



Research Paper

Analysis of the Profitability of Oyster Processing Business (Case Study at CV Natural Aceh Food)

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Abstract

Oysters are organisms in the phylum mollusca in the class bivalvia or a group of animals that have a pair of shells. The difference between oysters when compared to clams is in the shell. The shape of the two sides of the oyster shell is different, because the shape is like a lid and a bowl, while the shape of the two sides of the clam shell is relatively the same. Oysters are animals in the shellfish group that live attached to hard substrates such as wood, mango roots, rocks, and leftover building materials. Oysters are soft animals that live in salt waters both in the sea and in estuaries or rivers. As the co-advisor. The study aims to analyze the feasibility and profitability of the oyster cracker business at CV Natural Aceh Food, a micro, small, and medium enterprise (MSME) engaged in oyster processing. Using a quantitative case study method, data were collected through interviews, direct observation, and literature review. The results show a net income of IDR 1,085,362.22 per production cycle, with a profitability rate of 51.32% and an R/C ratio of 1.51. These figures indicate that the business is efficient, profitable, and feasible to develop as a contributor to the local economy.

Keywords: Profitability; Feasibility; Oyster crackers.

1. Introduction

Oysters are organisms in the phylum mollusca in the bivalve class or a group of animals that have cupped shells. The difference between oysters and shellfish is the shell. The shape of the two oyster shell shells is different, because they are shaped like a lid and a bowl, while the shape of the two oyster shell shells is relatively the same. Oysters are animals in the group of shellfish that live attached to hard substrates such as wood, mangrove roots, rocks, leftover building materials. Oysters are soft animals that live in waters containing salt both in the sea and in mate-



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rials. Oysters are soft animals that live in waters containing salt both in the sea and in estuaries or rivers. Oyster shells differ between the top and bottom sides, so the shell that is shaped like a lid is called the top shell because it is located at the top and the part of the shell that is shaped like a bowl is called the bottom shell, because the part that is shaped like a bowl is what sticks to the substrate [1].

Aceh has the potential for diverse marine catches. Aceh's sea waters are located between the Strait of Malacca (east coast) and the Indian Ocean (west coast), placing this area directly opposite countries in Southeast Asia and South Asia. The Aceh Sea is a large asset that acts as a source of natural wealth, energy source, food source, sea transportation medium between islands, trade area and security defense area. It is acknowledged that the Acehnese people's attention to the potential of their marine areas is growing. This trend is influenced by dynamic development developments which result in increasingly limited resource potential on land. Another influence is national maritime development, making it easier to utilize and manage marine resources [2].

The oyster cultivation system uses a collector system, this collector system uses used tires as the main medium developed by village officials and research institutions, which are usually harvested within a period of three to four months. Apart from harvesting oysters using used tires, generally they also collect oysters from rocks on the shores of ponds and beaches. Oyster seekers in this area will only take oysters when the water recedes, usually they look for oysters in the morning from 07.00 WIB to 11.00 WIB. They can look for oysters twice a day, namely in the morning and in the afternoon or even not at all if the sea water is high [3].

CV Natural Aceh Food is a company that operates in the oyster processing sector, founded in 2018. This company was founded by Mr. Zainal Abidin Suarja, which originally started from a group of women oyster farmers in Alue Naga, Banda Aceh who used oysters as their source of life. Along with the increasing demand for processed oyster products, CV Natural Aceh Food started a small-scale oyster processing business, such as producing oyster crackers under the brand name Kiboy Food. Until now, this processed oyster product has become one of the superior products typical of Alue Naga, known as Banda Aceh as an oyster producing region in Aceh. One of the main objectives of the company's operating activities is to obtain maximum income.

The oyster processing business at CV Natural Aceh runs its business using its own capital to make a profit, but what happens is that the use of capital is not efficient, because oyster crackers are a product that is not yet widely known by the public. Oyster crackers at CV Natural Aceh are still being produced and only distributed to souvenir shops. So the profit obtained is not in accordance with the company's target [4]. The aim of this research is to find out how much income the CV Natural Aceh Food oyster processing business receives and the profitability of the CV Natural Aceh Food oyster business.

