



Analysis of Added Value and Profitability of Ginger Chip Processing Business in Ulusena Village, South Konawe Regency

La Ode Muhammad Zulyarson¹, Abdi², Munirwan Zani³

¹ Alumnus of Agribusiness, Faculty of Agriculture, Halu Oleo University, Kendari City, Indonesia

²Lecturer, Faculty of Agriculture, Halu Oleo University, Kendari City, Indonesia

Corresponding Author: laodezulyarson@gmail.com

Abstract

This study aims to 1) analyze the added value generated from ginger chips processing in Ulusena Village, Moramo District, South Konawe Regency, and 2) analyze the profitability generated from ginger chips processing in Ulusena Village, Moramo District, South Konawe Regency. The research was conducted in Ulusena Village, Moramo District, South Konawe Regency from October to November 2024. The subjects of this study were the Women's Farmers Group (KWT) who are both the owners of the business and the processors of ginger chips products in Ulusena Village, Moramo District, South Konawe Regency. The added value of ginger chips processing was analyzed using the Hayami method, and the profitability of ginger chips processing was analyzed using the profitability analysis. The results of the study show that: 1) The difference between revenue and total production cost results in a net profit of IDR 1.288.959 per month. This profit reflects the profitability of the Harapan Jaya ginger chips processing business after deducting all production costs from the total revenue generated, indicating that the business has good financial performance, and 2) The added value generated from ginger chips processing is IDR 1,000 per kg with an added value ratio of 1.26%. This shows that although there is an increase in value from raw material to finished product, the increase is not very significant

Keyword: *Ginger chips; profitability; added value*

INTRODUCTION

The agricultural sector plays a strategic role in Indonesia's economic development, particularly in supporting food security, employment, and increasing community income. The contribution of this sector to the national economy is reflected in its contribution to the Gross Domestic Product (GDP), which reached 13.57% in 2018 (Central Statistics Agency, 2019). One of the efforts to increase the contribution of the agricultural sector is through the development of

241

IJETER, Volume 04 Issue 01, 2026



Copyright to the author of some rights reserved This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).



agro-industry that can provide added value to agricultural products.

Ginger is one of the leading agricultural commodities with bright prospects in both domestic and international markets. Besides being used as a spice, ginger is also widely used as a raw material for processed products, such as herbal drinks and ginger chips. Ginger is known to have various health benefits, including anti-inflammatory properties, digestive aid, and immune system booster (Sucipto, 2012). As public awareness of healthy lifestyles increases, the demand for ginger-based products also continues to rise (Ministry of Agriculture of the Republic of Indonesia, 2021).

In Southeast Sulawesi, particularly in the Moramo District of South Konawe Regency, ginger is one of the commodities with high potential for development. Ginger production in this region is showing an upward trend, and some farmers have started processing ginger into chips to increase its selling value and extend its shelf life (Southeast Sulawesi Agriculture Office, 2019; Susanti, 2020). Processing ginger into chips not only provides economic added value, but also opens up new job opportunities, especially for Women Farmers Groups (KWT) who play an active role in agricultural product processing activities.

However, the development of the ginger chip business in Moramo District still faces various obstacles, such as limited capital, access to training, and marketing strategies. Some farmers still choose to sell ginger in its raw form due to limited time and resources. Therefore, an analysis of the added value and profits of the ginger chip processing business is important to assess the feasibility and potential of developing this business as a source of sustainable income for the local community.

Several previous studies have shown that the agricultural processing industry provides significant added value and profits. Santoso (2020) found that ginger chip processing in Malang Regency provided added value of IDR 10,500/kg of raw materials and economically profitable returns. Research by Nirmala (2022) and Hamidi and Septina (2018) also proves that processing agricultural products into processed goods provides positive added value and is financially feasible. However, research on the analysis of added value and profits from the ginger chip business in Ulusena Village, Moramo District, South Konawe Regency is still limited.

Based on the above description, this study aims to analyze the added value and profitability of the ginger chip processing business in Ulusena Village, Moramo District, South Konawe Regency, so that it can serve as a basis for the development of a competitive and sustainable ginger agroindustry.



METHOD

This research was conducted in Ulusena Village, Moramo District, South Konawe Regency, from October to November 2024 with purposive location selection, as most of the community members work as farmers and ginger processors. This research used a quantitative approach with a case study method, with the research subjects being the Women Farmers Group (KWT) who act as the owners and processors of the ginger chip business in the village. The data used consisted of primary and secondary data, where primary data was obtained through interviews, questionnaires, and direct observation of respondents, while secondary data was obtained from reports, books, journals, scientific articles, and related agencies such as the South Konawe Regency Central Statistics Agency. Data collection techniques were carried out through interviews to obtain in-depth information, questionnaires to obtain measurable data, and documentation to support and complement the research data.

