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Business Feasibility and Socioeconomic Contribution of Kerupuk Kupang Processing: Evidence from a Coastal MSME in Balongdowo Village, Sidoarjo Regency

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Abstract: The development of fisheries-based micro, small, and medium enterprises (MSMEs) is important for increasing the economic value of fisheries resources and supporting coastal livelihoods. This study evaluated the business feasibility and socioeconomic contribution of the kerupuk kupang processing enterprise operated by UKM Ibu Kholilah in Balongdowo Village, Sidoarjo Regency. A quantitative descriptive approach was employed using primary data from observations, interviews, and documentation, complemented by secondary sources. Business feasibility was assessed using investment, depreciation, production and operating costs, revenue, profit, Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP). The enterprise required an initial investment of Rp69,147,000 and generated annual revenue of Rp1,485,120,000 and annual profit of Rp78,075,136. The R/C Ratio was approximately 1.06, while the Payback Period was 0.89 year. The revised Break-Even Point was approximately 19,790 kg per year, compared with estimated annual production of 124,800 kg. The enterprise employed six workers and generated approximately Rp159.12 million in annual labor expenditure, demonstrating its contribution to local employment and wage-income generation. The findings indicate that fisheries-based MSMEs can support value-added processing, employment, and coastal livelihood development. Financial results represent historical operating conditions observed during April 2016–January 2017.

Keywords: Business Feasibility, Fisheries-Based MSMEs, Kerupuk Kupang, Coastal Communities, Socioeconomic Contribution.

INTRODUCTION

Sidoarjo Regency is one of the major kupang-producing areas in East Java Province, Indonesia, with considerable potential as both a fisheries resource and a driver of coastal economic activities. Annual kupang production in the region ranges from 40,400 kg to 8,675,300 kg, while the average daily catch reaches 375.6 kg. The continuous availability of kupang throughout the year indicates a relatively stable supply of raw materials, providing substantial opportunities for the development of value-added fisheries products. In addition to being marketed as fresh seafood, kupang has been processed into various traditional products,

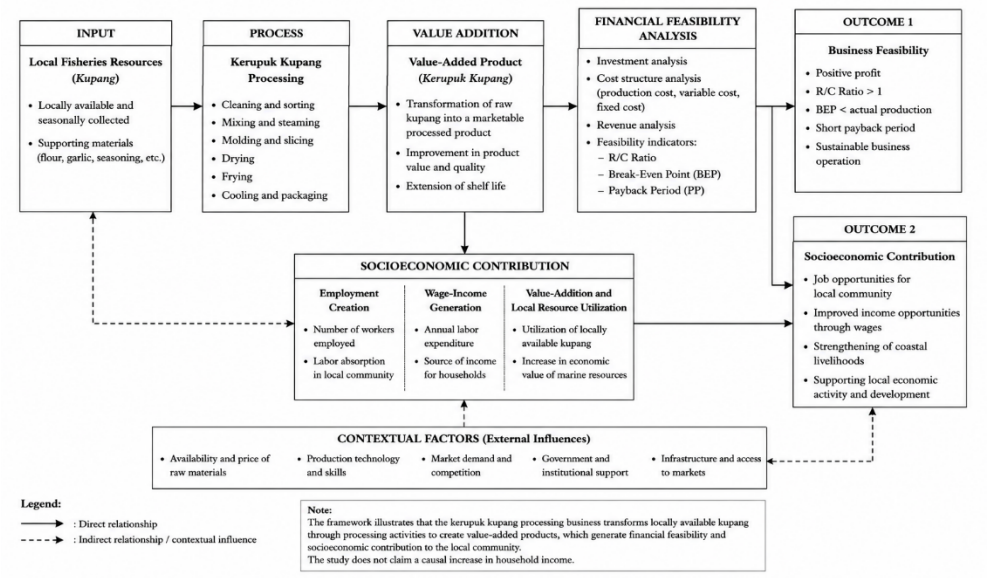
including lontong kupang, petis, fish balls, and kerupuk kupang, which has become one of the distinctive culinary products of coastal communities in Sidoarjo Regency (Prayitno & Susanto, 2001). Fisheries product processing is recognized as an important strategy for increasing the value added of fisheries commodities by transforming raw materials into products with greater economic utility. In addition to increasing market value, processing activities can extend product shelf life, broaden market opportunities, and create employment opportunities for local communities. Consequently, the development of fisheries-based micro, small, and medium enterprises (MSMEs) has become an important instrument for promoting regional economic growth, strengthening the competitiveness of local products, and supporting coastal livelihoods (Hudaya et al., 2021; Pentury, 2021; Setyawan et al., 2025).

