Financial Feasibility Analysis of Coffee Roasting Business (Case Study in Coffee Misconception Shop)

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Abstract
The coffee roasting business at the Kelirumologi Kopi shop has a very big opportunity to run because there are no competitors in the Kersana District area. But on the other hand, is this business financially viable or not? Therefore, this study aims to determine the feasibility of financial analysis in coffee roasting businesses in Kelirumology Coffee. The method used in this study is a quantitative method that is used to analyze the calculation of financial aspects such as Payback Period, Net Present Value and Profitability Index. The results of the study show that the calculation results from financial analysis are declared feasible to run because the Payback Period value is smaller than the investment age, namely 1 year 8.7 months with an investment age of 3 years, the NPV is more than 0 and has a positive value of Rp. 65,922,388 and PI is accepted because the calculation results show more than 1, namely 1.8.

Keywords: Roasting, Coffee, Results, Analysis, Feasibility

INTRODUCTION
The agricultural sector has a very important role in economic activity in Indonesia, especially the plantation sector. One of the plantation products that has a significant impact on Indonesia’s economic activities, including the country’s exports, is coffee. One of the commodities in Indonesia that has the potential to be developed into a major export product is coffee. Indonesia is known as the second largest coffee producer and exporter after Vietnam. The tropical climate and favorable geographical conditions and temperatures make Indonesia a potentially good place for coffee cultivation (Hafezd As’ad and Aji, 2020).

Coffee has grown to become one of the most well-known drinks and continues to be a classic drink today. Not only the elderly who regularly drink coffee these days, even young people like the drink (Sudiartini et al, 2020). The amount of coffee consumed in Indonesia always increases every year. The average annual increase in coffee consumption in Indonesia is 3.4%, making it possible to capitalize on this trend in an effort to improve the lives of coffee farmers and coffee producers.

The increase in coffee consumption in Indonesia will affect the increase in the number of businesses in coffee processing as seen in the rise of the coffee shop or cafe business and the coffee roasting business. The increase in coffee consumption in Indonesia will also affect coffee production in Indonesia, which always increases every year. The increase in the number of requests for coffee beans will be an opportunity for business people in the coffee processing business, one of which is in the coffee roasting business. This coffee roasting business has a direct relationship with the coffee shop or cafe business to supply the needs of coffee beans.

Kelirumologi coffee is one of the businesses engaged in the coffee commodity sector having its address in Ciampel Village, Kersana District, Brebes Regency, which was established in 2016 and is managed by individuals. Previously, Kelirumologi Kopi was only limited to the business of a coffee shop or cafe, but with the passage of time and technological developments, now Kelirumologi Kopi has a coffee business branch that is engaged in coffee roasting or the
process of roasting raw coffee beans. Coffee roasting is the roasting process of green bean coffee or raw coffee beans. This coffee roasting business is always increasing every year and is very promising because there are no competitors in the Kersana District area. But in this case it cannot be used as a reference that the Kelirumologi Coffee roasting business is feasible to run and develop financially. Therefore this study aims to determine the feasibility of financial analysis in coffee roasting businesses at Kelirumologi Kopi Coffee.

RESEARCH METHODS

This research was conducted at the Kelirumologi Kopi coffee roasting business which is located at Jalan Pemuda No.34 Ciampel Village, Kersana District, Brebes Regency. Kelirumologi Coffee is a business entity engaged in the coffee commodity sector. Previously, Kelirumologi Kopi was only limited to a coffee shop or cafe. However, over time and with increasingly advanced technological advances, Kelirumologi Kopi has added a new line of business, namely coffee roasting. Coffee roasting is the process of roasting unprocessed coffee beans (green bean coffee) into ripe coffee beans ready to be dissolved in the coffee brewing process.