The added value of ginger chip processing was analyzed using the Hayami et al. (1987) added value analysis method. The Hayami method is an analysis method used to measure the added value of an agricultural or processed product, especially products made from natural raw materials such as ginger. The Hayami method added value calculation can be seen in Table 1.

Table 1. Output, Input, and Price (Hayami Method)

No.	Variable	Value
	Output, Input, and Price	
1	Output (kg)	(1)
2	Input (kg)	(2)
3	Labor (HOK)	(3)
4	Conversion factor	$(4) = (1)/(2)$
5	Labor coefficient (HOK)	$(5) = (3)/(2)$
6	Product price (Rp/kg)	(6)
7	Labor wages (Rp/HOK)	(7)
	Revenue and Profit	
8	Raw material price (Rp/kg)	(8)
9	Other input contributions (Rp/kg)	(9)
10	Product value (Rp/kg)	$(10) = (4) \times (6)$
11a	Value added (Rp/kg)	$(11a) = (10) - (9) - (8)$
11b	Value-added ratio (%)	$(11b) = (11a)/(10) \times 100\%$
12a	Labor compensation (Rp/kg)	$(12a) = (5) \times (7)$
12b	Labor ratio (%)	$(12b) = (12a)/(11a) \times 100\%$
13a	Profit (Rp/kg)	$(13a) = (11a) - (12a)$



13b	Profit margin (%)	$(13b) = (13a)/(11a) \times 100\%$
-----	-------------------	------------------------------------

Source: Hayami et al., 1987

Profit analysis using the Hayami method focuses on analyzing the economic efficiency of farming by calculating the profit per kilogram of yield and the level of efficiency in the use of inputs. Meanwhile, the profit analysis of ginger chip processing is analyzed using the profit analysis according to Soekartawi (2003), which emphasizes the calculation of overall farm profits, taking into account all costs (fixed and variable) and total income, as well as the fact that profit is the difference between total revenue (*TR*) and total costs (*TC*) incurred during the production process. Profit is calculated using the following formula:

$$\pi = TR - TC$$

Explanation:

π = Profit (Rp/season)

TR = Total Revenue (Rp/season)

TC = Total Cost (Rp/season)

RESULTS AND DISCUSSION

The Harapan Jaya Business Group is one of the Women Farmers Groups (KWT) in Ulusena Village that has been engaged in ginger chip production since 2021 with the aim of empowering women farmers and increasing the added value of ginger commodities, which are abundant in the area. This group is chaired by Mrs. Mulyati (40 years old) and utilizes fresh ginger harvested from 1 hectare of local gardens as the main raw material, which is processed using a combination of traditional and modern techniques to produce high-quality ginger chips with a distinctive taste and good shelf life. In addition to focusing on production, the group also develops marketing strategies through attractive packaging and digital marketing so that it can reach a wider local market and increase member income. To support business sustainability, the Harapan Jaya Business Group actively participates in training on ginger cultivation, agricultural product processing, and business management to improve the skills and capacity of members in developing the ginger chip agroindustry.

Cost Analysis and Profit

Costs are an important element that determines the sustainability and success of a business (Sudana, 2017). In the context of this study, cost analysis consists of fixed costs and



variable costs. Fixed costs are costs that do not change even if the amount of production changes, while variable costs are costs that change according to the volume of production.

Table 2. Average Fixed Costs of Ginger Chip Processing Businesses in Ulusena Village, Moramo District, South Konawe Regency, 2024

Description	Quantity (Unit)	Price (Rp/unit)	Total Price (Rp)	Usage Period (Months)	Final Value (Rp/month)
Gas stove	3 units	380,000	1,140,000	3	380,000
Grating machine	1 unit	500,000	500,000	2	250,000
Frying pan	2 pieces	350,000	700,000	1	700,000
Press machine	1 unit	500,000	500,000	1	500,000
Machete	1 unit	150,000	150,000	2	75,000
Basin	5 units	20,000	100,000	1	100,000
Teflon	2 units	100,000	200,000	1	200,000
Tray	5 units	8,000	40,000	1	40,000
Average					280,625

Table 2 shows that the average fixed costs incurred by Harapan Jaya in Ulusena Village, Moramo District, South Konawe Regency, amount to IDR 280,625 per month, which are routine business costs and are not affected by production volume. These fixed costs include various essential equipment such as gas stoves, graters, frying pans, press machines, machetes, basins, and Teflon pans, which play an important role in supporting the smooth processing of ginger chips, from the preparation of raw materials to the marketing of the finished product. This equipment is a long-term investment that supports production efficiency and maintains product quality consistency, especially in the frying and chip forming processes. These results are in line with the research by Humairah et al. (2020), which states that fixed costs in the snack food processing business are greatly influenced by the type and completeness of equipment, where adequate equipment investment is an important factor in the sustainability and quality of small-scale agro-industrial businesses.