From an economic perspective, the sustainability and performance of fish-processing enterprises depend not only on the availability of raw materials but also on the ability of entrepreneurs to manage investment, production costs, operational efficiency, and business development. Business feasibility analysis is therefore an important approach for evaluating the financial performance of an enterprise through indicators such as profit, Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP). These indicators are widely used in fisheries business studies because they provide information on cost efficiency, the relationship between revenue and costs, the level of production required to cover costs, and the recovery of initial investment (Dollu et al., 2021; Idhamsyah et al., 2025; Surahmat et al., 2024). In Balongdowo Village, Candi District, Sidoarjo Regency, kerupuk kupang processing has developed as a fisheries-based economic activity that utilizes locally available fisheries resources. In addition to creating value from kupang through processing, the activity provides employment and wage-income opportunities and contributes to local economic activity. The development of fisheries-based MSMEs also plays a strategic role in strengthening business competitiveness and supporting sustainable coastal economic development (Illahi et al., 2024; Maulani et al., 2025).

Although numerous studies have examined business feasibility in the fisheries sector, many have focused on aquaculture, capture fisheries, or other fish-processing activities, such as smoked catfish, seaweed cultivation, and processed tuna products (Madjid et al., 2025; Pradilia et al., 2025; Witoko et al., 2026). Studies specifically addressing the business feasibility of kerupuk kupang, a traditional fisheries-based product associated with the coastal communities of Sidoarjo Regency, remain limited. Moreover, conventional fisheries business feasibility studies generally emphasize financial performance through individual feasibility indicators without explicitly connecting financial viability with the socioeconomic contribution of value-added processing activities. This creates a research gap concerning how the financial performance of a small-scale fisheries-processing enterprise relates to employment, wage generation, and the economic value created from locally available fisheries resources.

Based on this gap, the novelty of this study lies in integrating financial feasibility analysis with an assessment of the socioeconomic contribution of a kerupuk kupang processing MSME within a single analytical framework. Methodologically, this approach extends conventional fisheries business feasibility analysis by connecting financial performance with employment generation, wage-income generation, and value addition from locally available fisheries resources. From a theoretical perspective, the integrated approach connects business feasibility with value-added fisheries processing and coastal livelihood development. Financial feasibility reflects the economic capacity of an enterprise to maintain its operations, whereas socioeconomic contribution captures the benefits generated through employment, wage income, and productive utilization of local fisheries resources. This integrated perspective therefore provides a broader understanding of fisheries-based MSMEs by considering both internal business viability and their contribution to coastal livelihoods and local economic development.

Accordingly, this study aims to evaluate the business feasibility of the kerupuk kupang processing enterprise operated by UKM Ibu Kholilah in Balongdowo Village, Sidoarjo Regency, through the analysis of investment costs, depreciation costs, production costs, operating costs, revenue, profit, Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP). The study also examines the socioeconomic contribution of the enterprise through employment, wage-income generation, and value addition to local fisheries resources. The findings are expected to provide empirical evidence on how fisheries-based MSMEs can function not only as financially viable business units but also as value-added processing activities that support employment opportunities, coastal livelihoods, and local economic development.



Source: Authors' elaboration.

