total	16.750		679.350.000
Average	1.396		56.612.500

Based on Table 5, it is known that the amount of income from 34 salted fish entrepreneurs is IDR 679,350,000 per month, with a production volume of 16,750 kg/month. Meanwhile, their average income is IDR 56,612,500 per month with an average production volume of 1,396 kg/month.

Benefits of Salted Fish Processing Business

The profit from the salted fish processing business in Hajoran Village is the difference between revenue and the difference in total costs. In theory, profit is influenced by the costs incurred by the business. The smaller the costs sacrificed, the greater the profit obtained. The greater the costs incurred, the smaller the profit obtained by the company¹⁴ (Table 6).

Table 6 shows that the average income per business actor in one month reaches IDR56,612,500, while the average total cost incurred is IDR47,702,088. Thus, the average profit of salted fish processing business actors in one month of production is IDR8,910,412. It should be noted that the amount of profit received by each business actor can vary, depending on the difference between the total income and the total costs they incur. The success of a business is generally measured by the amount of profit generated in the management process. Based

on research conducted in Riau Province, the average profit from salted fish processing businesses was recorded at only IDR1,118,378 per month¹⁵.

Table 6. Average profit in salted fish processing business (IDR/Month)

Description	Average
Reception	56.612.500
Total Cost	47.702.088
Total	8.910.412

This figure is much lower than the profit from business actors in Hajoran Village, Pandan District, which reached IDR8,910,412 monthly. The fishery processing business run by fishermen in Hajoran even contributes 68.80% of their total income¹⁶.

4. CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the average total cost incurred by salted fish processing business actors each month reaches IDR 47,702,088. Meanwhile, the average income obtained reaches IDR 56,612,500 per month, resulting in a net profit of IDR 8,910,412 monthly. This finding shows that although the salted fish processing business is still carried out traditionally, this sector can still profit its actors significantly. This also confirms that

the salted fish processing business has promising economic prospects, especially in supporting the economic resilience of coastal communities. However, to increase

efficiency and income stability, a more optimal production cost management strategy and support for the stability of raw material prices are needed.

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