Table 3 Average Variable Costs of Ginger Chip Processing Businesses in Ulusena Village, Moramo District, South Konawe Regency in 2024

No.	Description	Quantity (Unit)	Price (Rp/unit)	Total Price (Rp)
1	Ginger	17 kg	20,000	340,000
2	Coconut	100 kg	20,000	2,000,000

3	Granulated sugar	20 kg	19,000	380,000
4	Gas cylinder	3	200,000	600,000
5	Packaging	1 pack	12,500	12,500
6	Labor	15 people	150,000	2,250,000
	Average			930,416.67

Table 3 shows that the average variable costs incurred by Harapan Jaya in Ulusena Village, Moramo District, South Konawe Regency, amounted to IDR 930,416 per month, which included the costs of main raw materials such as ginger, granulated sugar, and coconut, supporting materials such as gas cylinders and labeled packaging, and labor costs of IDR 150,000 per person for three types of work. Variable costs are fluctuating because they change in line with the level of production activity, both in terms of production volume and raw material usage (Mulyadi, 2009; Rudianto, 2013). These results are in line with Pratiwi's (2018) research, which shows that variable cost components are greatly influenced by differences in raw material prices and availability in each region, although in general variable costs will increase as production volume increases.

Table 4. Production Costs of Ginger Chip Processing Businesses in Ulusena Village, Moramo District, South Konawe Regency in 2024

No.	Description	Value (IDR/month)
1	Fixed Costs	280,625
2	Variable cost	930,416
	Total cost	1,211,041

Table 4 shows that the total production costs incurred by Harapan Jaya in producing ginger chips amounted to IDR 1,211,041 per month, which includes all expenses ranging from raw materials to other supporting materials. Total production costs are an important factor in business analysis because they directly affect the determination of selling prices, profit levels, and business feasibility (Hernanto, 2007). Efficient cost management enables businesses to increase profit margins and have the flexibility to set competitive prices in the market, while also coping with input price fluctuations. This is in line with the research by Saputra et al. (2018), which states that the higher the production costs incurred, the lower the income received, so that cost analysis becomes an important basis for strategic business decision making.

Table 5. Revenue of Ginger Chip Processing Businesses in Ulusena Village, Moramo District, South Konawe Regency in 2024

No.	Description	Value
1	Production volume (kg/month)	100
2	Selling price (Rp/kg)	25,000
	Revenue	2,500,000

Table 5 shows that the production volume of ginger chips by Harapan Jaya reaches 100 kg per month with a selling price of IDR 25,000/kg, resulting in total revenue of IDR 2,500,000 per month. This revenue reflects gross income before deducting production and operational costs, and indicates that the business has good potential to generate income. Revenue analysis is important for evaluating financial performance, determining pricing policies, and designing marketing strategies to increase sales volume and profits. This is in line with Santoso et al. (2018), who stated that efficient distribution and marketing network management can support increased business revenue, and supported by Hasibuan (2021), who found that differences in revenue between businesses are influenced by selling prices and market demand levels, so that the profitability of a new business can only be determined after taking into account all production costs.

Table 6. Average Profit of Ginger Chip Processing Businesses in Ulusena Village, Moramo District, South Konawe Regency in 2024

No.	Description	Value
1	Total Revenue (IDR/month)	2,500,000
2	Total production costs (Rp/month)	1,211,041
	Profit (IDR/month)	1,288,959

Table 6 shows that Harapan Jaya's total revenue reaches IDR 2,500,000 per month, with total production costs of IDR 1,211,041 per month, resulting in a net profit of IDR 1,288,959 per month. This profit indicates that the ginger chip processing business has good financial performance because the profit obtained is almost double the production cost, reflecting efficiency in cost management and accuracy in determining the selling price. This stable profit opens up opportunities for businesses to reinvest in order to increase production capacity, expand markets, and improve product quality for long-term business sustainability. The results of this study are in line with Fajri (2021) and Wijaya (2019), which show that the profitability of the ginger chip business is greatly influenced by production cost efficiency, selling price, and business

management strategies, so that cost management and accurate pricing are key to achieving optimal profits.