Primary data and secondary data are used as sources and types of data in this study. Primary data is information collected directly from the research location. Primary data was collected through direct interviews with respondents or informants and direct field observations. According to the research discussion, the respondents in this study were coffee roaster business owners, and secondary data was information collected through information from other sources such as the internet, previous research journals, and various related literature.

This research data analysis approach uses quantitative techniques. Quantitative data analysis was carried out to examine financial factors such as Payback Period, Net Present Value and Profitability Index.

1. Payback Period. According to Kasmir and Jakfar (2012), the formula used to calculate the Payback Period is as follows.

\[ PP = \frac{Investment \times 12 \text{ Month}}{Net \text{ Cash} / \text{Year}} \]

2. Net Present Value. According to Kasmir and Jakfar (2012), the formula used to calculate the NPV is as follows.

\[ NPV = \frac{Net \text{ Cash}_1 + Net \text{ Cash}_2 + \ldots + Net \text{ Cash}_N - Investment}{(1+r) + (1+r)^2 + \ldots + (1+r)^n} \]

Information:
- NPV: Net Present Value
- Net cash 1 to.d. N: Net cash for the 1st year to.d. specified year
- r: interest rate of return
- 1 to. n: Year 1 s.d. specified year

3. Profitability Index. According to Purwana and Hidayat (2016), the formula used to calculate PI is as follows.

\[ PI = \frac{\sum PV \text{ Net Cash} \times 100\%}{\sum PV \text{ Investment}} \]
Information:
If the PI is greater (>) than 1 then it is accepted (business is feasible to run).
If the PI is smaller (<) than 1 then it is rejected (the business is not feasible to run).

RESEARCH RESULTS AND DISCUSSION
Coffee Roasting Business Profile Kelirumologi Coffee
Business Name: Kelirumologi Coffee
Business Owner: Cecep Dewantara
Products produced: Processed Coffee (Robusta, Arabica, Blend)
Established Year: December 25, 2016
Address: Jl. Youth No.34, Ciampel Village, Kec. Kersana, Brebes Regency, Java Central, 52264

Vision Mission Business
Vision: Prosper Together. This means that all parties involved, from coffee farmers to coffee entrepreneurs (roasting and coffee shops) are always prosperous together, no one suffers losses and so on.
Mission:
1. Create a fair and healthy market mechanism from farmers to cafes or coffee shops.
2. Improving the quality and quality of local Brebes coffee.
3. Introducing Brebes coffee outside the region.

Financial Analysis
Processed coffee products from Kelirumologi Coffee consist of three coffee variants, namely Robusta coffee, Arabica coffee and blend coffee. The prices for each processed coffee product can be seen in the table below.

<table>
<thead>
<tr>
<th>Product</th>
<th>Weigh</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robusta</td>
<td>1 kg</td>
<td>Rp. 120,000</td>
</tr>
<tr>
<td>Arabica</td>
<td>1 kg</td>
<td>Rp. 250,000</td>
</tr>
<tr>
<td>Blend</td>
<td>1 kg</td>
<td>Rp. 160,000</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

The costs required in a coffee roasting business with the wrong terminology of coffee consist of investment costs, fixed costs and variable costs.

Investment Cost
Investment costs are substantial initial costs incurred by companies and cannot be included in one production cycle (Khotimah & Sutiono, 2014). Included in the investment costs are production houses, electrical installations, grinder machines, roasting machines, cupping bowls, plastic presses, scales, LPG gas cylinders, plastic boxes, packing tables, equipment racks, raw material racks and product racks. The following are the investment cost components which can be seen in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Price</th>
<th>Economic age</th>
<th>Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacture of Production Houses</td>
<td>20.000.000</td>
<td>30</td>
<td>666,666,666,667</td>
</tr>
<tr>
<td>Electrical installation</td>
<td>1.300.000</td>
<td>10</td>
<td>130,000</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022
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Fixed cost

Fixed costs are costs that remain constant over time, regardless of changes in the amount of work done to produce output or goods (Umar, 2003). In the Kelirumology Coffee roasting industry, fixed labor costs, depreciation costs for equipment and machinery, and building tax costs are all included in fixed costs. The table below shows the elements of fixed costs, which are as follows.

