



Analysis of Added Value of Fish Drumstick at Home Industry "Adisyafidz Barokah" Nagreg, Bandung Regency, West Java

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Research was conducted for one month starting from 16 November 2020 to 17 December 2020 at home industry "Adisyafidz barokah" Nagreg, Bandung regency, West Java province, Indonesia. Catfish (*Clarias* sp.) is one of the fish that preferably consumed by the people of Indonesia. This opportunity is used by Mr. Mansyur as owner of home industry "Adisyafidz Barokah" to process various products made from catfish, one of them is fish drumstick. This product is very popular among children and adults. This research aims to determine the added value and profit of fish drumstick products in the "Adisyafidz Barokah" Home Industry. The added value was analyzed using the Hayami method. The research procedure is carried out with the first stage of making fish drumstick products according to the steps that are usually done at home industry. Then the next step is to conduct interviews with the owner of the Home Industry Adisyafidz Barokah and also with several employees to get information related to the prices of main and additional raw materials as well as the marketing prices of fish drumstick. The data obtained were analyzed to see the added value based on the Hayami method. Based on the results of the research, it was concluded that the

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processing of catfish into fish drumstick products added value more than 0, which means this business was feasible to carry out. This processed product has an added value of IDR. 137,000.00 from 4 kg of fish drumstick products with 12 kg of catfish as raw material. The profit obtained from processing catfish into fish drumstick in one production (12 kg of raw material) is IDR. 110,600.00, percentage of profit is 80.07%.

Keywords: Catfish; processed products; fish drumstick; value added.

1. INTRODUCTION

Catfish (*Clarias* sp.) a popular fishery commodity in Indonesia. This fish comes from the African continent and was first imported to Indonesia in 1984. Catfish is one of the most easily accepted fish due to its various advantages. These advantages include fast growth, adaptability to the environment, and high nutritional content [1]. The catfish nutritional composition includes protein (17.7%), fat (4.8%), minerals (1.2%), and water (76%) [2].

Indonesian people like catfish for consumption and is one of the preferred fish [3]. Seeing the market that likes catfish with cheap catfish prices and high nutritional content, this opportunity is used by the home industry "Adisyafidz Barokah" to process it into various catfish based products. Diversification of processing will increase the consumption of catfish in Indonesia.

One of the products produced by home industry "Adisyafidz Barokah" is fish drumstick. According to [4] fish drumstick is a fish jelly product which is added with various types of flour and spices and other additional ingredients. The product is similar like nugget but using a stick and looks a like chicken drumstick.

This product is very popular with all people, children and adults. Processing catfish into fish drumstick will provide added value to the catfish and also profit. Many factors influence the added value and profit, one of them is the price of fresh catfish as the raw material for fish drumstick [5].

Catfish commodity has an unusual price. Consumption fish are generally more expensive because of their larger size. It is inversely proportional to catfish whose price will go down if the size is getting bigger [6]. Catfish used for raw materials in the Home Industry "Adisyafidz Barokah" is big fish size.

Fish is one of the raw materials which has the characteristic of quickly undergoing a process of putrefaction so that an effective way of handling is by processing it into fishery products that have a shelf life. Industries that carry out processing to

create new products will increase economic value after processing will provide higher prices providing greater benefits without going through the processing process [7].

Based on the foregoing, this research aims to determine the added value and profit of catfish processed into fish drumstick products made from fresh fish as a raw material at Home Industry "Adisyafidz Barokah".

2. MATERIALS AND METHODS

The research was conducted for one month starting from 16 November 2020 to 17 December 2020 at home industry "Adisyafidz barokah" Nagreg District, Bandung Regency, West Java. Which is located in KP. Margabakti RT. 01 RW. 16, Ganjarsabar Village. The research method used is the case study method (case study). The type of data used is primary data. Sampling method used in this study was purposive sampling. Respondents who were interviewed is the owner of home industri Adiyasfidz Barokah. Data collection methods used in this study include interviews, note taking and observation. The data analysis method used in this research is quantitative descriptive analysis.

2.1 Research Sites

Home industry "Adisyafidz barokah" Nagreg District, Bandung Regency, West Java. Which is located in KP. Margabakti RT. 01 RW. 16, Ganjarsabar Village. Located at eastern 40km from the capital city of west java, Bandung.

2.2 Value Added Analysis

The data analysis used in this research is quantitative analysis to see the value added analysis based on the Hayami method [8]. There are 2 ways to calculate added value. First the added value during processing consists of technical factors (production capacity, amount of materials and labor) and market factors (output prices, labor, labor wages, prices for raw materials and other inputs).

