**Vol. 4 No. 01 (2024)**

**Andalasian International Journal of Social and Entrepreneurial Development (AIJSED)**

**ISSN: 2808-6732 (Online)**

Available at: http://aijsed.lppm.unand.ac.id/index.php/aijsed

DOI: https://doi.org/10.25077/aijsed.4.01.10-14.2024

*Article*

# Analysis of Added Value in Banana Chips Agro-Industry (Case Study of UMKM Nuri Rashi in Padang City)

Risa Meutia Fiana, Sukma Aulia Raihan*, Santosa

Department of Agricultural Industry Technology, Andalas University

Article Information

Received : 2024-02-01
Revised : 2024-02-26
Accepted : 2024-03-11
Published: 2024-04-23

Keywords

Keyword: Value added, processing, Banana chips, Analysis, Hayami methods

*Corresponding Author

sukmaaulia1605@gmail.com

**Abstract**

The study focuses on the analysis of the added value of bananas into bananas chips on the UMKM Nuri Rashi Banana chips in Padang City. The high banana production in Western Sumatra has the potential to increase the value of bananas in banana chips. Analysis of the value added used in this study is using the Hayami method. The value added analysis found that the processing of bananas into bananas chips on UMKM Nuri Rashi's banana chips has a value added of Rp 25.587 it can be understood that the added value of each kilogram of banana fruit that is processed into bananan chips is Rs 25.587, and yields a high value added ratio of 121.8%. The high rate of value added from processing bananas to bananas chip indicates that this processing is worthy to be developed.

## INTRODUCTION

Indonesia is one of the potential producers of horticultural products. Horticultural products that have long been recognized by the people of Indonesia are bananas. Banana fruit is a superior commodity that is widely planted by farmers in Indonesia. According to BPS data (2021), banana production in Indonesia reaches 8,741,147 tons per year, and for the West Sumatra region, banana production in 2021 is 152,732 tons per year. Banana production in West Sumatra is in the top 3 on the island of Sumatra, after Lampung and South Sumatra.

The high production of bananas in West Sumatra can be a source of business for the surrounding community. Pisang kepok (Musa acuminata balbisiana colla) is one type of banana that is widely found and often becomes various processed foods, such as banana chips, fried bananas, banana nuggets and also banana sponge. Bananas are a type of climatic fruit that can experience an increase in maturity after the harvesting process is carried out (Arti and Manurung, 2018). The availability of bananas, which exceeds market demand, is a problem that often occurs. The perishability of bananas after harvesting can be prevented by further processing, often known as post-harvest technology (Latifah, 2010).

Banana was chosen as a raw material in the development of food products because banana is one of the many types of fruits that have the potential to be developed into chips. This banana chip product is included in the snack food category and is often used as a snack by Indonesian people (Herlyadisti et al., 2023). Processing bananas into banana chips has significant benefits in extending the shelf life and expanding the marketing reach of processed banana products. This is because processed products can have a longer shelf life, have a smaller volume, and are well packaged. As a result, the products can be easily marketed in areas that are far away from banana cultivation sites. Processing activities

can increase the usefulness of fresh agricultural commodities and produce new products that have added value (Dore et al., 2021).

Nuri Rashi banana chips MSME located in Kurao Kapalo Banda, Sungai Sapih Village, Kuranji District, Padang City is an industry that processes bananas into banana chips. Processing fruit into chips is increasingly in demand by entrepreneurs due to the availability of raw materials in the region, a simple processing process, modest capital, and an increasing trend in demand. When banana fruit is processed into chips, it not only adds value, but also involves the transformation of a primary product into a new product with higher economic value. This process is of interest because it can increase the marketability of the product and create profitable business opportunities. To determine the amount of added value of banana fruit after being processed into banana chips, requires an analysis of added value using the hayami method to determine whether the business is efficient and profitable (Laeliyah and Januar, 2018). Based on this background, the purpose of writing is to determine the added value of banana chip processing businesses in the banana chip MSME "Nuri Rashi" in Kuranji sub-district, Padang City.

## METHODOLOGY

This research is a case study conducted at the banana chips MSME "Nuri Rashi" in Kuranji District, Padang City with the consideration that the MSME is one of the potential household industries in Padang City. The data collected consists of two types, namely primary data and secondary data. Primary data is obtained from direct interviews with business actors as respondents to fill out questionnaires that have been prepared, the primary data needed includes data on raw material requirements, labor requirements, production data, production equipment, processing processes and other input contributions. Secondary data is obtained through literature studies that support and have a relationship in this study.