<table>
<thead>
<tr>
<th>Description</th>
<th>Total (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent Workforce</td>
<td>3.000.000</td>
</tr>
<tr>
<td>Equipment and Machinery Depreciation Cost</td>
<td>3.123.000</td>
</tr>
<tr>
<td>Building Tax</td>
<td>40.000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6.163.000</strong></td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

Variable Cost

Variable costs are costs that vary according to changes in production levels (Umar, 2003). Included in the variable costs in the coffee roasting business at Kelirumologi Kopi are raw material costs for raw coffee beans, electricity, gas, plastic packaging, packaging stickers and markers. The following are the variable cost components which can be seen in the table below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Total (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Materials (Raw Coffee Beans)</td>
<td>14.400.000</td>
</tr>
<tr>
<td>Electricity</td>
<td>200.000</td>
</tr>
<tr>
<td>Gas</td>
<td>85.000</td>
</tr>
<tr>
<td>Packaging Plastic</td>
<td>94.000</td>
</tr>
<tr>
<td>Packaging Sticker</td>
<td>100.000</td>
</tr>
<tr>
<td>Whiteboard marker</td>
<td>5.000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14.884.000</strong></td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022

The coffee roasting business at the Kelirumologi Kopi shop costs a total investment cost of Rp. 83,327,000 while the net cash obtained each year always increases. The net cash from 2019-2021 can be seen in the table below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Rp. 28,236,000</td>
</tr>
<tr>
<td>2020</td>
<td>Rp. 76,716,000</td>
</tr>
<tr>
<td>2021</td>
<td>Rp. 125,196,000</td>
</tr>
</tbody>
</table>

Source: Primary Data, 2022
The assessment criteria for financial analysis use calculations using the Payback Period, Net Present Value and Profitability Index methods.

**Payback Period**

The payback period calculation for the coffee roasting business at the Kelirumologi Coffee shop is as follows:

- **Investment** = Rp. 83,327,000
- **Year 1 net cash** = Rp. 28,236,000 – Rp. 55,091,000

Because the remainder of the calculation for year 1 cannot be reduced for year 2, the remainder for year 1 is divided by year 2.

\[
\text{PP} = \frac{\text{Rp. 55,091,000} \times 12 \text{ Month}}{\text{Rp. 76,716,000}} = 8.7 \text{ Month}
\]

Based on the calculation results, the payback period is 1 year 8.7 months, thus meaning that the initial investment in the coffee roasting business at the Kelirumologi Coffee shop will be returned within 1 year 8.7 months. According to Zainul Fuad et. al (2021), the results of his research show that the calculated Payback Period method is smaller than the economic life of the business, so that the business can be said to be feasible to run.

When viewed from the Payback Period calculation results obtained, it is stated that the coffee roasting business at the Kelirumologi Coffee shop can be achieved to operate or grow. According to Kasmir and Jakfar (2012) explained that a business is said to be feasible to run based on the calculation of the Payback Period, that is, if the Payback Period is now smaller than the investment age of the business being run.

**Net Present Value**

The assessment criterion for the Net Present Value is that if the NPV is positive, then the coffee roasting business at the wrong-mology coffee shop is declared economically feasible to run, but conversely if the NPV is negative, the coffee roasting business at the wrong-mology coffee shop is declared not feasible to run. This is also conveyed in the opinion of Purwana and Hidayat (2016), namely an investment project is said to be economically feasible if the NPV value is positive (greater than zero) and vice versa if the NPV value is negative, the investment project is rejected because it is less than zero and is considered unprofitable.