Added Value Analysis

Value added is the difference between sales costs and costs incurred for raw materials and supporting materials. Value added can be calculated based on raw material costs, indirect costs, and overhead costs included in the total cost of goods produced. Technical factors that influence value added are production capacity, the amount of raw materials used, and labor, while market factors that influence value added are output prices, labor wages, raw material prices, and other input values (Garrison *et al.*, 2018).

Table 7 Number of *Inputs* for Ginger Chip Processing in Ulusen Village, Moramo District, South Konawe Regency in 2024

No.	Description	Value
1	Output (kg/month)	
	Ginger chips	100
2	Input (kg/month)	
	Ginger	17
	Conversion Factor	5.9

Table 7 shows that the output produced is 100 kg of ginger chips. This output is the final result of the entire processing process. The inputs used in this production process consist of several main ingredients, namely ginger as the main raw material, which is used in the amount of 17 kg. The conversion factor obtained is 5.9. The conversion factor indicates the efficiency of the production process, which is the ratio between the raw material input used and the output produced. This means that for every kilogram of raw material used, approximately 59% is converted into finished products, while the rest may be lost as waste or used in other production processes. Overall, a clear picture is obtained of the use of raw materials in the ginger chip production process and the efficiency of converting raw materials into final products.

Table 8 Labor Based on Man-Days (HOK) in Ginger Chip Processing in Ulusena Village, Moramo District, South Konawe Regency in 2024

Description	Production (kg)	Wage (Rp/kg)	Total (Rp/person)	Number (people)	HOK	Wage (IDR/HOK)
1	2	3	4 = (2x3)	5	6	7 = (4/6)

Week 1	20	2,500	50,000	7	2	25,000
Week 2	50	1,200	60,000	6	4	15,000
Week 3	30	1,333.33	40,000	2	2	20,000
Total	100	5,033.33	150,000	15	8	60,000
Average	33.33	1,677.78	50,000	5	2.67	20,000

Table 8 illustrates the production process of ginger chips in one month of production. In the first week, ginger chip production reached 20 kg with a wage of IDR 2,500/kg/person, with a total of 2 HOK (Man-Days), resulting in a wage per HOK of IDR 25,000. The second week had the highest production of 50 kg, with a wage of Rp1,200/kg/person, resulting in a lower wage per HOK of Rp15,000. Meanwhile, production in the third week was 30 kg with a wage of Rp1,333.33/kg/person with 2 HOK, resulting in a wage per HOK of Rp20,000. Overall, total production reached 100 kg with an average wage of Rp50,000. The average production per stage was 33.33 kg with an average wage of Rp1,677.78/kg, resulting in an average total wage of Rp50,000. This shows that the cleaning stage provided the highest wage per HOK, while processing had the lowest wage per HOK despite having the largest production.

Table 9. Contribution of Other Inputs in Ginger Chip Processing in Ulusena Village, Moramo Subdistrict, South Konawe Regency in 2024

No.	Description	Value
1	Packaging (IDR/pack)	12,500
2	Cooking oil (Rp/pack)	17,000
	Total	29,500

Table 9 shows that other inputs in the production of ginger chips by Harapan Jaya include the cost of gas cylinders, packaging, and cooking oil, which are important components in supporting the smooth running of the production process. The cost of gas cylinders as an energy source for cooking and frying reaches Rp200,000 per unit, which plays a role in maintaining temperature stability and the quality of the fried product. Packaging costs of IDR 12,500 per pack serve to maintain product freshness while increasing market appeal and selling value, while cooking oil costs IDR 17,000 per pack and is used to produce crispy ginger chips. Overall, the total cost of other input contributions reaches IDR 29,500 per month, which shows that supporting inputs play a significant role in determining production efficiency and final product quality.

Table 10 Value Added of Ginger Chip Processing Using the Hayami Method in Ulusen Village, Moramo District, South Konawe Regency, 2024

No.	Output, Input, and Price	Value
1	Ginger chip production output (kg/month)	100
2	Raw materials used (kg/month)	17
3	Labor (HOK)	8
4	Conversion factor	5.9
5	Labor coefficient	0.5
6	Average product price (Rp/kg)	25,000
7	Average labor wage (Rp/HOK)	20,000
	Revenue and Profit	
8	Raw material price (Rp/kg of raw material)	49,000
9	Other <i>input</i> contributions (Rp/kg of raw material)	29,500
10	Product value (Rp)	79,500
11	a. Value added (Rp/kg of raw material) b. Value added ratio	1,000 1.26
12	a. Labor compensation (Rp) b. Labor share	10,000 10
13	a. Profit b. Profit Margin	25.00 50,000

Source: Hayami et al., 1987

Table 10 shows that the output of ginger chips produced reached 100 kg with 17 kg of raw material input and 8 HOK of labor, resulting in a conversion factor of 5.9 and a labor coefficient of 0.5 HOK. The selling price of the product is set at Rp25,000/kg with a labor wage of Rp20,000/HOK, while the price of ginger raw materials is Rp49,000/kg and other input contributions are Rp29,500/kg. The calculation results show an added value of IDR 1,000/kg with an added value ratio of 1.26%, indicating that the increase in value from raw materials to processed products is still relatively low due to high production costs, especially from raw material prices and supporting inputs, so that most of the product value is used to cover production costs.

