



DEVELOPMENT FEASIBILITY OF CRACKER MSMEs IN BOGOR CITY

(Case Study: *Simping Beras Kencur Teteh Sari Business*)

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ABSTRACT

The Biopharma plant processing business has great potential, especially in this pandemic. Cutcherry is a biopharmaceutical plant that has many health benefits. Teteh Sari is a cutcherry cracker business with a development plan in the form of house building production and procurement of production machinery and equipment. This research was conducted to analyze the feasibility of the development plan for the Teteh Sari cutcherry cracker business, which will be carried out. Feasibility analysis includes non-financial and financial aspects. As a result of the non-financial aspect, the business development plan is feasible to run based on the feasibility score for each non-financial aspect above 50 percent. The analysis of the financial aspect results obtained an NPV value of IDR 220.345.204, an IRR of 80,42 percent, a Net B/C of 6,44, and a Payback Period of 2,85 years; the business development plan is financially feasible because it passes the eligibility criteria. The switching value analysis shows that the business is sensitive to a decrease in the amount of production.

INTRODUCTION

MSMEs are a business sector in Indonesia that can compete to become a business sector that excels in competitiveness and contributes to the country's economic growth (Nasution & Lubis, 2018; Wahyuningsih, 2009). According to data

from the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, many MSMEs in Indonesia are increasing. The growth rate of the number of MSMEs in Indonesia from 2015-to 2018 is 8.3 percent. The number of MSMEs that provide accommodation and food and drink in Indonesia is 17% (BPS, 2019). Bogor City is one of the regions that contributed 15,364 MSME units in 2019. The number of MSMEs in Bogor City continues to increase every year with an increasing trend of 5.42% (Figure 1).

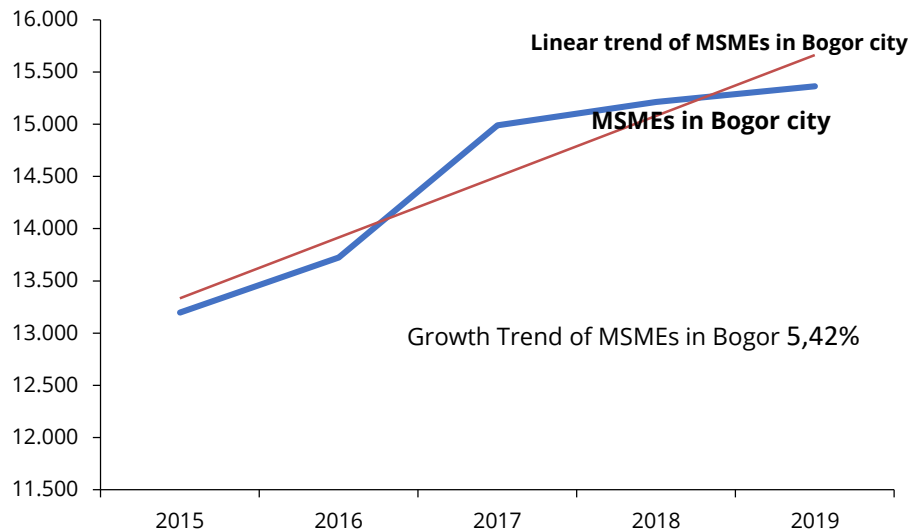


Figure 1.
Number of MSMEs Developments in Bogor City
(Department of Cooperatives and MSMEs in Bogor City, 2019)

One of the MSMEs that runs and contributes to making crackers, especially cutcherry crackers, is *Simping Beras Kencur Teteh Sari*. Simping crackers are an alternative food that is relatively healthy, low in cholesterol, and easy to digest (Nugraha, 2002; Suseno et al, 2004). The MSME is a micro-scale business unit under the guidance of the MSME Office of Bogor, City, which has been running for almost three years. This business locates in Tanah Cereal District, Bogor City, West Java. Currently, this business can produce 500 packages or the equivalent of 100 kg. This amount is obtained by implementing a production system that is still not optimal, which only applies 60 hours of work a month and still uses conventional frying pans.