Figure 1. Conceptual Framework of Business Feasibility and Socioeconomic Contribution of Kerupuk Kupang Processing

METHODS

Research Design and Data Collection

This study employed a quantitative descriptive approach using a survey method to evaluate the business feasibility and socioeconomic contribution of the kerupuk kupang processing enterprise. A quantitative descriptive approach is appropriate for describing business performance based on measurable financial indicators and assessing the economic feasibility of micro, small, and medium enterprises (MSMEs) (Sekaran & Bougie, 2020). The business feasibility assessment followed commonly used financial indicators in fisheries and MSME studies, including investment cost, depreciation cost, production cost, operating cost, total cost, revenue, profit, Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP) (Dollu et al., 2021; Idhamsyah et al., 2025; Pradilia et al., 2025; Surahmat et al., 2024).

The study was conducted at UKM Ibu Kholilah, located in Balongdowo Village, Candi District, Sidoarjo Regency, East Java, from April 2016 to January 2017. The research location was purposively selected because Balongdowo is one of the major centers of kupang processing in Sidoarjo, where kerupuk kupang has developed as a value-added fisheries product associated with the local coastal economy. The research object was the kerupuk kupang processing enterprise operated by UKM Ibu Kholilah. Primary data were collected through field observations, direct interviews with the business owner, and documentation of production activities. The collected information included investment requirements, production facilities, depreciation of production assets, production and operating costs, production capacity, selling prices, and annual revenues. Secondary data were obtained from relevant literature, previous

studies, and institutional documents related to fisheries-based MSMEs and business feasibility analysis (Sekaran & Bougie, 2020).

The financial data represent the operating conditions of the enterprise during the April 2016–January 2017 study period and are therefore treated as historical case evidence rather than current market estimates. The analysis does not assume that the reported prices, costs, revenues, or profitability indicators remain unchanged over time. Instead, the data are used to assess the financial structure and socioeconomic contribution of the enterprise under the conditions observed during the study period.

Data Analysis

The collected data were analyzed descriptively using business feasibility analysis. Investment costs were calculated by identifying the productive assets required to establish and operate the business. Depreciation costs were estimated using the straight-line depreciation method based on the economic useful life of each depreciable production asset (Mulyadi, 2015). Production land was included in the initial investment because it represented capital committed to the production facility; however, land was not depreciated because it was treated as a non-depreciable asset in this analysis. Depreciation was therefore applied only to machinery, equipment, and other production assets with identifiable useful lives.

Costs were classified according to their relationship with production activity. Variable costs were defined as costs that changed with production volume or production frequency, including raw materials, packaging materials, production labor, electricity, and firewood. Fixed costs were defined as costs that remained unchanged over the annual operating period regardless of short-term changes in production volume, including annual depreciation and business tax. This classification was applied to distinguish production-related expenditures from costs that were incurred independently of short-term changes in production activity.

The enterprise had an observed production capacity of 400 kg per production cycle and operated approximately 26 production cycles per month. Annual production was therefore estimated at 124,800 kg based on 12 operating months. Total cost, total revenue, profit, Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP) were calculated using the following equations.

Total cost was calculated as the sum of total variable cost and total fixed cost:

$$TC = VC + FC \tag{1}$$

where (TC) is total cost, (VC) is total variable cost, and (FC) is total fixed cost. Total revenue was calculated by multiplying the quantity produced by the selling price:

$$TR = Q \times P \tag{2}$$

where (TR) is total revenue, (Q) is total production, and (P) is the selling price per unit. Profit was determined as the difference between total revenue and total cost:

$$\Pi = TR - TC \tag{3}$$

where (Π) is annual profit. The break-even point in units was calculated as:

$$BEP(Q) = \frac{FC}{P - VC_u} \tag{4}$$

where ($BEP(Q)$) is the break-even production volume, (FC) is annual fixed cost, (P) is the selling price per unit, and (VC_u) is variable cost per unit. The selling price per kilogram was determined from annual revenue and annual production, while variable cost per kilogram was obtained by dividing annual variable cost by annual production. The resulting BEP was compared with actual annual production to determine whether the enterprise operated above its minimum break-even production level. The revenue-cost ratio was calculated as:

