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The Added Value of Specialty Ground Coffee at Gunung Mas Jaya Agroindustry, Situbondo Regency

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ABSTRACT

Coffee is a key commodity in Indonesia's plantation subsector, offering prospects both locally and internationally. The rise in Indonesian coffee production over the last decade has coincided with shifts in people's coffee consumption habits. The expansion of coffee shops and cafés in Indonesia has had a considerable impact on coffee demand, especially for processed coffee products. This creates an opportunity for coffee producers and the coffee agroindustry to supply high-value-added coffee goods, such as specialty coffee powder created by Gunung Mas Jaya Agroindustry. The purpose of this study was to assess the value added of specialty coffee powder at Gunung Mas Jaya. The descriptive-quantitative technique employed both primary and secondary data sources. Respondents were chosen using purposive sampling at Gunung Mas Jaya Agroindustry. The Hayami approach was used in data analysis to calculate value-added. The analysis results suggest that the value added of specialty ground coffee is 87.56%, placing it in the top category (VA > 50%). The profit rate for specialty ground coffee is 98.08%, showing that it has a lot of room for growth due to its high profitability.

Keywords: agroindustry, Hayami Method, specialty ground coffee, value added

INTRODUCTION

Coffee is one of Indonesia's most important plantation commodities due to its excellent domestic and international market prospects (Octavyan and Sofiani 2021; Sitanggang and Sembiring 2013). The plantation industry accounts for most of the national coffee production, which is destined for export. Indonesia is one of the world's largest coffee exporters (Ginting and Kartiasih 2019). Coffee's popularity remains strong due to its numerous flavors, which are greatly liked, as well as the growing number of coffee shops that are becoming increasingly popular with the general population. Arabica, Robusta, and Liberica are the three most regularly traded coffee varieties worldwide (Rahardjo 2017).

According to BPS (2023), Indonesia's coffee production in 2022 was 794,800 tons, up approximately 1.1% over the previous year. Coffee production reached its lowest point in 2015, at 639,000 tons. Coffee output increased again in the following years, reaching 794,800 tons in 2022 (Rosdiana *et al*. 2023). Indonesia is now the world's fourth-largest coffee producer, trailing only Brazil, Vietnam, and Colombia, which account for 60% of global coffee production (Putra *et al*. 2020). This reflects a positive trend in Indonesian coffee output. Coffee production is increasing as the demand for coffee rises. According to estimates from the International Coffee Organization (2021), global coffee consumption in 2020−2021 was expected to reach 167.26 million bags, or around 10.04 million tons, a 1.9% rise over the 2019−2020 timeframe. Coffee consumption in Indonesia continues to rise, with an annual average increase of 8% (Harum 2022). This circumstance allows farmers and coffee industry operators to boost their income by diversifying and developing processed coffee products. This includes the agro-industry in Situbondo.

Gunung Mas Jaya is one of Situbondo's agroindustries, producing specialty ground coffee. Specialty coffee is a high-quality coffee with greater flavor and economic value grown on specialist estates (Fadillah *et al*. 2019; Zulkarnain 2020). Specialty coffee is prepared from carefully chosen coffee beans; therefore the agroindustry ensures the quality of specialty coffee raw materials by picking beans from organic coffee plantations. The raw material for specialty coffee is sourced from both his farm and the Sejahtera Farmers Group's farm, which also uses organic agricultural practices. Furthermore, the agroindustry only accepts completely ripe red coffee beans to maintain the quality of specialty coffee. The processing of specialty coffee into ground coffee aims to increase its added value, thereby increasing the agroindustry's sales value and income.

There has been substantial research into the additional value of coffee processing. Processing coffee into natural, honey, and full-wash ground coffee for Arabica and Robusta has a value-added ratio of approximately 16.21−54.40% (Dewi *et al*. 2015; Puryantoro 2021; Tamaradewi *et al*. 2019; Wibowo and

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Palupi 2022). Unlike the value-added analysis of Arabica and Robusta coffee powder, research on the value added of specialty coffee powder is currently restricted, as most specialty coffee producers promote their products as coffee beans for export (Fadillah *et al*. 2019). The purpose of this research was to investigate the value added in the production of specialty coffee powder at Agroindustri Gunung Mas Jaya. As a result, it can serve as a proposal to other coffee agroindustries and stakeholders for increasing the economic value of coffee products as a regional flagship potential.

