

Analysis of the Added Value of Arabica Coffee in Trawas District, Mojokerto Regency, East Java, Indonesia

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Abstract: The purpose of this study was to analyze the added value of Arabica coffee in Trawas District, Mojokerto Regency, East Java, Indonesia. The location determination was carried out in Trawas District, Mojokerto Regency with the consideration that the research location is one of the Arabica coffee development areas in East Java Province. The population in this study consisted of group leaders, coffee farmers, coffee processors and the Department of Agriculture in Mojokerto Regency. A sample of 10 respondents from a total of 13 respondents was taken using a purposive technique. To determine the amount of added value obtained from processing cocoa and coffee, using the value added calculation method used by Hayami, et.al (1987). The results showed that the value added analysis of the Arabica coffee processing business in Ketapanrame Village and Trawas Village resulted in the added value of natural processed green bean coffee of IDR 3,284.09 with a value added ratio of 30.1%. The added value of ground coffee is Rp. 9,750.00 with a ratio of 48.75%. Meanwhile, the added value analysis of green bean processing Wine method in coffee processing farms in Ketapanrame and Trawas villages is Rp. 10,022.06 with a ratio of 56.79%. The added value of ground coffee processing in Ketapanrame and Trawas villages is Rp. 23,083.33 with a ratio of 69.25%.

Keywords: Added Value, Arabica Coffee

I. INTRODUCTION

Kopi (*Coffea* sp) is one of the leading commodities in the plantation sub-sector which has good market opportunities both domestically and abroad. The opportunity to develop coffee as a driver of the regional economy actually has enormous potential, especially for coffee production centers. The coffee commodity has an important role in the national economy, both as a source of income for coffee farmers, a source of foreign exchange, a producer of industrial raw materials, as well as a provider of employment through processing, marketing, and trading activities (exports and imports). The country of Indonesia has abundant natural resources and climatic conditions that are very supportive for the development of plant cultivation. One of them is the coffee plant (*Coffea* sp) which has good potential to increase the country's foreign exchange sources. Indonesian coffee currently has a fairly strong competitiveness in the world market. One of the largest coffee producing areas in Indonesia is East Java. Mojokerto is one of the coffee producing areas in East Java. There are several Mojokerto areas located in

mountainous areas, including in the districts of Trawas, Pacet, Gondang and Jatrejo.

The coffee business also has the opportunity to gain added value through the post-harvest handling process as well as by implementing GMP (Good Manufacturing Practice), especially the wet processing system, besides that there are still a number of opportunities for farmers to get added value from coffee agribusiness, namely by processing coffee into coffee, roasted or into ground coffee (Winarno et al, 2018). Value added is the added value of a product or commodity because it undergoes processing, transportation, or storage in a production. Value-added processing can be defined as the difference between the value of the product and the value of raw materials and other inputs, excluding labor (Hayami et al., 1987). Agricultural products that are quickly damaged or degraded in quality after harvesting require further processing by changing the form of agricultural products into other products that have added value. The results of processed products affect the length of storage so that they have a high bargaining value and price so that they benefit farmers (Soetriono & Suwandari, 2016). Processing of Arabica coffee to be ground coffee and packaged so as to increase the value of the commodity. To see the added value from and the remuneration received by coffee farmers, the analysis of the added value of Arabica coffee processing through the Downstream stage using the Hayami analysis method which is commonly used to analyze the added value of the processing subsystem or secondary production. Value added describes the rewards for labor, capital, and management. Added value can be obtained from processing coffee waste or coffee grounds which are made into organic fertilizers that have good nutritional content to be returned to coffee plantations and become value-added by-products. The use of coffee waste as fertilizer can reduce the environmental impact. (Janissen & Huynh, 2018). The quality of coffee beans through proper processing will have added value so as to increase coffee sales margins at various marketing levels. In addition, coffee packaging in a practical form is in great demand by consumers (van Keulen & Kirchherr, 2020).