The demand for the crackers often cannot be fulfilled, as in August 2020, the demand for these crackers reached 1200 packages, but due to production constraints such as technical aspects that still use conventional fryers that can only produce 4 kg of product in each production. In addition, the limited number of workers in producing these crackers is another problem.

The development of the *Simping Beras Kencur Teteh Sari* business has set a target for the production of simping crackers in a month to reach 1350 packages or equal to 270 kg of crackers. This target can be obtained by increasing working hours to 120 working hours in a month by moving production sites and increasing the use of production machines capable of producing 10 kg of product in each production.

Business success is determined by many factors, one of which is determining the right business location. Ease of business development is one of the important factors in determining the location of the business (Handoko 2000). Producers in the agro-industry sector must be able to use technology to add value to processed agricultural products (Soekartawi, 2007; Massinai et al, 2013). Moreover, currently facing technological advances, the effectiveness will increase to produce more production output (Mankiw 2007). Of course, relocating business production sites and adopting modern production equipment requires a large investment cost. Therefore, evaluating the business development design requires an investment assessment using a business feasibility analysis.

MSME *Simping Beras Kencur Teteh Sari* is aware of this. Therefore, the business carried out the development by increasing production capacity by relocating business locations. Also, applying modern equipment in the form of a fryer that can control the temperature of the oil in the fryer automatically (deep fryer) and an oil drainer (spinner) that can optimize the production system so that the resulting product in one month can reach 1350 packages or the equivalent of 270 kg of simping crackers every month. In addition, business permits and other legalities are made in supporting business development, such as the National Food and Drugs Agency and Halal Indonesian Ulema Council certification. With the complete legality of the company, the realization of business development will take place more optimally.

The development of the *Simping Beras Kencur Teteh Sari* business certainly must be carried out effectively and efficiently. Therefore an analysis is needed that shows the development of this business is feasible or not feasible to run. The development of the business will also affect the environment around the place of production, so analysis is needed to show whether this business is feasible or not to run based on its impact on the social, economic, and surrounding environment. The development of the business also requires a large investment cost and is expected to be profitable. Therefore it is necessary to conduct a financial feasibility analysis. *Simping Beras Kencur Teteh Sari* will experience conditions that continue to change, it can lead to an ambiguity that can lead to changes in the input and output variables of production that can affect business feasibility, so it is necessary to do a switching value analysis to find out how much change in the input and output variables is. Such as a decrease in production and an increase in production costs to the feasibility level of business development. Based on this explanation, the problems studied in this study can be formulated, including 1) how is the feasibility of developing the *Simping Beras Kencur Teteh Sari* business in a non-financial way in terms of market, technical, management, legal, social, economic, and cultural aspects, as well as

environmental aspects ?, 2) what is the financial feasibility of developing the *Simping Beras Kencur Teteh Sari* business?, and 3) what is the acceptable level of change at the feasibility level if there is a decrease in the amount of production and an increase in production costs in the *Simping Beras Kencur Teteh Sari* business.

RESEARCH METHODS

Method of Collecting Data

This research was conducted at the *Simping Beras Kencur Teteh Sari* production site in Tanah Sareal District, Bogor City, West Java. The determination of the study location was purposive. It was considering that the *Simping Beras Kencur Teteh Sari* is one of the services of the Bogor City Small and Medium Enterprises Office, which plans to develop its business by increasing production capacity through relocation of production locations and the use of modern tools in the production process. Implementation of this research was carried out from March to June 2021.

The types of data used in this study were primary and secondary data. Primary data was obtained through interviews with business owners or related parties. Secondary data was obtained through various sources, including the Office of Cooperatives and SMEs in Bogor, the Central Statistics Agency, other agencies, library sources, and various previous studies.

Data Analysis Method

Data analysis carried out in this study is a method of qualitative analysis and quantitative analysis. Qualitative analysis is used in analyzing non-financial aspects, including market aspects, technical aspects, management, and legal aspects, social, economic, and cultural aspects, and environmental aspects. The Likert scale is used to analyze non-financial aspects by assigning a value to the criteria specified in each aspect. Meanwhile, quantitative analysis was conducted to analyze financial and non-financial aspects. The analysis of the financial aspect is carried out using income statement analysis and analysis of investment criteria consisting of Net Present Value (NPV), Net Benefit-Cost Ratio (Net B/C), Internal Rate of Return (IRR), Payback Period (PP), and Switching Value analysis.