$$R/C = \frac{TR}{TC} \tag{5}$$

where (TR) is total revenue and (TC) is total cost. An R/C Ratio greater than 1 indicates that total revenue exceeds total cost and therefore indicates financial feasibility. An R/C Ratio equal to 1 represents a break-even condition, whereas an R/C Ratio below 1 indicates that total cost exceeds total revenue. Finally, the Payback Period (PP) was calculated as:

$$PP = \frac{I}{\Pi} \tag{6}$$

where (PP) is the payback period in years, (I) is the initial investment, and (Π) is annual profit. The calculation assumes that annual profit remains constant throughout the payback period and does not consider the time value of money, additional investment, or salvage value. The financial results were subsequently interpreted together with employment and wage-generation information to assess the socioeconomic contribution of the kerupuk kupang processing enterprise. Socioeconomic contribution was assessed primarily through directly observable indicators, particularly the number of workers employed, annual labor expenditure, and the value-added utilization of locally available kupang resources. This approach is consistent with the broader perspective of community economic development, in which productive activities based on local resources can support income-generating opportunities and local economic activity (Mubyarto, 2003). Because the study did not collect longitudinal household-income data, the analysis does not claim a causal increase in household income.

RESULTS AND DISCUSSION

Investment Cost Analysis

Table 1 presents the initial investment required for the kerupuk kupang processing enterprise operated by UKM Ibu Kholilah. The investment comprised production land, processing machinery, and supporting equipment used to facilitate the production process. Production land represented the largest reported investment component, followed by the drying machine, measuring equipment, molding machine, grinding machine, and other supporting equipment. Based on the reported investment data, the total initial investment was Rp69,147,000. This investment represents the capital committed to establishing the production facility and providing the productive assets required for the operation of the enterprise.

Table 1. Initial Investment Cost of the Kerupuk Kupang Processing Business

Investment Item	Quantity	Unit	Unit Price (Rp)	Total Cost (Rp)
Production land	1	unit	50,000,000	50,000,000
Knife	3	pcs	3,000	9,000
Plastic container	2	pcs	20,000	40,000
Scale	1	unit	150,000	150,000
Drying rack	10	units	15,000	150,000
Basin	2	pcs	7,000	14,000
Plastic basket	2	pcs	12,000	24,000
Grinding machine	1	unit	1,500,000	1,500,000

Molding machine	1	unit	2,000,000	2,000,000
Measuring equipment	1	unit	2,750,000	2,750,000
Drying machine	1	unit	10,000,000	10,000,000
Cutting machine	1	unit	1,750,000	1,750,000
Industrial mixer	1	unit	500,000	500,000
Frying pan	2	pcs	120,000	240,000
Plastic bucket	2	pcs	20,000	40,000
Total Initial Investment				69,147,000

Source: Primary data processed by the authors.

The investment structure shows that a substantial proportion of the reported capital was allocated to production land, while the remaining investment was directed toward machinery and supporting equipment. The allocation of capital to processing equipment indicates the importance of productive assets in maintaining production capacity and supporting the continuity of the enterprise. Equipment such as the grinding machine, molding machine, drying machine, cutting machine, and industrial mixer directly supports the transformation of kupang into a value-added processed product.

From a business feasibility perspective, investment constitutes the economic foundation of production because productive assets determine the capacity of an enterprise to conduct and maintain its operations. Gittinger (1986) emphasizes that productive investment should generate economic benefits throughout the useful life of the assets employed. Similarly, Husnan & Muhammad (2000) explain that productive investment is associated with the ability of an enterprise to support operational activities and generate future economic benefits. In the context of the present study, the investment structure indicates that capital was primarily directed toward assets required for production rather than toward non-productive expenditures. This allocation provides the physical foundation for the enterprise to utilize locally available fisheries resources through value-added processing.

