P-ISSN: 2355-729X
Jurnal IPTEKS PSP. Vol. 12 (2) October 2025: 73 – 81 E-ISSN: 2614-5014

# FINANCIAL FEASIBILITY ANALYSIS OF PICKLED SKIPJACK TUNA PRODUCTS AT TITIEFOOD MSMEs IN GORONTALO CITY

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Manuscript Recived: 22 December 2025
Revision Accapted: 31 December 2025

**ABSTRACT**

This study aims to analyze the financial feasibility of the pickled skipjack tuna production business at the Titie Food MSME in Gorontalo City through the R/C Ratio, Break Even Point (BEP), and Payback Period (PP) approaches. The research method uses a quantitative descriptive approach by collecting data on fixed costs, variable costs, production volume, revenue, and initial investment incurred by the MSME. The results show that the total fixed costs of the Titie Food MSME are IDR 8,606,165.46 per month, with total variable costs reaching IDR 37,275,000.00 for a production capacity of 2,100 units. The R/C Ratio analysis shows a value greater than 1, which indicates that the business is in a profitable condition and is feasible to run. The BEP analysis shows that the business reaches the break-even point at sales of 703 units or IDR 21,090,000, while actual production far exceeds this value, thus providing a high safety margin. Furthermore, the Payback Period (PP) analysis shows that the initial investment of IDR 413,178,997.00 can be recovered within 24.13 months, or approximately two years. Overall, the results of this study confirm that the pickled skipjack tuna production business at the Titie Food MSME is financially viable and has good long-term development prospects.

**Keywords:** Break Even Point, Financial, Payback Period, Pickled skipjack tuna, R/C Ratio

## INTRODUCTION

MSMEs are one of the important pillars in regional and national economic development, including in the fishery processing sector (Gustika & Susena, 2022; Rahma et al., 2025). The city of Gorontalo has great potential in skipjack tuna, which is widely used as a value-added processed product. Titiefood MSME is one of the businesses that has developed an innovative fishery-based product, namely skipjack tuna pickles. Although this product has good market opportunities, MSMEs often face obstacles in financial management that affect business sustainability. The main problem that arises is the lack of comprehensive financial feasibility analysis to ensure that the business is truly profitable and able to survive in the long term.

A lack of understanding of cost efficiency, break-even points, and return on investment often makes it difficult for MSME players to make strategic decisions related to business development (Hindarwati et al., 2025; Fatmah et al., 2024). On the other hand, growing competition in the local food industry requires business actors to have a strong and data-driven basis for decision-making. Without adequate financial analysis, MSMEs risk business instability, inefficient spending, and an inability to survive in an increasingly competitive market

(Hindarwati et al., 2025; Shobari et al., 2025; Nasution & Japina, 2025).

Based on these issues, this study aims to analyze the financial feasibility of skipjack tuna pickles produced by the SME Titiefood using three main indicators, namely the Revenue Cost Ratio (R/C Ratio), Break Even Point (BEP), and Payback Period (PP). This analysis provides an overview of the level of business efficiency, the minimum production limit to avoid losses, and an estimate of the time required to recover the initial investment capital. These three indicators were chosen because they provide a simple yet accurate financial evaluation that can be applied by MSME players without requiring complex technical skills.

The contribution of this research is multidimensional. In the field of education, the results of this study can be a learning resource for students and academics in understanding the application of financial analysis in small businesses based on fishery products. In terms of research, this study enriches the literature on the financial feasibility of local food MSMEs and opens up opportunities for further research related to business management, product development, and marketing strategies. Meanwhile, for the community and MSME players, this research provides practical guidance for managing businesses more efficiently, improving decision-making capabilities, and strengthening the competitiveness of processed fish products at the local level.

Thus, this research not only answers financial problems at Titiefood MSMEs but also makes a real contribution to the development of science and the improvement of community welfare through strengthening the capacity of small businesses.

## MATERIAL AND METHOD

### Research Type

This study is a descriptive-quantitative study that aims to analyze the financial feasibility of the skipjack tuna pickle business at Titiefood MSME. A quantitative approach is used to calculate costs, revenues, break-even points, business efficiency, and return on investment.

### Research Location and Time

The research was conducted at Titiefood MSME, located in Gorontalo City. Data collection was carried out during the period of October – November 2025.

### Types and Sources of Data

The data used in this study consists of:

- Primary data, obtained through direct interviews with MSME owners, observation of production processes, and recording of costs and production volumes.
- Secondary data, obtained from MSME sales archives, simple financial reports, raw

material prices, literature related to financial analysis, and other supporting documents.