Non-Financial Aspects Analysis

The analysis of non-financial aspects studied on the feasibility of developing *Simping Beras Kencur Teteh Sari* business includes market aspects, technical aspects, management, and legal aspects, social, economic, and cultural aspects, and environmental aspects. Market aspect analysis includes analysis of demand, supply, prices, marketing programs, and sales projections that the company can achieve.

Technical aspects related to production operations include business location, production area, production process, and production layout. Management and legal aspects include management in the business, the form of business entity applied, and the certification and legality of the business. The social, economic, and cultural aspects discuss the social, economic, and cultural impacts on the community around the business. The environmental aspect discusses the influence of the presence of a business on the environment. Quantitative analysis uses a Likert scale to make it easier to draw feasibility conclusions because non-financial aspects tend to be subjective (Wahyu, 2018; Arifin et al, 2018). Quantitative analysis was carried out using a Likert scale by providing a feasibility value in the range of values from one to four (1-4) arranged sequentially from strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The total score for each criterion from each aspect is calculated by adding up all the scores obtained and dividing by the number of existing criteria, which is then multiplied by 100 percent. A feasibility score in the form of percent will be generated. These non-financial aspects can be feasible if they produce a feasibility value of more than 51 percent and are said to be inappropriate if they produce a feasibility value of less than 51 percent (Giranda 2018).

Financial Aspects Analysis

The analysis of financial aspects is carried out using profit and loss analysis and analysis of investment feasibility criteria, which consist of Net Present Value, Net Benefit/Cost Ratio, Internal Rate of Return, Payback Period, and Switching Value (Nurmalina, 2014).

Net Present Value (NPV)

Net Present Value or net benefits is the current value of the income stream caused by the investment made. A business can be feasible if the NPV is greater than 0, which means the business can provide benefits and benefits. The NPV value can be calculated using the formula.

$$NPV = \sum_{t=1}^n \frac{B_t - C_t}{(1+i)^t}$$

Note: NPV = *Net Present Value* (IDR); B_t = Benefit year-_t; C_t = Cost year-_t; i = Interest; n = Business operation (year); and t = Business year

Net Benefit Cos ratio (Net B/C)

Net Benefit-Cost Ratio which is the ratio of net benefits with a positive value to net benefits with a negative value. A business can be feasible if the

Net B/C value is less than 1. The Net B/C value can be calculated using the formula:

$$NetB/C = \left[\frac{\sum_{t=1}^n \frac{B_t - C_t}{(1+i)^t}}{\sum_{t=1}^n \frac{B_t - C_t}{(1+i)^t}} \right] \quad \Rightarrow \quad \begin{matrix} B_t - C_t > 0 \\ B_t - C_t < 0 \end{matrix}$$

Note: B_t = Revenue in t year; C_t = Annual costs in t year; i = Interest Rate (percent); t = Business Operatin (year) ($t = 1, 2, 3, \dots, n$) $1/(1+i)$; and i = Discount Factor (DF) in t year

Internal Rate of Return

Internal Rate Return (IRR) is the internal rate of return expressed in percent. IRR is a method for calculating the interest rate that makes the present value of expected cash inflows equal to the present value of expected cash outflows (Hazen 2009). A business can be feasible if its IRR has a value greater than the prevailing interest rate. The following is the formula for the IRR:

$$IRR = i_1 + \frac{NPV_1}{NPV_1 - NPV_2} (i_2 - i_1)$$

Note: i_1 = Discount rate with Positive NPV (percent); i_2 = Discount rate with Negative NPV (percent); NPV_1 = Positive NPV; and NPV_2 = Negative NPV

Payback Period

The payback period (PP) is the period required to return the investment expenditure. If the payback period is shorter than the projected life of the project, then the project can be said to be feasible. The faster the ability of a business to recover its business investment costs, the more feasible the business is. Mathematically, the payback period can be calculated using the following formula:

$$PP = \frac{I}{Ab}$$

Note: I = The number of required investment costs; and A = Net benefits that can be obtained each year