Depreciation Cost Analysis

As presented in Table 2, depreciation was estimated using the economic useful life assigned to each production asset. Production land was assigned an economic useful life of 10 years and an annual depreciation allocation of Rp5,000,000, consistent with the economic feasibility approach used in the original analysis. Although land is generally treated as a non-depreciable asset in financial accounting, the present study uses an economic-cost approach to allocate the reported investment cost of the production land over its assumed economic use period. This treatment allows the capital committed to the production facility to be incorporated into the feasibility analysis.

The total annual depreciation reported in the original calculation was Rp11,713,664. This amount represents the annual allocation of the investment cost of production assets over their assumed useful lives and was incorporated into the financial feasibility analysis as a fixed cost component. The depreciation allocation reflects the estimated consumption of productive assets used in the processing of kerupuk kupang, with the largest allocations associated with the production land and drying machine.

Table 2. Annual Depreciation Cost of Production Equipment

Production Equipment	Quantity	Useful Life (Years)	Acquisition Cost (Rp)	Annual Depreciation (Rp)
Production land	1	10	50,000,000	5,000,000
Knife	3	1	9,000	9,000
Plastic container	2	1	40,000	40,000
Scale	1	1	150,000	150,000
Drying rack	10	1	150,000	150,000
Basin	2	1	14,000	14,000
Plastic basket	2	1	24,000	24,000

Grinding machine	1	3	1,500,000	500,000
Molding machine	1	3	2,000,000	666,000
Measuring equipment	1	3	2,750,000	916,000
Drying machine	1	3	10,000,000	3,333,333
Cutting machine	1	3	1,750,000	583,000
Industrial mixer	1	3	500,000	166,000
Frying pan	2	2	240,000	120,000
Plastic bucket	2	1	40,000	40,000
Total Annual Depreciation				**11,713,664**

Source: Primary data processed by the authors.

Although depreciation does not represent a direct cash outflow during the production period, its inclusion in the financial analysis provides a more comprehensive estimate of the economic cost associated with the use of productive assets. The treatment is particularly relevant for a feasibility analysis because productive assets are expected to generate economic benefits over a specific period, and their acquisition costs should therefore be allocated across their assumed useful lives.

Recognizing depreciation also supports a more complete assessment of the enterprise's financial performance because production equipment gradually loses its economic usefulness through continued use and physical wear. Mulyadi (2015) explains that depreciation forms part of the cost associated with the use of productive assets, while Garrison et al. (2021) emphasize that depreciation provides a systematic means of allocating the cost of long-term assets over their useful lives. Accordingly, incorporating depreciation into the feasibility analysis allows the financial performance of the kerupuk kupang processing enterprise to be evaluated while accounting for the economic consumption of its productive assets.

Production Cost Analysis

Table 3 presents the production cost of the kerupuk kupang processing enterprise. The production cost consisted of dried kupang, ladon broth, garlic, seasoning, and tapioca flour used in each production cycle. Tapioca flour represented the largest production cost component, amounting to Rp2,320,000 per production cycle, followed by dried kupang at Rp960,000. The remaining production costs consisted of ladon broth, garlic, and seasoning. The total production cost was Rp3,672,000 per production cycle. With an average production frequency of 26 cycles per month, the production cost reached Rp95,472,000 per month or Rp1,145,664,000 per year.

Table 3. Production Cost of the Kerupuk Kupang Processing Business

Production Cost Component	Quantity	Unit	Unit Price (Rp)	Total Cost (Rp)
Dried kupang	16	kg	60,000	960,000
Ladon broth	16	liters	7,000	112,000
Garlic	8	kg	34,000	272,000
Seasoning	16	sachets	500	8,000
Tapioca flour	16	sacks	145,000	2,320,000
Total Cost per Production Cycle				3,672,000
Total Cost per Month (26 production cycles)				95,472,000
Total Cost per Year (12 months)				1,145,664,000

Source: Primary data processed by the authors.