The purpose of this study was to analyze the added value of Arabica coffee in Trawas District, Mojokerto Regency, East Java, Indonesia.

II. RESEARCH METHODS

The location determination was carried out in Trawas District, Mojokerto Regency with the consideration that the research location is one of the Arabica coffee development areas in East Java Province. In addition, Arabica coffee still has the potential to be developed in a large number of coffee fields. The population in this study consisted of group leaders, coffee farmers, coffee processors and the Department of Agriculture in Mojokerto Regency. A sample of 10 respondents from a total of 13 respondents was taken using a purposive technique.

To determine the amount of added value obtained from processing cocoa and coffee, using the value added calculation method used by Hayami, et.al (1987). a. Value added (RP) is the difference between the value of the output with the main raw materials and the contribution of other inputs. The value added ratio (%) shows the added value of

the product value; b. Labor income (RP) shows the wages received by workers for processing one unit of raw materials; c. The share of labor (%) shows the percentage of labor income from the added value obtained; d. Gross revenue (RP) shows the share received by the company; e. Gross income level (%) shows the percentage of gross income from product value; f. Margin (RP) shows the contribution of owners of production factors other than raw materials used in the production process; g. Percentage of labor income to margin (%); h. The percentage of additional input contribution to the margin (%). i. Percentage of processing profit to margin (%).

III. RESULTS AND DISCUSSION

The processing of Arabica coffee logs into Arabica green beans and powder by 1 entrepreneur in Ketapanrame Village and 1 in Trawas Village produces an average added value which can be seen in table 1 below:

Table 1. Added Value of Natural Process Arabica Coffee in 2020

| No | Variable | Unit | Green Bean | Powder |
|-----------------------------------|--|---------|------------|------------|
| I. Output input and price | | | | |
| 1 | Output | Kg | 424,24 | 100,00 |
| 2 | Input | Kg | 3.500,00 | 750,00 |
| 3 | Labor (HOK / production period) | HOK | 91,50 | 95,50 |
| 4 | Conversion factor | | 0,12 | 0,13 |
| 5 | Labor Coefficient | HOK/Kg | 0,03 | 0,13 |
| 6 | Output price | IDR/Kg | 90.000,00 | 150.000,00 |
| 7 | Labor Wages | IDR/HOK | 50.000,00 | 50.000,00 |
| II. Income and Value Added | | | | |
| 8 | Raw material prices | IDR/Kg | 7.000,00 | 7.000,00 |
| 9 | Other input prices | IDR/Kg | 625,00 | 3.250,00 |
| 10 | Output value | IDR/Kg | 10.909,09 | 20.000,00 |
| 11 | Added value | IDR/Kg | 3.284,09 | 9.750,00 |
| | Value added ratio | % | 30,10 | 48,75 |
| 12 | Labor Income | IDR/Kg | 1.307,14 | 6.366,67 |
| | Share of workforce | % | 39,80 | 65,30 |
| 13 | Profit | IDR/Kg | 1.976,95 | 3.383,33 |
| | Profit rate | % | 60,20 | 34,70 |
| 14 | Margin | IDR/Kg | 3.909,09 | 13.000,00 |
| | a. Labor | % | 33,44 | 48,97 |
| | b. Capital (other input contributions) | % | 15,99 | 25,00 |
| | c. Profit | % | 50,57 | 26,03 |

Source: Primary data (processed) (2021)

Based on Table 1, it shows that the average added value of natural processing of red logs coffee into green bean coffee in coffee processing businesses in Ketapanrame Village and Trawas Village is IDR 3,284.09. The average value added ratio is 30.1%. The value added ratio of green bean coffee

processing in Ketapanrame and Trawas villages is moderate. The average added value of processing red coffee beans into ground coffee using the Natural Process method in Ketapanrame Village and Trawas Village is IDR 9,750.00 with a relatively large added value ratio of 48.75%.