Switching value analysis

Switching Value analysis is carried out to determine the maximum change from changes in a component of business inflow, including a decrease in output prices or decreased production. In addition, Switching Value Analysis can also calculate changes in the components of business outflow, including an increase in input prices or an increase in production costs (Nurmalina et al., 2014). Switching value analysis is done by finding the maximum limit of the change so that the business can still be said to be feasible to run. This condition is projected until the NPV is close to zero, the Net B/C value is close to one, and the IRR value is close to the prevailing interest rate. In this study, switching value analysis was carried out with four scenarios, namely a decrease in the amount of production, an increase in packaging prices, an increase in the price of rice flour, and an increase in the price of cutcherry. The selection of the four scenarios was based on previous research, including Winarti et al. (2018) and Nugraha (2015).

RESULTS AND DISCUSSION**NON-FINANCIAL ASPECTS**

The complexity of the investment decision-making process is often not only a financial aspect. As described by Skitmore et al. (1989), any knowledge or information is very important to be able to assist decision makers in recognizing and minimizing potential uncertainties and risks. However, many project objectives tend to be qualitative and not easy to measure and verify. Meanwhile, as revealed by Andreou et al. (1989), projects also often generate externalities where costs and benefits are often not taken into account in the financial aspect. therefore. Financial techniques should be used only as a guide, or basis, and other factors that may affect the analysis of uncertainty should be considered. Financial evaluation is only part of the decision-making process and additional information is required. Therefore, even if the financial conditions are very favorable, neglecting some qualitative aspects can lead to serious problems. The following are some of the non-financial aspects surrounding micro, small and medium-sized crackers in the city of Bogor

Market Aspect

Analysis of market potential is carried out through the characteristics of target consumers based on demographic and geographical aspects. The target consumers used in this study are consumers who live in Bogor City and are male and female. As for consumers aged 15-40 years in Bogor City, as many as 429,452 people with the total per capita expenditure for other food

commodities such as crackers is IDR 15,121 (BPS 2020 processed). Assuming as many as 50% of the population of Bogor City buy crackers in other food choices. Then the market potential obtained by this line of business is $\text{IDR } 15,121 \times 214,726 = \text{IDR } 3,246,871,846$. In the sales projection during the *Simping Beras Kencur* MSME development, Teteh Sari gets a turnover of IDR 52,500,000. Then the market share owned by the Small and Medium Enterprises of *Simping Beras Kencur Teteh Sari* in Bogor is $(\text{IDR } 52,500,000 / \text{IDR } 3,246,871,846) \times 100\% = 1.61\%$. This indicates that the demand for cutcherry crackers has only reached 1.61% of the total potential of the cracker market in Bogor City. This shows that the product's market potential is still very wide in the city of Bogor.

The price set for one product of *simping rice crackers Teteh Sari*, which is sold directly to end consumers, is IDR 20,000. Meanwhile, the selling price through resellers is subject to a lower price of 20 percent of the selling price per package. *Simping Beras Kencur Teteh Sari* now has 30 reseller partners and ten restaurants spread across the Greater Jakarta area. Sales promotions are carried out online using social media such as *Instagram* and *WhatsApp* and offline participating in events and bazaars. Based on the feasibility analysis results of the market aspect using the Likert scale, a feasibility value of 75.56 percent was obtained so that the business can be said to be feasible based on the market aspect because it produced a feasibility score of more than 51 percent.

Technical Aspect

The *Simping Beras Kencur Teteh Sari* is located on Jalan Pool Bina Marga, Cibadak Poncol Village, RT 002/001 No.48 Kayumanis Village, Tanah Sareal District, Bogor City. The raw materials needed in production activities come from suppliers who have collaborated with businesses to supply production raw materials. This is indicated by the location proximity (1.7 km) and the ease of supplying raw materials (once every month). This is in line with Purwoko's research (2007), Akram & Tinaprilla (2020) that determining the most optimal business location takes access to raw materials, the location of the targeted market, labor resources, and access to transportation.