The production cost analysis indicates that tapioca flour and dried kupang are the two largest production cost components, accounting for the majority of expenditure per production cycle. In contrast, ladon broth, garlic, and seasoning contribute relatively smaller shares of production expenditure. This cost structure indicates that the profitability of the enterprise is sensitive to changes in the prices and availability of its major production inputs, particularly tapioca flour and dried kupang. An increase in the prices of these inputs, without a

corresponding increase in the selling price, would increase total production costs and potentially reduce the enterprise's profit margin.

These findings are consistent with cost accounting principles, which recognize direct material expenditures as an important component of production costs in processing activities (Mulyadi, 2015; Soekartawi, 2002). Similar patterns have been reported in fisheries-related business studies, in which raw material expenditures constitute an important determinant of production costs and business efficiency (Dollu et al., 2021; Surahmat et al., 2024). Therefore, maintaining the availability of major raw materials and improving procurement efficiency are important for controlling production costs and supporting the financial sustainability of the enterprise.

Operating Cost Analysis

Table 4 presents the operating cost structure of the kerupuk kupang processing enterprise. Based on their relationship with production activity, the operating costs were classified into variable and fixed costs. Packaging materials, labor, electricity, and firewood were classified as variable costs because their use was associated with production frequency and operational activity. Business tax was classified as a fixed cost because it was incurred annually and did not directly vary with short-term changes in production volume. Annual depreciation was also treated as a fixed cost in the financial feasibility analysis because it represents the allocation of the acquisition cost of productive assets over their assumed useful lives.

Table 4. Operating Cost Components of the Kerupuk Kupang Processing Business

Cost Classification	Cost Component	Quantity	Unit	Unit Cost (Rp)	Total Cost (Rp)
Variable Cost	Packaging plastic	600	pieces	250	150,000
Variable Cost	Labor	6	workers	85,000	510,000
Variable Cost	Electricity	9	hours	10,200	30,600
Variable Cost	Firewood	20	logs	5,000	100,000
Fixed Cost	Business tax	1	year	3,000,000	3,000,000

Source: Primary data processed by the authors.

The operating cost structure demonstrates that the enterprise is sensitive to production activity because packaging, labor, electricity, and firewood expenditures are incurred in connection with production operations. Labor represents the largest production-related operating cost component, amounting to Rp510,000 per production cycle, followed by packaging materials at Rp150,000, firewood at Rp100,000, and electricity at Rp30,600. Collectively, these variable operating costs amounted to Rp790,600 per production cycle. With 26 production cycles per month and 12 operating months per year, the corresponding annual variable operating cost was Rp246,667,200.

The classification of labor and other production-related expenditures as variable costs is important for the subsequent feasibility analysis because these costs change with production frequency and therefore affect the variable cost per unit used in the Break-Even Point calculation. In contrast, the annual business tax represents a fixed operating expenditure because it is incurred annually and does not directly depend on short-term production volume. Annual depreciation of Rp11,713,664 was also treated as a fixed cost because it represents the systematic allocation of productive asset costs over their assumed useful lives. Accordingly, the revised fixed-cost structure consisted of annual depreciation and business tax, resulting in total fixed costs of Rp14,713,664 per year.

The revised cost classification provides a clearer basis for evaluating the relationship between production volume, cost structure, revenue, and business feasibility. In particular, distinguishing production-related variable costs from fixed costs allows the contribution margin and production volume required to reach the break-even point to be identified more transparently.

Business Feasibility Analysis

Table 5 presents the business feasibility analysis of the kerupuk kupang processing enterprise based on the revised classification of costs according to their relationship with production activity. The enterprise incurred an annual production cost of Rp1,145,664,000, while variable operating costs for packaging, labor, electricity, and firewood amounted to Rp246,667,200 per year. Consequently, total variable costs amounted to Rp1,392,331,200 per year. Fixed costs consisted of annual depreciation and business tax, totaling Rp14,713,664 per year. The resulting total annual cost was Rp1,407,044,864. With annual revenue of Rp1,485,120,000, the enterprise generated an annual profit of Rp78,075,136.