Table 2. Added Value of Wine Process Arabica Coffee in 2020

| No | Variable | Unit | Green Bean | Powder |
|-----------------------------------|--|----------|------------|------------|
| I. Output input and price | | | | |
| 1 | Output | Kg | 411,76 | 100,00 |
| 2 | Input | Kg | 3.500,00 | 750,00 |
| 3 | Labor (HOK / production period) | HOK | 124,50 | 132,35 |
| 4 | Conversion factor | | 0,12 | 0,13 |
| 5 | Labor Coefficient | HOK/Kg | 0,04 | 0,18 |
| 6 | Output price | IDR/Kg | 150.000,00 | 250.000,00 |
| 7 | Labor Wages | IDR/HOK | 50.000,00 | 50.000,00 |
| II. Income and Value Added | | | | |
| 8 | Raw material prices | IDR/Kg | 7.000,00 | 7.000,00 |
| 9 | Other input prices | IDR/Kg | 625,00 | 3.250,00 |
| 10 | Output value | IDR/Kg | 17.647,06 | 33.333,33 |
| 11 | Added value | IDR/Kg | 10.022,06 | 23.083,33 |
| | Value added ratio | % | 56,79 | 69,25 |
| 12 | Labor Income | IDR/Kg | 1.778,57 | 8.823,33 |
| | Share of workforce | % | 17,75 | 38,22 |
| 13 | Profit | IDR/Kg | 8.243,49 | 14.260,00 |
| | Profit rate | % | 82,25 | 61,78 |
| 14 | Margin | IDR / Kg | 10.647,06 | 26.333,33 |
| | a. Labor | % | 16,70 | 33,51 |
| | b. Capital (other input contributions) | % | 5,87 | 12,34 |
| | c. Profit | % | 77,43 | 54,15 |

Source: Primary data (processed) (2021)

Based on Table 2, it can be seen that the added value of wine processing in the process of red logs coffee into green bean coffee in coffee processing farms in Ketapanrame Village and Trawas Village is Rp. 10,022.06. The average value added ratio is 56.79%. The ratio of added value to green bean coffee processing in Ketapanrame and Trawas villages is relatively high. The average added value of red coffee processing into ground coffee using the wine process method in Ketapanrame Village and Trawas Village is Rp. 23,083.33. The amount of added value in the processing of Arabica ground coffee is greater than that of processing green bean Arabica coffee, this is because the processing into ground coffee is more processed and takes a long time, so the output price is set higher. This is in accordance with the opinion of Priantara et al., (2016) which states that the formation of added value for ground coffee goes through several stages of process so that the output price is set higher than other coffee products.

The added value is influenced by technical factors and market factors. Technical factors in the coffee processing process in Ketapanrame and Trawas villages include the technology used and the quality of the raw materials. The business of processing ground Arabica coffee in Ketapanrame

Village is still conventional and does not have a roasting machine and grinder machine, so it requires more costs for roasting and grinding costs. The quality of the raw materials used in the processing of ground Arabica coffee only uses red coffee beans. Market factors in the processing of ground Arabica coffee in Ketapanrame and Trawas villages include the selling price of the product. The selling price of Arabica ground coffee products is higher because the processing of ground coffee goes through a longer stage compared to green bean coffee products. The added value ratio of coffee processing with the wine process method from red coffee beans to ground coffee in Ketapanrame Village and Trawas Village is relatively high, namely 69.25%, so the process of processing red coffee beans into ground coffee in the processing business in Ketapanrame Village is classified as having an added value ratio.

IV. CONCLUSION

Analysis of the added value of the Arabica coffee processing business in Ketapanrame and Trawas Villages resulted in the added value of natural processed green bean coffee of IDR 3,284.09 with a value added ratio of 30.1%.

The added value of ground coffee is Rp. 9,750.00 with a ratio of 48.75%. Meanwhile, the added value analysis of green bean processing Wine method in coffee processing farms in Ketapanrame and Trawas villages is Rp. 10,022.06 with a ratio of 56.79%. The added value of ground coffee processing in Ketapanrame and Trawas villages is Rp. 23,083.33 with a ratio of 69.25%.

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