Production process activities include milling raw material, steaming, dough making, molding, frying, draining, and packaging. In actual conditions, the production capacity of *simping beras kencur* crackers is around 500 packages or 100 kilograms per month. Under development conditions, this business set a production capacity of *simping beras kencur* crackers capable of reaching 1350 packages or equivalent to 270 kg per month. The feasibility analysis results using the Likert scale show the percentage of the feasibility value of 75 percent. From the technical aspect, the business is feasible to run.

Management and Legal Aspects

Simping Beras Kencur Teteh Sari has a management system that is still simple. This business is a family business, and the primary source of labor comes from the family. This business also does not have an organizational structure, so the business is run non-formally. Three people currently run the business unit. Most of the workers in the business have graduated from high school (SMA).

The *Simping Beras Kencur Teteh Sari* business is an individual business entity that started running in 2018. At the beginning of the establishment, this business did not have any permits. Assisted by the Bogor City Cooperatives and UMKM Service, this business has a Business Certificate (SKU) permit from the village, Home Industry Food certification (P-IRT) number 2063271010970-24 from the Bogor City Health Office, and a Business Identification Number (NIB).)/ Micro and Small Business License (IUMK) number 9120213182715. In the future, the Small and Medium Enterprises of *Simping Beras Kencur Teteh Sari* are applying for Indonesian Ulema Council Halal certification and National Food and Drug Agency permits. *Simping Beras Kencur Teteh Sari* already has a Taxpayer Identification Number (NPWP) and reports finances to the relevant offices to determine the taxes paid every month. Based on the quantitative analysis of the feasibility of the management and legal aspects, the market aspect feasibility value is 64.58 percent. This means that the management and legal business can be feasible to run.

Social, Economic, and Cultural Aspects

From the social aspect, namely seeing the response of the surrounding community to the operation of the *Simping Beras Kencur Teteh Sari*. The recruitment of workers sourced from around the business location further increases the confidence of the surrounding community. In addition, although Teteh Sari's business is still classified as a micro-enterprise, this business also often holds a Friday blessing program in collaboration with MSMEs in the city of Bogor to help people with disabilities who are still not well off to meet their daily needs.

In the economic aspect, the existence of a business is considered to be able to increase income, especially for the community around the business location. These MSMEs create jobs when they receive orders beyond their capacity and require additional workers. In terms of culture, the impact of business activities can make *simping beras kencur* exclusive souvenirs of the Bogor City area. Apart from that, this business can be accepted by the prevailing culture around the business location from the cultural aspect. Based on the results of a quantitative feasibility analysis of the social, economic, and cultural aspects, the feasibility value of the social, economic, and cultural aspects is

obtained by 72.39 percent, so the business can be said to be feasible because it produces a feasibility score of more than 51 percent.

Environmental Aspects

In the production process, the business produces residual production waste that impacts the environment around the business. Although these MSMEs do not produce waste on a large scale, they still process the remaining production waste before being disposed. Regarding environmental security, the security of the location around the business is guarded by security officers from the village administrator, who must pay a security service fee every month. The results of the analysis of the non-financial feasibility aspects of all aspects can be seen in Table 1.

Table 1 The results of the analysis of the non-financial feasibility aspects quantitatively

No.	Aspects	Feasibility Percentage (%)	Description
1	Market	75,56	Feasible, because > 50 %
2	Technical	75,00	Feasible, because > 50 %
3	Management and Legal	64,58	Feasible, because > 50 %
4	Social, Economic, and Cultural	72,39	Feasible, because > 50 %
5	Environmental	70,13	Feasible, because > 50 %
Total Score		71,67	Feasible, because > 50 %

Based on the results of a quantitative feasibility analysis on environmental aspects, the feasibility value of environmental aspects is 70.13 percent. The business can be feasible because it produces a feasibility score of more than 51 percent (Nazir 2005).

FINANCIAL ASPECT

Feasibility studies are the most appropriate way to answer questions about current and future businesses. Financial feasibility studies project how much start-up capital is required, sources of capital, return on investment, and other financial considerations. This looks at how much cash is needed, where it is coming from, and how it will be spent. The more entrepreneurs know about their business needs at the outset, the fewer problems they will face in raising capital and starting their business.