The procedure for calculating the value-added analysis on banana chips products using the hayami method can be seen in Table 1.

**Table 1. Calculation of Added Value of Banana Chips Products**

| No. | Variable | Formula |
|---|---|---|
| **I. Output, Input, Price** | | |
| 1. | Output (kg/process) | A |
| 2. | Raw Material Input (kg) | B |
| 3. | Labor Input (JKO) | C |
| 4. | Conversion Factor | A/B=M |
| 5. | Labor Coefficient (JKO) | C/B = N |
| 6. | Output Price (Rp/Kg) | D |
| 7. | Average Wage (Rp/JKO) | E |
| **II. Revenue and Profit** | | |
| 8. | Raw Material Input Price (Rp/kg) | F |
| 9. | Other Input Contribution (Rp/kg) | G |
| 10. | Output Value | M x D=H |
| 11 | a. Added Value (Rp/Kg) | H-F-G=I |
| | b. Value-added ratio (%) | (I/H) x 100% = J |
| 12 | a. Labor remuneration (Rp/Kg) | N x E = K |
| | b. Labor Share (%) | (K/I) x 100% = L |
| 13 | a. Profit (IDR/Kg) | I-K = R |
| | b. Profit Rate (%) | (R/H) x 100% = O |

| | | |
|---|---|---|
| **III. Services to Owners of Factors of Production** | | |
| 14 | Margin (Rp/kg) | H – F = P |
| | a. Labor Income (%) | (K/P) x 100 % = Q |
| | b. Other Input Contribution (%) | (G/P) x 100% = S |
| | c. Company Profit (%) | (R/P) x 100% = T |

Sumber : Hayami et al. (1987).

According to Hubeis in Diarsa et al (2017) there are three indicators of the value added ratio, namely:
1. The magnitude of the value-added ratio <15%, then the added value is low,
2. The magnitude of the value-added ratio is 15%-40%, then the added value is medium,
3. The magnitude of the value-added ratio >40%, then the added value is high.

## RESULTS AND DISCUSSION

The process of making banana chips with kepok banana raw materials is carried out to increase the added value of banana fruit. In this study, value-added analysis was conducted using the Hayami method. The value-added calculation system used in the processing of banana chips is done per one production process. The value-added analysis of banana chips for one production process can be seen in Table 2.

**Table 2. Analysis of Added Value of Banana Chips of UMKM Nuri Rashi**

| No. | Variabel | Keterangan | Nilai Tambah |
|---|---|---|---|
| **I.** | **Output, Input, and Price** | | |
| 1. | Output (kg/process) | A | 20 |
| 2. | Raw Material Input (kg) | B | 59.5 |
| 3. | Labor Input (JKO) | C | 30 |
| 4. | Conversion Factor | A/B=M | 0,336 |
| 5. | Labor Coefficient (JKO) | C/B=N | 0,504 |
| 6. | Output Price (Rp/kg) | D | 125.000 |
| 7. | Average Wage (Rp/JKO) | E | 3.782 |
| **II.** | **Revenue and Profit** | | |
| 8. | Raw Material Input Price (Rp/kg) | F | 4.200 |
| 9. | Other Input Contribution (Rp/kg) | G | 12.213 |
| 10. | Output Value | M x D=H | 42.000 |
| 11. | a. Value added (Rp/kg) | H-F-G=I | 25.587 |
| | b. Value-added ratio (%) | (I/H) x 100% = J | 121,8 |
| 12. | a. Labor remuneration (IDR/kg) | N x E = K | 1.906 |
| | b. Labor Share (%) | (K/I) x 100% = L | 7,45 |
| 13. | a. Profit (Rp/kg) | I-K = R | 23.681 |
| | b. Profit Rate (%) | (R/H) x 100% = O | 56,38 |
| **III.** | **Factor of Production Owner's Remuneration** | | |

| | | | |
|---|---|---|---|
| 14. | Margin (Rp/kg) | H – F = P | 37.800 |
| | a. Labor Income (%) | (K/P) x 100% = Q | 5,04 |
| | b. Other Input Contribution (%) | (G/P) x 100% = S | 32,31` |
| | c. Company Profit (%) | (R/P) x 100% = T | 62,65 |