**Data Collection Techniques**

Data collection was conducted using the following methods:

- Structured interviews to obtain information on investment costs, operating costs, production capacity, and selling prices.
- Direct observation to observe the use of materials, labor, production processes, and output quantities.
- Documentation, such as purchase notes, sales records, and other historical business data.

**Data Analysis Methods**

Financial feasibility analysis was conducted using three main indicators:

a. Revenue Cost Ratio (R/C Ratio)

Used to assess business efficiency with the formula:

$$R/C = \frac{Total\ revenue}{Total\ cost}$$

Criteria:

- R/C > 1: viable and profitable business
- R/C = 1: the business is at break-even point
- R/C < 1: unreasonable endeavor

b. Break Even Point (BEP)

Calculating the minimum number of products that must be produced and sold so that the business does not suffer losses.

- BEP Unit

$$BEP_u = \frac{Fixed\ costs}{Selling\ price\ -\ Variable\ cost\ per\ unit}$$

- BEP Rupiah

$$BEP_{Rp} = \frac{Fixed\ costs}{1 - \frac{Variable\ costs}{Selling\ price}}$$

c. Payback Period (PP)

Measuring the time required to recoup the initial investment.

$$PP = \frac{Total\ Investment}{Net\ profit\ per\ year}$$

Criteria: the shorter the return on investment period, the lower the business risk.

## RESULTS AND DISCUSSION

**Overview of Titiefood MSMEs**

Titiefood MSME is a fishery product processing business located in Gorontalo City that focuses on producing various types of fish-based products. One of its flagship products is pickled skipjack tuna, which has become the hallmark of this business. Titiefood MSME began to grow in line with increasing public demand for convenient, long-lasting, and distinctive-tasting ready-to-eat food products. The business owner takes advantage of the abundant supply of skipjack tuna in the coastal area of Gorontalo, which ensures a relatively stable supply of raw materials and supports the sustainability of the production process.

The production of cakalang fish pickles is based on market demand and business partners. However, in general, Titiefood SME produces cakalang fish pickles seven times a

month, with an average production of around 700 pieces per week. The main raw material, cakalang fish, is obtained directly from local fishermen, ensuring its quality and freshness.

In terms of marketing, Titiefood SME has a fairly good promotional strategy. The products are regularly displayed at various exhibitions in Gorontalo in an effort to expand market reach. In addition, marketing is also carried out through online platforms and collaborations with various partners, so that Titiefood products are not only known within the city of Gorontalo, but have spread to several regencies and even outside the province of Gorontalo.

Titiefood SME not only produces Cakalang Fish Pickles, but also develops various other product variants, such as Tuna Fish Pickles, Chicken Pickles, Nike Crispy, Nike Rica-Rica, Payangga Crispy, Balado Peanut Teri, Garo Belanga Meat, Tuna Sambal, Mackerel Sambal, Roa Sambal, Squid Sambal, Rica-Rica Meat Sambal, as well as various Goroho Banana products such as Goroho Banana with Cheese Milk, Goroho Banana with Palm Sugar, Goroho Banana with Balado, and Goroho Banana with Roa Sambal. Other products include Frozen Meatballs, Pickles, Rempeyek, ready-to-use seasonings (small and large), Tuna Floss, and Tuna Rica-Rica. This diversity of products demonstrates the creativity of Titiefood's SMEs in processing local food ingredients into high-value foods. Each product has a distinctive flavor because it uses a special blend of spices that sets Titiefood apart from other SMEs.

**Financial Feasibility Analysis**

Financial feasibility analysis is a process of assessing whether a business or project can be run profitably and provide long-term economic benefits (Ichsan et al., 2019; Sutandi et al., 2024). This analysis is carried out by comparing the costs incurred and the income generated, so that it can be determined whether the business is feasible, low risk, or actually loss-making.

Based on the investment and operational cost table, Titiefood MSME incurred a total investment cost of IDR 413,178,997.00 to meet the equipment needs for producing cakalang fish pickles. This investment includes the procurement of various supporting facilities such as freezers, display shelves, gallon storage, frying pans, stoves, computers, sealing machines, and operational vehicles. The largest investment value comes from the purchase of operational vehicles and freezers, which play an important role in product distribution and raw material storage. All of this equipment has a varying useful life of between 36 and 120 months, resulting in a total depreciation or fixed cost of IDR 8,606,165.46 per month.