Expenditure Flow Analysis

Expenditure flows analyzed in this study are an investment, reinvestment, and operational costs. The investment costs incurred are intended to realize the business development process. The total investment cost used is IDR 115.832,000, which is used to construct a production site, purchase a refrigerator, deep fryer, spinner machine, grinding machine, etc.

Operational costs are the overall costs incurred for *simping beras kencur* cracker production activities. Operational costs are divided into two components, namely, fixed costs and variable costs (Nurmalina et al., 2014). The fixed costs used by the Teteh Sari rice cracker processing business consist of employee wages, marketing costs, electricity, and water. While the variable costs in the business include the purchase of raw materials, gas, packaging, and oil. In the first year, the fixed costs incurred by the business amounted to IDR 42,713,842 and operating expenses of IDR 32,412,000. Meanwhile, from the second year to the eighth year, the fixed costs incurred by the business amounted to IDR 103,171,067 and operating costs of IDR 124,534,800.

Revenue Flow Analysis

The revenue stream analyzed in this study is the value of the products sold and the residual value of the investment. In the first year, *Simping Beras Kencur Teteh Sari* could produce as many as 6000 pack products or 1200 kg annually. Under development conditions or after the second year, *Simping Beras Kencur Teteh Sari* can produce as many as 16,200 packages or 3240 kg of cutcherry crackers every year. Sales are carried out in two channels with a composition of 70% through reseller partners and restaurants with Ro 16,000.00-/ and as much as 30% through direct sales to consumers for IDR 20,000.00-/pcs. Therefore, in the first year, the business got product sales of IDR 103,200,000 and in the second year to the eighth year the business got product sales of IDR 278,640,000.

The business also has several investments that still have an economic life of the business life. These investments still have a residual investment value after the projected age of the business. The residual value calculation is based on the straight-line method. The straight-line method is calculated by dividing the purchase value by the economic life of each component and then multiplying it by the remaining life of each investment component. This value is stated in Rupiah based on the assumption of operating conditions with a total residual value of IDR63,268,667.00.

Profit and Loss Analysis

Profit and loss analysis is done by subtracting total sales from operating costs. The gross profit of the business after the value of sales minus operating costs in the first year was IDR27,898,533.00, and from the second year to the

eighth year, it was IDR50,934,133.00. This nominal is reduced by a 6 percent interest expense of IDR 11,869,820 for five years so that the profit before tax obtained in the first year is IDR 15,948,669, and in the second year to the fifth year, it is IDR 39,064,313. In the first year, the tax imposed is IDR 80,144.00. in the second to fourth years, the tax imposed is IDR 195,322.00, and in the fifth year the tax is IDR 390,643.00, and in the sixth to eighth year the tax is IDR 509,341.00. So that the net profit earned by the business after paying taxes in the first year is IDR 15,948,569.00. Meanwhile, from the second to the fourth year the net profit obtained was IDR 38,868,992.00 and in the fifth year the net profit was IDR 38,673,670.00, and in the sixth to eighth year the net profit was IDR 50,424,792.00.

Investment Feasibility Criteria

Analysis of investment feasibility criteria is carried out to analyze whether a business can be feasible based on its financial aspects. The assessment criteria used to analyze investment feasibility are Net Present Value (NPV), Internal Rate of Return (IRR), Net Benefit-Cost Ratio (Net B/C), and Payback Period (PP). The interest rate applicable in this study is the Bank Rakyat Indonesia (BRI) deposit interest rate applicable in April 2021, which is 2.85%. The analysis of investment feasibility criteria results is used to determine whether or not business development is feasible based on financial aspects. The value of the business feasibility criteria for the *Simping Beras Kencur Teteh Sari* can be seen in Table 2.