In the coffee roasting business at the Kelirumologi Kopi shop, it assumes that the desired rate of return is 20%. So the calculation of the Discount Factor (DF) is as follows.

\[
\text{Year 1} = \frac{1}{(1+0.2)} = 0.833
\]
\[
\text{Year 2} = \frac{1}{(1+0.2)^2} = 0.694
\]
\[
\text{Year 3} = \frac{1}{(1+0.2)^3} = 0.579
\]

Next, after knowing the DF, the next step is to complete the NPV calculation. The following is a table for calculating the NPV for the coffee roasting business in Kelirumology Coffee from 2019-2021.

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Cash</th>
<th>DF 20%</th>
<th>Net Cash PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Rp. 28,236,000</td>
<td>0.833</td>
<td>Rp. 23,520,000</td>
</tr>
</tbody>
</table>
Total Net Cash PV  = Rp. 149.249.388
Total Investment PV = Rp. 83.327.000 –
NPV  = Rp. 65.922.388

Based on the calculation results obtained using the Net Present Value method, the NPV results are Rp. 65,992,388 with these results, the coffee roasting business at the Kelirumologi Kopi shop is economically viable because the NPV is positive. This is also in accordance with the research of Maria Nabut et al. (2021), who argued that when calculations using the Net Present Value approach provide findings (>) greater than 0 and a positive value, the company can be considered operationally practical and feasible to run.

Profitability Index

Profitability Index is the activity ratio of the sum of the present value of net income with the present value of investment expenses over the life of the investment (Kasmir and Jakfar, 2012). The scoring criteria for the Profitability Index are if the PI is greater (>) than 1 then the roasting business at the wrong-mology coffee shop is declared feasible, whereas if the PI is smaller (<) than 1 then the roasting business at the wrong-mology coffee shop is declared infeasible. The following is the Profitability Index calculation for the coffee roasting business in coffee malology.

\[
PI = \frac{\sum PV \text{ Net Cash}}{\sum PV \text{ Investment}} \times 100\% \\
PI = \frac{\text{Rp}.149.249.388}{\text{Rp}.83.327.000} \times 100\% \\
= 1,8 \text{ kali (}> 1\text{) worth running.}
\]

Based on calculations using the Profitability Index (PI) method, the result is 1.8 times, meaning that the coffee roasting business at the Kelirumologi Coffee shop is feasible to run and develop because the PI is more than (> 1). These results are also the same as the research study from Rohmah et al (2020), namely the PI obtained (>) is more than 1, which means that the business is feasible to run.

CONCLUSION

The results of financial analysis calculations on the coffee roasting business at the Kelirumologi Kopi Shop are declared feasible to run because they see the Payback Period value is smaller, namely 1 year 8.7 months from the investment age for 3 years, the Net Present Value is more than 0 and has a positive value of Rp. 65,922,388 and the Profitability Index is accepted because the calculation results show more than 1, namely 1.8.

Acknowledge

Praise and gratitude the author prays to the presence of Allah SWT who has given His mercy and grace, so that the writer can complete this research journal entitled "Financial Feasibility Analysis of Coffee Roasting Business (Case Study at Kelirumologi Coffee Shop)" well. In writing this journal the author is fully aware of the shortcomings and limitations that the author has, but thanks to the help, guidance and support of various parties this journal can be
completed. For that the author would like to thank: Mr. Wadli, S.TP., M.Sc. as Dean of the Faculty of Science and Technology, University of Muhadi Setiabudi. Holy Mother Nur Utami, S.Pt., M.Sc. as Chair of the Agribusiness Study Program at Muhadi Setiabudi University and at the same time as Associate Advisor. Mr. Dr. Muhammad Juwanda, S.P., M.P. as the Main Advisor Lecturer. My parents who always pray, support and give encouragement. All my friends who have provided support and encouragement. The author realizes that writing this journal is far from perfect and there are still many shortcomings. Therefore, with all humility, the authors expect suggestions and constructive criticism for the perfection of this journal. Hopefully this journal can be useful for all parties.

BIBLIOGRAPHY