METHODS

The investigation was conducted at Gunung Mas Jaya Agroindustry in Kayumas Village, Arjasa Subdistrict, Situbondo Regency. The area was chosen purposefully, as Gunung Mas Jaya Agroindustry has been in operation since 2008 and continues to produce specialty ground coffee today. The study was done from September to October 2023.

The research data comes from two sources: primary and secondary data. Primary data was gathered through direct interviews with agro-industry owners and personnel, and included information about production process phases, production expenses, and the quantity and price of specialty ground coffee produced in a single manufacturing process. Secondary data was gathered from BPS data, specifically coffee production statistics, as well as literature studies such as reference books, research journals, and other sources that supported the research.

This study employed a descriptive-quantitative methodology using the Hayami value-added calculation method (Table 1). Value-added analysis attempts to quantify the amount to which specialty ground coffee processing adds economic value at each stage of the process. The analysis results would show if the processing at Agroindustri Gunung Mas Jaya adds value or not. According to Hayami's criteria, if the value added (VA) is larger than zero, the processing step produces value added; if VA is less than zero, then no value added is produced (Puryantoro 2021). Furthermore, additional value can be assessed using the added value ratio (Sudiyono 2004 *in* Waknate *et al.* 2022), where a ratio larger than 50% is classified as high and a ratio of 50% or less as low.

RESULTS AND DISCUSSION

The Production Stage of Specialty Ground Coffee

The coffee production process comprises of numerous processes that strive to convert raw coffee beans and other supporting materials into the ultimate result, specialty ground coffee. Agroindustri Gunung Mas Jaya produces specialty coffee powder three times a week, with daily working hours ranging from six to seven hours. During September, the agricultural industry can generate 300 kg of specialty ground coffee from 400 kg of raw coffee beans.

The process of producing specialty ground coffee involves multiple processes, including the preparation and sorting of coffee beans as raw materials,

Table 1 Analysis of Hayami Method value added

Variable	Unit		Value
Output, input, price			
Output	kg	(1)	
Input	kg	(2)	
Labor	man-day	(3)	
Conversion factor		(4)	= (1)/(2)
Labor coefficient	man-day/kg	(5)	= (3)/(2)
Harga output price	IDR	(6)	
Labor wage	IDR/man-day	(7)	
Revenue and profit			
Raw material price	IDR/kg	(8)	
Other input contribution	IDR/kg	(9)	
Output value	IDR/kg	(10)	= (4) × (6)
a. Value added	IDR/kg	(11a)	= (10) – (9) – (8)
b. Add value ratio	%	(11b)	= (11a/10) × 100%
a. Direct labor income	IDR/kg	(12a)	= (5) × (7)
b. Share of labor	%	(12b)	= (12a/11a) × 100%
a. Profit	IDR/kg	(13a)	= (11a) – (12a)
b. Profit rate	%	(13b)	= (13a/11a) × 100%
Reply services to owners of factors production			
Margin	IDR/kg	(14)	= (10) – (8)
a. Direct labor income	%	(14a)	= (12a/14) × 100%
b. Other input contribution	%	(14b)	= (9/14) × 100%
c. Profit	%	(14c)	= (13a/14) × 100%

Source: Hayami in (Wibowo and Palupi 2022)

fermentation, washing, drying, hulling, roasting, cooling, grinding, and packing (Figure 1).

Analyzing the Added Value of Specialty Ground Coffee

The purpose of the added value analysis is to assess how much economic value is generated by the processing of specialty ground coffee. Added value is defined as the difference between the value of the finished product (output) and the total cost of the inputs used. The components evaluated include production volume, raw materials used, worker numbers and wages, raw material costs, final product selling prices, and a variety of other additional inputs involved in the manufacturing process. Table 2 shows that in September, 300 kg of specialty ground coffee were produced from 400 kg of raw coffee beans. The specialty ground coffee processing required 36 man-days. The conversion rate obtained was 0.75 per kg, which means that 1 kg of coffee beans may yield 0.75 kg of specialty ground coffee. The labor coefficient was 0.09, meaning that in one man-day, a worker could process approximately 0.09 kg of raw material (Waknate *et al*. 2022). Each worker was paid IDR 35,000 per man-day.