Table 2 The Business Feasibility Criteria for the *Simping Beras Kencur Teteh Sari*

Criteria	Criteria	Result
NPV	>0	IDR 220.345.204
Net B/C	>1	80,42%
IRR	>2,85	6,44
PP	<8	2,85 years

Based on Table 2 shows that the NPV is worth IDR220,345,204.00. This figure shows that until the end of the eight-year business operation, the business will get a total profit of IDR 220,345,204.00. This shows that the business development plan that will be carried out by the *Simping Beras Kencur Teteh Sari* is feasible to run based on the eligibility requirements (NPV> 0). The net B/C obtained is 6.44. This indicates that for every expense of IDR 1, there will be a profit of IDR 6.44 over the life of the business. Based on the Net B/C value obtained being greater than 1, the business development that will be carried out can be said to be feasible. The IRR value obtained from this business development is 80.42%. The IRR value greater than the bank deposit

interest rate of 2.85% per year indicates that this business development is feasible to carry out. The payback period obtained in this business is 2.85 years, which means the business investment costs will return in the second year in the fourth month after the business is started. The payback period obtained is smaller than the business age of 8 years. This indicates that the business development plan to be implemented can be said to be feasible.

Switching Value Analysis

Switching value analysis was carried out on the variables that were thought to have the most influence on business. In this study, the variables that are thought to have the most influence on the business is a decrease in the amount of production, an increase in the price of raw materials for rice flour and cutcherry, and an increase in the price of packaging.

Table 3 Switching Value of Simping Beras Kencur Teteh Sari

Changes	Changes Limit
Decreasing of Production Number	12,75
Increasing of Packaging Price	90,37
Increasing of Rice Flour Price	119,78
Increasing of Cutcherry Price	202,29

The results of the switching value analysis for the development of *Simping Beras Kencur Teteh Sari* can be seen in Table 3. Based on Table 3, the maximum limit for decreasing the amount of production is 12.75 percent. The maximum limit for increasing the price of packaging is 90.37 percent, and the maximum limit for increasing the price of rice flour is 119.78 percent. Changes to the increase in the price of cutcherry are still feasible if the amount of increase does not exceed 202.29 percent. However, it is also necessary to anticipate the increase in raw material prices by identifying alternative suppliers in providing inputs (Hanifa and Rosiana, 2020; Irmawati et al, 2015).

CONCLUSIONS AND POLICY IMPLICATIONS

Conclusions

Based on non-financial and financial feasibility analysis, the *Simping Beras Kencur Teteh Sari* is feasible to run. This is shown based on the value of the feasibility score on the non-financial aspect with the percentage level of the business feasibility score greater than 51 percent. In addition, based on the feasibility analysis of the financial aspect, the NPV was IDR 219,948,248.00, the IRR was 80.41 percent, the Net B/C was 6.43, and the Payback Period was 2.85 years. The results of switching value

analysis using four scenarios show that the most sensitive variable affecting business is the variable of decreasing the amount of production with a maximum limit of 12.75 percent decrease. If there is a decrease in the amount of production by more than 12.75 percent, the business can be said to be unfit to run, and it is necessary to anticipate that there will be no decrease in that limit.

Recommendations

Based on the analysis of non-financial aspects, the non-financial aspect of the assessment component, which has the smallest score in each aspect needs to be improved. From the market aspect, businesses should maximize social media such as *Instagram*, *Facebook*, etc. Using the ads feature on social media and doing endorsement collaborations with influencers. From the technical aspect, it is better if the business determines a business layout based on the flow of the production process so that the production process can be carried out effectively and efficiently. Businesses should immediately have a clear organizational structure from the management and legal aspects. From the social, cultural and environmental aspects, the business can set aside a portion of the profits earned for the construction and improvement of public facilities around the business location. From the environmental aspect, even though the business has already carried out the waste treatment, the business should also apply for an Environmental Impact Assessment permit to ensure that business and development activities can run sustainably.

Based on the analysis of the financial aspect, the construction of a production house uses a fairly large investment cost to impact the feasibility value. Therefore, integrated planning and design should be made so that every aspect of the business supports each other and the development process can run effectively and use costs as efficiently as possible.

To avoid a decline in production, businesses should use more modern production equipment and regular maintenance to maximize production. Businesses can also provide training and direction to employees before carrying out the production process to minimize the level of negligence that employees can make during the production process and minimize the risk of product failure.

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