The labor compensation of IDR 21,920/kg with a labor ratio of 10% shows the important role of labor in the production process, while the profit margin of 25% indicates that the business is still able to generate net profit after all costs are covered. However, the low value-added ratio poses a challenge to the long-term sustainability of the business, requiring strategies to increase



efficiency and product value through innovation, quality improvement, or product diversification. These results are lower than those found in Setiawan's (2020) study, which found a value-added ratio of 3.5% in the chip business in Bali, indicating that value added and profit distribution are greatly influenced by raw material prices, production process efficiency, and cost management applied in the snack food processing business.

CONCLUSION

Based on the research results, it can be concluded that ginger chip processing in Ulusena Village, Moramo District, South Konawe Regency, generates added value of IDR 1,000/kg with an added value ratio of 1.26%, indicating that the increase in value from raw materials to processed products is still relatively low. However, the Harapan Jaya ginger chip processing business is able to generate a profit of IDR 1,552,875 per month, reflecting that the business has good financial performance and is feasible to develop even though the added value generated is not yet optimal.

Based on the research results, it is recommended that farmers and the Women Farmers Group (KWT) that process ginger chips improve production efficiency through the use of more modern technology, improving the skills of members, and diversifying ginger-based products to increase added value and competitiveness. The government is expected to provide support in the form of access to capital, entrepreneurship training, digital marketing assistance, and production facilities and infrastructure assistance to improve business efficiency and quality. Meanwhile, further research is recommended to examine in greater depth the aspects of marketing, product diversification, and technological and creative economic innovation so that the development of the ginger chip industry can be sustainable.

REFERENCE

- Badan Pusat Statistik (BPS). (2019). *Produk Domestik Bruto Indonesia Tahun 2018*. Jakarta: BPS.
- Dinas Pertanian Sulawesi Tenggara. (2019). *Laporan Tahunan Produksi Jahe di Sulawesi Tenggara*. Kendari: Dinas Pertanian Sulawesi Tenggara.
- Hamidi, R. & Septina, M. (2018). *Analisis Nilai Tambah dan Strategi Pengembangan Bisnis Agroindustri Sagu Publik di Kabupaten Kepulauan Meranti*. Riau: Universitas Riau.
- Hayami, Y., Kawagoe, T., Morooka, Y., & Siregar, M. (1987). *Agricultural marketing and processing in upland Java: A perspective from a Sunda village*. Center for Southeast Asian Studies, Kyoto University.
- Kementerian Pertanian Republik Indonesia. (2021). *Statistik Pertanian 2021*. Jakarta: Pusat Data dan Informasi Pertanian.





- Kementerian Pertanian Republik Indonesia. (2021). *Potensi dan Pengembangan Komoditas Jahe di Indonesia*. Jakarta: Kementerian Pertanian.
- Mulyadi. (2019). *Akuntansi Biaya*. Jakarta: Salemba Empat.
- Nirmala, S. (2022). *Analisis Kinerja Produksi, Nilai Tambah, dan Keuntungan Agroindustri Keripik Sagu*. Bogor: IPB Press.
- Padapi, R., Santoso, H., & Fadli, M. (2023). *Modifikasi Perhitungan Analisis Nilai Tambah Hayami pada Pengolahan Cabai Rawit*. Surabaya: Universitas Airlangga.
- Santoso, B. (2020). *Analisis Nilai Tambah dan Keuntungan Agroindustri Keripik Jahe di Kabupaten Malang*. Malang: Universitas Brawijaya.
- Setiawan, A. (2022). *Camilan Sehat dan Tren Konsumen di Indonesia*. Jakarta: Penerbit Andalas.
- Soekartawi. (2003). *Analisis Usahatani*. Jakarta: UI Press.
- Sucipto, D. (2012). *Manfaat Kesehatan dari Tanaman Jahe*. Bandung: Alfabeta.
- Susanti, L. (2020). *Strategi Pengolahan Jahe Menjadi Produk Olahan di Indonesia*. Malang: Universitas Brawijaya.

