

THE VALUE-ADDED ANALYSIS OF CASSAVA TAPE PROCESSING IN BANDAR SETIA VILLAGE, PERCUT SEI TUAN SUB-DISTRICT, DELI SERDANG DISTRICT

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Abstract

Currently, household industries in Bandar Setia Village also process cassava, especially for cassava tape production. The purpose of this study was to determine the profit margin and added value of cassava tape processing in Bandar Setia Village, Percut Sei Tuan District, Deli Serdang Regency. The survey method is the research strategy used. Utilizing surveys as a data collection tool, the survey method draws samples from an existing population, and the findings are often applicable. Using descriptive analysis combined with a quantitative approach, the problem was assessed. In contrast, to address the issue of value-added, Hayami's (1987) method was used. The production cost calculated in this study yielded a result of approximately IDR 203,909.4 per day. The production output was limited to one batch per day and the amount of raw materials used was 50 kg per day. The resulting production yield is 35 packs per day, and the price per pack is IDR 10,000. And the value-added ratio in the cassava tape artisan company is 4.57%, meaning that the percentage of cassava tape goods that obtain added value is 0.016%. The added value of cassava into cassava tape is Rp 32,000. Rp 31,540 is generated per day from processing cassava into cassava tape..

INTRODUCTION

Cassava is commonly known for its perishability, rapid decay and abundance. Due to cyanide acid (HCN), damaged cassava will change color and taste and may become toxic or less appetizing. Processed cassava has better selling value, can be stored for longer periods of time, and is less prone to failure and deterioration. (Sitorus, 2019).

Various initiatives have been carried out to create processing technologies that can increase the nutritional value, added value and reputation of cassava. This is intended to cover existing shortcomings, such as low protein content, unattractive taste and aroma, and short shelf life (Wiraputra, et al., 2019).

Cassava tape is one of the most famous traditional fermented foods. Tape is made from cassava. Tape is known as a cuisine with a unique flavor that has a slight sourness, sweetness, and a smooth and liquid texture. It also smells like alcohol. The manufacturing procedure combines modern and traditional methods. Fermentation of waste materials is gaining popularity because it is safer and more environmentally friendly than using chemicals, not to mention easier and cheaper. Fermented foods usually have more nutritional content than the original source because bacteria break down the ingredients into simple chemicals that are easier to digest. The fermentation process has the potential to reduce the concentration of harmful chemicals such as cyanide, oxalic acid, and phylloacetic acid. (Malianti, et al, 2019).

Cassava tubers are used as a substrate for making cassava tape, and when the skin has been peeled, the tubers are coated with tape yeast (*Chlamydomucor Saccharomyces cerevisiae*). Fermentation takes a day or two to complete. Besides cassava tape, black glutinous rice tape is another type of tape that is composed of dari singkong.

Salah satu cara untuk memikirkan proses fermentasi yang digunakan untuk mengubah singkong menjadi tape is a form of biotechnology. The process by which cassava becomes soft, juicy, sweet, and smells of alcohol is called tape. This is caused by the microbes *Saccharomyces cerevisiae* and *Chlamydomucor* that convert starch into sugar. The brain system, muscle cells and digestive system all depend on vitamin B1 (thiamine), which can reach three times more in tape fermentation. One million lactic acid bacteria per milliliter or gram can be detected in tape liquid. These fermented foods impact the digestive tract by increasing beneficial bacteria and reducing harmful ones. The capacity of tape to attach to and remove aphactosin, a toxic material secreted by molds, especially *Aspergillus flavus*, from the human body. The harmful ingredient known as alactosin, which is produced by molds, especially *Aspergillus flavus*, can be bound and extracted from the body by tapai. Since the bacteria that digest tapai are capable of producing vitamin B12, consuming tapai can prevent anemia. Cassava contains cyanide which is harmful to humans. (Sihombing, 2022).

Apart from being used as an alternative to rice, cassava (or cassava as a food source) can be processed into many industrial goods, one of which is the cassava tape household industry in Bandar Setia Village. There are ten hamlets in Bandar Setia Village. The household-scale cassava tape industry operates in Bandar Setia Village, Percut Sei Tuan District, Deli Serdang Regency. This industry processes cassava into processed products such as cassava tape. Cassava tape production is still done traditionally, using family labor. The cassava tape industry in Bandar Setia Village, Percut Sei Tuan District, Deli Serdang Regency, is in great demand by the surrounding community because of its distinctive and sweet taste. Cassava tape in Bandar Setia Village has been established for 40 years until now.

METHODS

This research was conducted from April 2023 to May 2023. This research processes its data using a descriptive quantitative approach. In descriptive research, researchers record potential symptoms as observed by the team. The purpose of quantitative analysis is to provide an explanation or summary of the various circumstances, variables, and conditions that exist in the community under study. To assist in data analysis, field data is first grouped, classified, evaluated, and processed through tabulation. This allows for consideration of the added value of Hayami's (1987) technique.

In this study, both primary and secondary data were used. Information collected directly from research subjects through surveys or pre-made questions is known as primary data. In contrast, secondary data is additional information collected from a third, fourth, or more recent source. Secondary data also includes information that has been published in any kind of publication, including magazines, journals, e-books, traditional books, transcripts from interviews, and more.