In addition to fixed costs, this business also incurs variable costs of IDR 37,275,000.00, which consist of expenses for packaging, gas, groceries, and the main raw material, skipjack

tuna. These variable costs change according to the production volume, so that the higher the production volume, the greater the costs that must be incurred. The largest variable cost component comes from the purchase of groceries and packaging, which are important elements in maintaining product quality and appearance. With an average production volume of around 700 pieces per week, these variable costs greatly determine the cost of goods manufactured and ultimately affect the business's profit margin.

The results of this study are in line with various previous studies that analyzed the cost structure of MSME fish processing businesses. Research by Aprilia et al. (2021) on processed fish products at CV. Fania Food shows that variable costs—such as fish raw materials, spices, cooking oil, and packaging—are the largest components in the cost structure and increase as production volume increases. Thus, the variable cost conditions at Titie Food SME are not only consistent with the general characteristics of fishery product processing businesses, but also support previous research findings that variable costs are the most sensitive cost component to changes in production volume and have a direct effect on the financial feasibility of the business.

In terms of revenue, Titie Food SME sells its products at a price of IDR 30,000 per piece, and the average production volume reaches 2,100 pieces per month. The total revenue (turnover) obtained is IDR 63,000,000 per month. After deducting the total production costs of IDR 45,881,165, the net profit received by Titie Food SME per month is IDR 17,118,834. This value shows that the business is still profitable because it is able to generate a significant positive difference between revenue and total production costs. This profit also reflects that production activities are running efficiently and that market demand for the products is fairly stable. If managed with a more optimal marketing strategy, Titie Food MSME has the potential to increase production capacity and expand its market so that profit growth can be achieved sustainably.

Based on the available data, this business is able to cover all production costs and still obtain a fairly good profit margin. This shows that even though Titiefood MSME has a large fixed cost structure due to the high value of investment, the business is still able to generate profits because it is supported by stable production volume, a wide marketing network, and continuously increasing market demand.

**Table 1.** Investment Costs and Fixed Costs for Mackerel Pickle Products at Titiefood

| Type of Investment Cost | Quantity (Units) | Price (IDR) | Total Investment Cost | Age of Use (Months) | Fixed Cost (IDR) |
|---|---|---|---|---|---|
| Gallery Store | 1 | 76,000,000.00 | 76,000,000.00 | 120 | 633,333.33 |
| Gas Cylinder | 11 | 180,000.00 | 1,980,000.00 | 60 | 33,000.00 |
| Stove | 3 | 625,000.00 | 1,875,000.00 | 96 | 19,531.25 |
| Frying Pan | 4 | 450,000.00 | 1,800,000.00 | 60 | 30,000.00 |
| Freezer | 3 | 4,933,333.00 | 14,799,999.00 | 108 | 137,037.03 |
| Display Rack | 4 | 12,500,000.00 | 50,000,000.00 | 120 | 416,666.67 |
| Computer | 1 | 3,170,000.00 | 3,170,000.00 | 60 | 52,833.33 |
| Car | 1 | 258,200,000.00 | 258,200,000.00 | 36 | 7,172,222.22 |
| Siller Machine | 3 | 1,784,666.00 | 5,353,998.00 | 48 | 111,541.63 |
| **Total** | | | **413,178,997.00** | | **8,606,165.46** |

**Table 2.** Variable Costs of Skipjack Tuna Pickles at Titiefood

| Types of Variable Costs | Price (IDR) |
|---|---|
| Packaging | 13,000,000.00 |
| Gas | 275,000.00 |
| Basic necessities | 15,000,000.00 |
| Raw materials | 9,000,000.00 |
| **Total** | **37,275,000.00** |

## R/C Ratio

Revenue Cost Ratio (R/C Ratio) analysis is used to determine the financial feasibility of a business by comparing total revenue to total production costs. The R/C Ratio value is obtained by dividing the total business income by the total costs incurred during a production period. At Titie Food MSME, total monthly revenue reaches IDR 63,000,000, while total monthly production costs are IDR 42,300,000. Thus, the R/C Ratio value obtained is 1.49.

An R/C Ratio value of 1.49 indicates that every Rp 1 spent generates Rp 1.49 in revenue. In other words, this business provides an additional profit of Rp 0.49 for every rupiah spent. A business is considered feasible and profitable if it has an R/C Ratio greater than 1. Since the R/C Ratio value of Titie Food MSME is well above that figure, this business can be considered very feasible financially.