2. Method

This research was aimed at Gampong Alue Naga, Syia Kuala District, Banda Aceh City. Specifically, the location of Alue Naga Village is near the sea and not far from Darussalam sub-district, which is home to various well-known campuses in Aceh. The population studied was the oyster processing business at CV Natural Aceh Food. The sampling technique in this research was to use the case study method, which is by limiting the approach in the case study to create a closeness that can satisfy attention in an intensive and detailed case [10].

Data collection in this research used the case study method. The data sources obtained from this research activity were primary data and secondary data. Primary data is data taken directly through questions and answers from CV Natural Aceh Food managers, and workers at CV Natural Aceh Food.

2.1 Profitability analysis

According to [11] The profitability generated by a company is measured by the company's success and the company's ability to use assets or capital productively. To increase profits, it is closely related to the working capital used in company operations to generate sales as well as determine the amount of profit. The interest rate on capital in this research is for commercial banks at 8.68%.

$$R = \frac{L}{M} \times 100\% \dots\dots\dots[11]$$

Information:

- R = Profitability achieved (%).
- L = Amount of profit earned during a certain period (Rp).
- M = Capital used during a certain period (Rp).

2.2 Feasibility analysis

According to [9] Business feasibility is analyzed by calculating the R/C ratio (revenue cost ratio) using the formula:

$$R/C \text{ Ratio} = TR/TC$$

Information:

- R/C Ratio = comparison between total revenue and total cost
- TR = total revenue (total revenue)
- TC = total cost (total costs)

2.3 Fixed costs

Fixed costs are costs incurred in the production process whose value is fixed over a certain period, and the size does not depend on the size of the output obtained. Variable costing is a cost determination method that only takes into account variable production costs, namely raw material costs, direct labor costs and factory overhead costs [12].

2.4 Variable costs

Includes costs that change in line with changes in production or sales volume, including direct raw material costs, direct labor costs, and several elements of factory overhead costs that are considered variable in relation to production levels [13].

2.5 Revenue analysis

This analysis aims to be a tool used to determine the amount of profit obtained from the oyster processing business carried out at CV Natural Aceh Food. Income analysis is a number of results obtained or received in a certain period, both material and non-material forms that affect a person's life [14].

3. Result and Discussion

Labor is the acceptance of labor actors to carry out their duties as they should or the existence of a situation that reflects the availability of workers or jobs to be filled by job seekers. In simple terms, labor absorption means the amount of labor that can be absorbed by the economic sector [15]. The characteristics of workers in this study include age, education level, work experience,

number of family dependents. The CV Natural Aceh Food business has 6 workers with different ages and levels of education. For more details, see **Table 1** below.

Table 1. Characteristics of workers at CV natural Aceh food in 2025

No.	Name	Age (years)	Experience (tahun)	Education
1	Yusniar	35	6	12
2	Saniati	32	5	12
3	Jamilah	33	5	9
4	Siti Sarah	34	5	12
5	Nurma Wati	33	6	12
6	Zinatul Hayati	31	6	9
Average		33	5,5	11

Source: Primary data, 2025

The age factor is very strongly related to work ability, entrepreneurs who are younger and healthier have stronger physical abilities in running a business. Table 1 above shows that the age of entrepreneurs in the research area is 33 years. Education is very important in improving human resources. Education is the basis for developing oneself, including developing abilities in terms of making maximum use of existing facilities and infrastructure. Education is also one of the supporting means in increasing knowledge about industrial technology to be able to build the latest product breakthroughs so that they can provide satisfaction to consumers.

3.1 Total production costs

Total costs are the sum of all fixed costs and variable costs incurred by a company producing several products in a certain period. Total costs are all costs incurred in the process of making oyster crackers, such as fixed costs and variable costs [16].

Table 2. Total costs of oyster processing businesses per production in 2025

Table 2. Total Costs of Oyster Processing Businesses per Production in 2023		
No.	Cost Description (Rupiah)	Cost Description (Rupiah)
1	Fixed Cost	263.627,78
2	Variabel cost	1 Oyater chip pink 508.300
		2 Oyster raw chip 1.342.710
Amount		2.114.637,78

Source: Primary data, 2025

Based on the table above, the total production costs are IDR 2,114,637.78. These costs are divided into fixed costs, variable costs, equipment depreciation costs, and labor costs. The largest costs incurred in total production costs are non-fixed costs or variable costs, namely Rp. 1,342,710 because it is in accordance with the amount of production spent and the number of other supporting facilities in the production facilities.