RESULTS AND DISCUSSION

Results

Hayami's approach allows for the distribution of value added on the labor imablan and profits generated. The raw materials used in this study are cassava, output (cassava tape), labor costs, raw material prices, and other raw material prices. The calculation of the added value of this study aims to measure the amount of added value derived from changes in texture, taste, and processing of cassava to make cassava tape.

Table 9. Hayami method value-added calculation results

Variable	Mark
Output, Input, Price	
1. Output (Kg)	A = 35
2. Input (Kg)	B = 50
3. Labor (HOK)	C = 2
4. Conversion factors	D = 0,7
5. Labor Coefficient (HOK/Kg)	E = 0,04 F = 10.000
6. Output Price (Rp/Kg)	G = 15.000
7. Labor Wages (Rp/HOK)	H = 3.000
8. Input Price (Rp/Kg)	I = 6.040
9. Other Input Prices (Rp/Kg)	J = 7.000
10. Output Value (Rp/Kg)	K = 16.040
11. Added Value (Rp/Kg)	L = 229,14
12. Value Added Ratio (%)	M = 600
13. Labor Benefits (Rp/Kg)	N = 3,74
14. Added Value (%)	O = 5.440
15. Profit (Rp/Kg)	

Description:

- A. = Output is the production of cassava tape of 35 Kg
- B. = Input is the raw material used in making cassava tape as much as 50 kg
- C. = Labor is the number of workers in making tape is 2 people
- D. = Conversion Factor is the division between output and input (A/B). The conversion factor in making tape is 0.7
- E. = Labor Coefficient is the division between labor and input (C/B). the coefficient of labor is 0.036 HOK/Kg
- F. = Output Price is the price of tape sold at 10,000 Kg
- G. = Labor Wages in making tape amounting to 15,000 once the production process
- H. = Input Price is the price of raw materials from cassava which amounted to Rp.3,000 / Kg
- I. = Other Input Prices consist of yeast costs, packaging costs, and fuel costs. The price of other inputs amounted to Rp.6,040.
- J. = Output Value is the result of multiplying the conversion factor and output price (D*F), the value of output in cassava tape making is Rp.6,040.
cassava tape making is Rp. 7,000.
- K. = Added Value is the addition of output value to the price of my materials and the price of other raw materials (J+H+I).
(J+H+I), the value added in making cassava tape is Rp. 16,049/Kg.
- L = Value-added ratio is the division between the value added and the output value and multiplied by 100% (K/J*100%), the ratio of added value in cassava tape making is 229.14%.
- M = Labor Reward is the multiplication of the coefficient of labor with the wage of labor (E * G), the coefficient of labor in cassava tape making is Rp.600/Kg.
- N = Value Added % is the division between labor rewards and added value multiplied by 100%.
The percentage of added value in cassava tape making is 3.74%.
- O = Profit is the reduction between the added value and the labor reward (K-M), the profit obtained in making cassava tape is 3.74%.
obtained in making cassava tape is Rp. 5,440.

Discussion

Value-added refers to the value that producers add to the purchase of raw materials or finished goods (other than labor) before selling new or updated goods or services. Value-added also refers to the increase in value that a commodity experiences as a result of additional processing during the production process. The notion of value-added refers to the increase in value of agricultural commodities caused by useful inputs that are treated like commodities. Treatments and services that increase the value and usefulness of agricultural commodities are referred to as functional inputs. When making investments in agro-industry, other producers can use the high value-added as knowledge. Profits for producers are generated by competent value addition. If value-added is able to provide significant profits, more investors will be attracted to invest their capital, and the local community will benefit from employment opportunities. (Farisandi 2018).

The difference between the value of a product before and after processing or production is known as value-added. It is thought that adding value to primary agricultural products will make them more competitive, which will help achieve national goals for industrial growth. As a result, the growth of agribusiness as a model of economic development can utilize potential regional resources. Value-added production costs are calculated using the following factors: salary costs, depreciation of additional costs and operating costs, and raw material costs or basic costs. (Waryat, et al 2016)

Value-added refers to the value that producers add to the purchase of raw materials or finished goods (other than labor) before selling new or updated goods or services. Value-added also refers to the increase in value that a commodity experiences as a result of additional processing during the production process. The notion of value-added refers to the increase in value of agricultural commodities caused by useful inputs that are treated like commodities. Treatments and services that increase the value and usefulness of agricultural commodities are referred to as functional inputs (Reni, 2011). When making investments in agro-industry, other producers can use the high added value as knowledge. Profits for producers are generated by competent value-added. If value-added is able to provide significant profits, more investors will be attracted to invest their capital, and the local community will benefit from employment opportunities (Sonhaji, 2000).

The shift in value caused by the way inputs are handled during the production process is known as value-added.

CONCLUSION

The added value contained in the process of making cassava tape is Rp.16,040 / Kg. the ratio of added value contained in the process of making cassava tape is 229.14%., labor remuneration contained in the process of making cassava tape is Rp.600 / Kg. %, the percentage of added value contained in the process of making cassava tape is 3.74%. the profit contained in the process of making cassava tape is Rp. 5,440.

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