Based on annual production of 124,800 kg and annual revenue of Rp1,485,120,000, the implied selling price was approximately Rp11,900 per kg. The resulting variable cost was approximately Rp11,156.50 per kg. Using annual fixed costs of Rp14,713,664, the Break-Even Point (BEP) was approximately 19,790 kg per year. This value indicates the minimum annual production required for the enterprise to cover its fixed and variable costs under the observed cost and revenue conditions. Since estimated annual production of 124,800 kg substantially exceeded the break-even production volume, the enterprise operated above its break-even level during the study period.

The Revenue-Cost (R/C) Ratio was approximately 1.06, indicating that the enterprise generated revenue greater than its total annual cost. Specifically, every Rp1.00 of total cost generated approximately Rp1.06 in revenue. An R/C Ratio greater than 1 indicates that total revenue exceeds total cost and therefore indicates financial feasibility. The Payback Period was approximately 0.89 year, calculated by dividing the initial investment of Rp69,147,000 by the annual profit of Rp78,075,136. This result indicates that the initial investment could theoretically be recovered in less than one year under the assumption of constant annual profit and without considering the time value of money, additional investment, or salvage value.

Table 5. Business Feasibility Analysis

Indicator	Value
Initial Investment	Rp69,147,000
Annual Depreciation Cost	Rp11,713,664
Annual Production Cost	Rp1,145,664,000
Annual Variable Operating Cost	Rp246,667,200
Total Annual Variable Cost	Rp1,392,331,200
Annual Fixed Cost	Rp14,713,664
Total Annual Cost	Rp1,407,044,864
Annual Production	124,800 kg
Implied Selling Price	Rp11,900/kg
Variable Cost per Unit	Rp11,156.50/kg
Annual Revenue	Rp1,485,120,000
Annual Profit	Rp78,075,136
Break-Even Point (BEP)	19,790 kg/year
Revenue-Cost Ratio (R/C Ratio)	1.06
Payback Period (PP)	0.89 year

Source: Primary data processed by the authors.

The revised business feasibility analysis demonstrates that the kerupuk kupang processing enterprise generated positive financial returns under the operating conditions observed during the study period. Annual revenue exceeded total annual cost, resulting in an annual profit of Rp78,075,136. The R/C Ratio of approximately 1.06 confirms that the revenue generated was greater than the costs incurred. The BEP of approximately 19,790 kg per year was substantially below the estimated annual production of 124,800 kg, indicating that the enterprise operated considerably above its minimum break-even production level.

The revised cost classification also provides a clearer interpretation of the enterprise's cost structure. Production materials, packaging, labor, electricity, and firewood were treated as variable costs because their use was associated with production activity, whereas depreciation

and business tax were treated as fixed costs. This distinction is important because the classification of costs directly determines the unit variable cost and consequently affects the BEP calculation. The Payback Period of approximately 0.89 year further indicates a relatively rapid theoretical recovery of the initial investment. Overall, the financial indicators demonstrate favorable business performance under the historical operating conditions observed during the study period.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study concludes that the kerupuk kupang processing enterprise operated by UKM Ibu Kholilah in Balongdowo Village demonstrated favorable financial performance and provided measurable socioeconomic contributions under the operating conditions observed during the study period. The enterprise required an initial investment of Rp69,147,000, with production land and processing equipment representing the major investment components. The cost analysis showed that production materials constituted the largest share of variable costs, particularly tapioca flour and dried kupang, while labor, packaging, electricity, and firewood were also classified as variable costs because their use was associated with production activity. Annual depreciation and business tax were treated as fixed costs.

The business feasibility analysis resulted in an annual revenue of Rp1,485,120,000 and an annual profit of Rp78,075,136. The R/C Ratio was approximately 1.06, indicating that the enterprise generated more revenue than total annual cost. The Break-Even Point (BEP) was approximately 19,790 kg per year, substantially below the estimated annual production of 124,800 kg. The Payback Period (PP) was approximately 0.89 year, indicating that the initial investment could theoretically be recovered in less than one year under the assumption of constant annual profit and without considering the time value of money, additional investment, or salvage value.