In addition, an R/C Ratio value close to 1.37 reflects that the business has been able to manage production costs efficiently and has a fairly good sales rate. If MSMEs are able to increase variable cost efficiency or increase production volume without significantly increasing fixed costs, the R/C Ratio value can increase even higher. Thus, this analysis illustrates that Titie Food MSME has good business prospects and the potential for further development through production optimization and marketing strategies.

These findings are in line with several previous studies in the fishery product processing sector. For example, a study Mahayani et al. (2024) on catfish bone crackers reported an R/C Ratio of 2.02, which also indicates that the business is viable. Similarly, a

study by Amarco and Sitohang, (2024) on milkfish stalls showed an average R/C Ratio of >1, confirming that fishery product processing generally has good cost efficiency and stable profit potential.

In comparison, the R/C Ratio value of Titie Food MSME (1.49) is higher than the two studies, indicating that this MSME has better cost efficiency and the ability to generate greater profits for every rupiah spent. This difference may be influenced by the effectiveness of variable cost management, relatively stable production volume, and more optimal marketing strategies. Thus, Titie Food SME can be said to have stronger financial performance than similar businesses in previous studies.

**Break Even Point (BEP)**

Break-even point (BEP) analysis was conducted to determine the level of production and sales at which Titie Food MSMEs would break even, i.e., when total revenue equals total costs, so that the business neither incurs losses nor makes a profit (Soleha et al., 2022). Based on business cost data, total fixed costs incurred per month reach IDR 8,606,165.46, while total variable costs amount to IDR 37,275,000.00 for a production capacity of 2,100 units per month, so that the variable cost per unit is around IDR 17,750. With a selling price of Rp 30,000 per unit, the contribution margin generated is Rp 12,250 per unit. This value shows the contribution of each product unit in covering fixed costs before generating a profit. Through these calculations, the BEP in units is 703 units, which means that Titie Food MSME must sell at least 703 units of cakalang fish pickles every month to break even. Meanwhile, the BEP in rupiah reaches IDR 21,090,000, which indicates the minimum amount of income that must be achieved so that the business does not suffer losses. When compared to the actual production of 2,100 units per month, it can be seen that Titie Food MSME is well above the break-even point, indicating that the business is in a very secure financial condition, has a high margin of safety, and has the potential to generate significant profits.

Research conducted by Maharani et al. (2024) on the tuna sambal business in Kedongan, Bali, shows that an annual profit of IDR 32,543,000 is obtained with a relatively high BEP and limited production capacity. In contrast, Titie Food MSME has a stronger financial condition because the difference between actual production and BEP is very large, so that the potential profit per month and per year is much higher and the risk of loss is much lower.

Thus, compared to previous studies, the Titie Food SME demonstrates higher production efficiency, a wider safety margin, and better financial viability, making this business more

stable and offering greater prospects for development.

**Payback Periode (PP)**

Payback Period (PP) analysis is used to determine how quickly the initial investment made by Titie Food MSME can be recovered through the net profit earned each month. PP is an important indicator in assessing the financial feasibility of a business, because the faster the investment is recovered, the lower the business risk and the more attractive the development opportunities. Based on the data obtained, Titie Food MSME has an initial investment of IDR 413,178,997.00, while the monthly net profit reaches IDR 17,118,834 after taking into account all production costs and revenues. Thus, the Payback Period is calculated by dividing the total initial investment by the monthly net profit, resulting in a value of 24.13 months, or approximately 2 years. This result shows that Titie Food MSME needs more than two years to return its initial investment. Although not as fast as small-scale businesses with low investments, this payback period is still considered feasible for processed food-based businesses because they have stable market potential and good growth prospects. Thus, Titie Food MSME's cakalang fish pickle business is still considered feasible to run and has the opportunity to provide sustainable profits in the long term.

## CONCLUSION

The results of the study show that the skipjack tuna pickle production business at Titie Food MSME is financially viable. An R/C Ratio value > 1 indicates a profitable business, the BEP is at 703 units, which is easily achievable, and a Payback Period of 24.13 months shows that the investment can be recovered within two years. With an actual production of 2,100 units per month, Titie Food SME has a high safety margin and stable profit potential. Business development can be achieved through market expansion outside the region, equipment modernization, food safety certification, and improved branding and packaging quality.

## ACKNOWLEDGEMENTS

The author would like to thank Titie Food MSME for providing permission, data, and support during this research process. Appreciation is also extended to all parties who have assisted in the preparation of this research, whether through suggestions, criticism, or technical support. Hopefully, the results of this research can benefit MSMEs and related parties.

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