Processing coffee beans into specialty ground coffee produces an added value of IDR 164,174/kg, with an added value ratio of 87.56%. This ratio implies that the additional value of specialty ground coffee is substantial, as it is greater than 50%. An 87.56% ratio indicates that for every IDR 100 product price, IDR 87.56 of added value is generated. This is owing to the high cost of specialty coffee, although raw ingredients and other input contributions are very inexpensive. This is consistent with the findings of Waknate *et al*. (2022), who said that the high value-added ratio is caused by the high product value compared to the comparatively low values of raw materials and other input contributions. This ratio exceeds that reported by Waknate *et al*. (2022), who discovered a value-added ratio of 72.63% for specialty ground coffee. Puryantoro (2021) showed similar value-added ratios for full-wash and natural process ground coffee: 40.48% and 40.48%, respectively. Value discrepancies are influenced by technical, technological, and market aspects (Nugroho *et al*. 2022). Differences in raw material prices, other input prices, and processing methods will definitely have an impact on the product's selling price, altering the value-added ratio. Additionally, the conversion of labor to equipment will have an impact on worker productivity and wages.

Table 2 demonstrates that the specialty ground coffee processing firm earns IDR 161,024 per kg, for a profit margin of 98.08%. This profit margin is relatively high, surpassing the profit levels of non-specialty Arabica and Robusta ground coffee processing, which typically range from 17.91% to 94.07% (Dewi *et al*. 2015; Puryantoro 2021; Tamaradewi *et al*. 2019). This suggests that specialist ground coffee manufacturing has better economic potential than non-specialty Arabica and Robusta ground coffee. Meanwhile, the difference between the product value and raw material price is IDR 172,500. This margin is assigned to multiple components, including 1.82% for labor expenditures, 4.83% for contributions from other inputs, and 93.35% for corporate profits.

CONCLUSION

The findings of a study on the added value of specialty ground coffee in the Gunung Mas Jaya Agroindustry demonstrate that processing specialty Arabica ground coffee produces more added value than non-specialty ground coffee, with an added value ratio of 87.56%. Similarly, processing specialty ground coffee yields a higher profit than processing non-specialty ground coffee, with a profit margin of 98.08% per kilogram.

Given the higher added value of specialty ground coffee compared to non-specialty ground coffee, the following recommendations might be made. (1) Promote commercial potential and the economic value of specialty ground coffee in the coffee agroindustry of Situbondo; (2) Encourage the coffee agroindustry to improve its processed goods through various regency promotional initiatives, such as conducting exhibitions of the regency's top products; (3) Encourage coffee producers to produce high-quality coffee beans by providing training in organic coffee production and GAP-compliant growing practices; and (4) More research into the added value of specialty ground

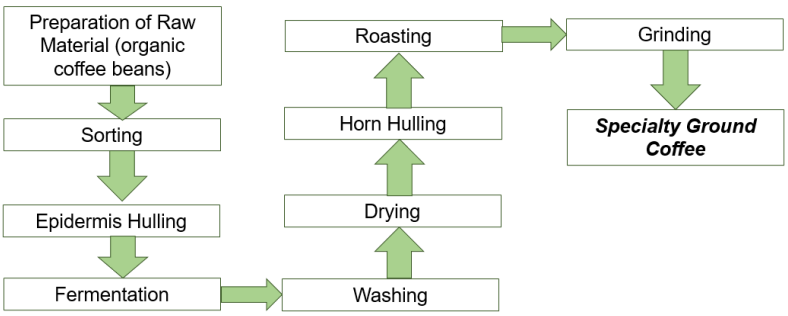

Figure 1 Specialty ground coffee production process at Gunung Mas Jaya Agroindustry.

Table 2 Calculation of added value of Gunung Mas Jaya Coffee Agroindustry

Variable	Unit	Value
Output, input, price		
Output	kg	300.00
Input	kg	400.00
Labor	man-day	36.00
Conversion factor		0.75
Labor coefficient	man-day/kg	0.09
Output price	IDR/kg	250,000.00
Labor wage	IDR/man-day	35,000.00
Revenue and profit		
Raw material price	IDR/kg	15,000.00
Other input contribution	IDR/kg	8,326.00
Output value	IDR/kg	187,500.00
Value added	IDR/kg	164,174.00
Add value ratio	%	87.56
Direct labor income	IDR/kg	3,150.00
Share of labor	%	1.88
Profit	IDR/kg	161,024.00
Profit rate	%	98.08
Reply services to owners of factors production		
Margin	IDR/kg	172,500.00
a. Direct labor income	%	1.82
b. Other input contribution	%	4.83
c. Profit	%	93.35

coffee is required to acquire a more complete analysis and results.

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