Beyond financial feasibility, the enterprise provides a measurable socioeconomic contribution through employment and wage-income generation. The business employs six workers and generates approximately Rp159.12 million in annual labor expenditure. In addition, the processing activity creates value by transforming locally available kupang into a marketable processed food product. These findings indicate that fisheries-based MSMEs can simultaneously function as financially viable enterprises and as value-added processing activities that support employment opportunities and coastal livelihoods.

However, the findings should be interpreted within the historical context of the April 2016–January 2017 data collection period. The results represent the financial and operating conditions observed during that period and should not be interpreted as current market estimates or as evidence of a causal improvement in household income. Overall, the study demonstrates that value-added fisheries processing can provide both business-level economic viability and measurable contributions to local coastal economic activity.

Limitations

This study has several limitations. First, the analysis was conducted using a single case study of one fisheries-based MSME, namely UKM Ibu Kholilah in Balongdowo Village, Sidoarjo Regency. Consequently, the findings may not be directly generalizable to other fisheries-processing enterprises operating at different production scales, management practices, market conditions, or geographical locations.

Second, the financial data were collected during April 2016–January 2017 and therefore represent historical operating conditions. Changes in raw material prices, labor costs, selling prices, consumer demand, technology, and other market conditions may affect the current financial performance of similar enterprises. The financial results should therefore be interpreted as historical case evidence rather than current market benchmarks.

Third, the financial feasibility assessment relied on conventional indicators, including Break-Even Point (BEP), Revenue-Cost (R/C) Ratio, and Payback Period (PP), without incorporating more comprehensive investment appraisal techniques such as Net Present Value (NPV), Internal Rate of Return (IRR), or Benefit-Cost (B/C) Ratio.

Fourth, the socioeconomic contribution was assessed primarily through directly observable indicators, particularly employment, labor expenditure, and value-added utilization of local fisheries resources. The study did not collect longitudinal household-income data, changes in workers' welfare, employment quality, or local economic multiplier effects. Therefore, the findings should be interpreted as evidence of socioeconomic contribution rather than causal socioeconomic impact. Future research should incorporate updated financial data, larger samples of fisheries-based MSMEs, household-level socioeconomic indicators, and broader measures of local economic effects.

Recommendations

Based on the findings, the kerupuk kupang processing enterprise should prioritize production-cost management and the efficient use of major raw materials. Tapioca flour and dried kupang represented the largest components of production costs; therefore, maintaining a stable supply of these inputs and improving procurement efficiency are important for protecting profit margins. The enterprise should also improve production efficiency and labor productivity while maintaining product quality and consistency.

Market development should be strengthened through product diversification, improved packaging, branding, and digital marketing. These strategies may increase market reach and strengthen the competitiveness of kerupuk kupang as a value-added fisheries product. Expanding market access can also improve the enterprise's capacity to maintain employment and generate wage income within the local community.

Local governments and relevant institutions can support fisheries-based MSMEs through entrepreneurship training, access to financing, technology adoption, product certification, packaging improvement, and market-promotion programs. Such interventions can strengthen the capacity of small-scale processors to convert locally available fisheries resources into competitive value-added products while maintaining local employment opportunities.

Future research should involve a larger number of fisheries-based MSMEs across different coastal regions and use updated primary data to reflect contemporary market conditions. Further studies should also incorporate comprehensive investment appraisal methods, including Net Present Value (NPV), Internal Rate of Return (IRR), and Benefit-Cost (B/C) Ratio, together with household-level socioeconomic indicators and local economic multiplier measures to provide a more comprehensive assessment of the sustainability and socioeconomic role of fisheries-based MSMEs.

Author Contributions

All authors contributed substantially to this study. The first author was responsible for conceptualizing the research, collecting field data, performing the business feasibility analysis, and preparing the original manuscript draft. The co-authors contributed to the research design, data interpretation, critical revision of the manuscript, and improvement of the scientific content. All authors reviewed, approved, and agreed to the final version of the manuscript prior to submission and accept responsibility for the integrity and accuracy of the work.

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