3.2 Labor costs

Labor is an absolute factor and is needed by every business as we understand that labor is the main production factor [15]. Without the workforce, all the activities that will be carried out will not be achieved, as is the case with the oyster processing business at CV Natural Aceh Food, Syiah Kuala District, Banda Aceh City. The workforce at the CV Natural Aceh oyster processing business has 1 manager, the labor cost that must be given to 1 manager is Rp. 750,000 in one

production process for 1 manager, so the labor costs incurred are Rp. 750,000/per month. There are 6 employees at CV Natural Aceh, the amount of labor costs that must be given to 1 worker is Rp. 83,000 in one production process, so the labor costs incurred are Rp. 498,000/per month for 6 people in one production process.

Table 3. Labor in the CV natural aceh oyster processing business per production year, 2025

No.	Position	Quantity/ unit	Salary (Rp/Per Production)	Amount (Rp/per production)
1	Manager	1 orang	750.000	750.000
2	Staff	6 orang	83.000	498.000
Total				1.248.000

Sumber: Data Primer, 2025.

3.3 Profitability analyst

Profitability reflects a company's efficiency in using its working capital. The profitability of a company shows the comparison between profit and capital that produces profits [17]. The total production costs incurred by CV Natural Aceh in one month of the production process are IDR 2,114,637.78. Furthermore, the profit obtained from the total production costs is IDR 1,085,362.22. Profitability calculations for the CV Natural Aceh oyster processing business per month can be calculated using the following formula:

$$R = \frac{1}{M} \times 100\%$$

$$R = \frac{1.085.362,22}{2.114.637,78} \times 100\%$$

$$R = 51,32\%$$

$$R = 51,32\%$$

The calculation above shows the profitability value of the CV Natural Aceh oyster processing business which has provided a profit level of 51.32% percent of the capital used during one month of production. This profitability figure has an economic meaning, namely that every 100 percent of capital issued will provide a profit of 51.32% percent. This shows the amount of capital used during one month of production.

3.4 Feasibility analysis

Feasibility or appropriateness to carry out a type of business, by looking at certain parameters or eligibility criteria. Thus, a business is said to be feasible if the profits obtained can cover all costs incurred, both direct and indirect costs [7]. Feasibility is a key word that must be adhered to by managers of financial institutions and is the most basic criterion in financing a type of business [18].

$$R/C \text{ Ratio} = TR/TC$$

Information:

R/C Ratio = Comparison between total revenue and total cost.

TR = Total revenue (total revenue).

TC = Total cost (total costs).

R/C Ratio = $3,200,000 / 2,114,637.78 = 1.51$.

4. Conclusion

This study examined the oyster processing business operations and financial performance of CV Natural Aceh located in Gampong Alue Naga, Syiah Kuala District, Banda Aceh City. The production process encompasses several systematic stages, beginning with harvesting and progressing through cleaning, boiling, grinding, processing, drying, frying, and ultimately packaging. The packaging stage serves a critical function in maintaining product quality, ensuring cleanliness, and enhancing visual appeal before products reach end consumers. Financial analysis of one complete production cycle for both pink oyster chips and raw oyster chips reveals substantial profitability. The gross income generated amounts to IDR 3,200,000, from which total production costs of IDR 2,114,637.78 are deducted, resulting in a net income of IDR 1,085,362.22 per production cycle. This translates to a profitability percentage of 51.32% based on the capital employed by CV Natural Aceh. This profitability rate significantly exceeds the capital interest rate of 8.68%, demonstrating that the capital deployed throughout the production process generates an average profit of 51.32% for every 100% of capital invested per production period. The economic feasibility assessment, measured through the Revenue-to-Cost (R/C) Ratio, yields a value of 1.51. This figure indicates that CV Natural Aceh operates in an economically advantageous position, as the R/C Ratio exceeds the break-even threshold of 1.0. Specifically, this means that every rupiah invested in production generates a return of IDR 1.51, confirming the business's financial viability and sustainable profitability in the oyster processing sector.

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Authors' contributions and responsibilities

Safna Fitri: conceptualization, methodology, writing – original draft, supervision. Ainal Mardhiah: supervision, writing – review & editing. Teuku Fadhla: investigation, formal analysis, visualization.

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Availability of data and materials

All data are available from the authors.

Competing interests

The authors declare no competing interest.

Additional information

No additional information from the authors.

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