Source: Research Data Analysis, 2023

From the results of the calculation of added value based on the Hayami method in Table 2, it can be seen that the banana chip UMKM "Nuri Rashi" processes 59.5 kg of banana raw materials in each production process. The production results are in the form of banana chips with a total output of 20 kg for one production process. The labor required for each production is 3 people with a working time of 10 hours, so that the amount of labor per production process is 30 JKO. The average product price of banana chips is IDR 125,000/kg of banana chips with an average labor wage after calculation obtained at IDR 3,782/kg of banana. The price of raw materials is Rp 4,200/kg banana and the contribution of other inputs, namely the contribution derived from auxiliary materials after calculation amounted to Rp 12,213/kg banana.

Based on Table 2, the processing of banana chips produces an added value of Rp 25,587/kg banana with a ratio of 121.8%, which means that 121.8% of the output value is the added value obtained from processing banana chips. In the services of the owners of production factors, the margin shows the amount of contribution of the owners of production factors other than the raw materials (inputs) used. The profit obtained by the business is Rp 23,681/kg banana. Based on Table 12, the margin obtained for processing banana chips is Rp 37,800/kg banana. In the company's profit section, the banana chip household industry "Nuri Rashi" obtained a profit derived from the division between the value added and the margin of 62.65%, meaning that every time one banana chip production will generate a profit of 62.65% or Rp 37,800 / kg banana. The added value obtained from the activities carried out by the banana chip business "Nuri Rashi" to produce 20 kg of banana chips in one production process shows that processing bananas into chips is one of the profitable businesses because there is added value generated in the process and is able to provide benefits for business actors.

The processing of bananas into banana chips in the "Nuri Rashi" banana chips MSMEs is categorized as MSMEs that have high added value, this is because the ratio of added value of banana fruit to banana chips is> 40%, which is 121.8%. Processing banana fruit into banana chips is a feasible business to develop, because after the value-added analysis, the profit obtained for the sale of banana chips is 62.65%.

## CONCLUSIONS AND RECOMMENDATIONS

Banana chips processed products in the Nuri Rashi MSME banana chips agro-industry are classified as providing high added value. This can be seen in the added value of banana chips, which is Rp 25,587 with an added value ratio of 121.8% per kilogram of raw material in one production process. The added value of banana chips of Rp 25,587 means that the added value of each kilogram of banana fruit processed into banana chips is Rp 25,587. The value-added ratio is classified as high, where the high value-added ratio is >40%.

## ACKNOWLEDGMENTS

The author thanks all those who have helped in completing this research, namely the Department of Agricultural Industrial Technology, Faculty of Agricultural Technology, University of Andalas for the facilities and infrastructure in carrying out this research.

## REFERENCES

Arti, Inti Mulyo, dan Adinda Nurul Huda Manurung. 2018. “Pengaruh Etilen Apel dan Daun Mangga pada Pematangan Buah Pisang Kepok (Musa paradisiaca formatypica).” *Jurnal Pertanian Presisi* 2 (2): 77-88.

Diarsa, A. W., Januar, J., & Suwandari, A. (2017). Analisis Nilai Tambah dan Strategi Pengembangan Home Industry Kupang Kering di Desa Bolongdowo Kecamatan Candi Kabupaten Sidoarjo. *JSEP, Vol 10*(No 3).

Dore, D. K., Dahoelat, D. N., & Afdah, U. (2021). Analisis Nilai Tambah Keripik Apel di Industri Rumah Tangga Andhini Kota Batu. *PRIMORDIA, Vol 17*(No 1).

Herlyadisti, F., Santosa, & Fiana, R. M. (2023). *Nilai Tambah dan Prospek Pengembangan Usaha pada Produk Olahan Keripik Pisang.* Jawa Timur: Uwais Inspirasi Indonesia.

Laeliyah, L., & Januar, J. (2018). Analisis Nilai Tambah Keripik Nangka pada Agroindustri UD Dua Dewi di Kabupaten Jember. *Pembangunan Pertanian dan Peran Pendidikan Tinggi Agribisnis*.

Latifah, I. (2010). *Pendugaan Umur Simpan Keripik Wortel dalam Kemasan Polipropilen.* Bogor: Institut Pertanian Bogor.