Value addition is the added value of a commodity due to the treatment given to the commodity. The criteria for assessing added value are as follows:

1. If the added value (AV) > 0 means that the catfish processing business provides added value (positive).
2. If the added value (AV) < 0, it means that the catfish processing business does not provide added value (negative).

3. RESULTS

3.1 Value Added Analysis of Fish Drumstick

Fish drumstick products adiyasfidz barokah are sold to collectors who come to the processing house or made by order. The selling price for fish drumstick to collectors ranging from IDR. 25,000.00/package, containing fish drumstick 200gr/package. Resellers usually sell fish drumstick for IDR. 35,000.00/package. Adiyasfidz barokah gives discounts to wholesalers if they buy more than 1000 packages, the price will be cheaper.

The processing of catfish into fish drumstick provides added value for the processor. The added value of fish drumstick is calculated based

on the production yield for 1 production. Value added analysis is useful for describing the production process according to the contribution of each factor production. Basis for calculating this added value analysis method uses the calculation of 12 kg of catfish raw materials, with one production resulting in an output of 4 kg of fish drumstick.

Based on the results the following is the result of analysis of value-added processing of fish drumstick Table 2.

Output of 4 kg provides marketing sales of IDR. 500,000.00 for the total. Labor who take part in the production process get a wage of IDR 80,000.00. Labor is the number of working days of people who are directly involved in one production process of making fish drumstick with the labor involved in the production is 4 HOK, yields a conversion factor of 0.33. This conversion rate shows that 1 kg of fish can produce 0.33 kg of fish drumstick. The average price of catfish as a raw material is IDR 10,000.00 / kg. In addition to the main raw material, there are other input contributions needed in the processing of fish drumstick amounting to IDR 8,000.00 for each production.

Table 1. The framework for calculating the added value of the Hayami method

| No | Description | Calculation |
|------------|---|--------------------------|
| I | Output, input, price | |
| 1. | Output (kg) | (1) |
| 2. | Raw Fish Material (kg) | (2) |
| 3. | Labor (HOK) | (3) |
| 4. | Conversion Factor (1/2) | (4) = (1) / (2) |
| 5. | Labor Coefficient (3/2) | (5) = (3) / (2) |
| 6. | Output Prices (IDR/kg) | (6) |
| 7. | Direct Labor Wages (IDR/HOK) | (7) |
| II | Income and profits | |
| 8. | Raw material prices (IDR/kg) | (8) |
| 9. | Other input contributions (IDR/kg) | (9) |
| 10. | Output Value (IDR) (4x6) | (10) = (4) x (6) |
| 11 a. | Value-added (IDR) (10-9-8) | (11a) = (10) – (9) – (8) |
| b. | Value Added Ratio (%) (11a/10) | (11b) = (11a/10) x 100% |
| 12 a. | Direct Labor Income (IDR)(5x7) | (12a) = (5) x (7) |
| b. | Share of Labor (%) (12a/11a) | (12b) = (12a/11a) x 100% |
| 13 a. | Profit (IDR)(11a-12a) | (13a) = 11a – 12a |
| b. | Profit Rate (%) (13a/11a) | (13b) = (13a/11a) x 100% |
| III | Remuneration for the owner of production factors | |
| 14. | Margin (IDR)(10-8) | (14) = (10) – (8) |
| a. | Direct Labor Income (%) (12a/14) | (14a) = (12a/14) x 100% |
| b. | Other Input Contributions (%) (9/14) | (14b) = (9/14) x 100% |
| c. | Entrepreneur Profits (%) (13a/14) | (14c) = (13a/14) x 100% |

Source: Hayami et al. *Agricultural Marketing and Processing In Upland Java (1987)*

Table 2. Analysis of the value added fish drumstick in adiyasfidz barokah

| No | Description | Fish drumstick |
|------------|--|----------------|
| I | Output, input, price | |
| | 1. Output (kg) | 4 |
| | 2. Raw Fish Material (kg) | 12 |
| | 3. Labor (HOK) | 4 |
| | 4. Conversion Factor (1/2) | 0,33 |
| | 5. Labor Coefficient (3/2) | 0,33 |
| | 6. Output Prices (IDR/kg) | 500.000,00 |
| | 7. Direct Labor Wages (IDR/HOK) | 80.000,00 |
| II | Income and profits | |
| | 8. Raw material prices (IDR/kg) | 15.000,00 |
| | 9. Other input contributions (IDR/kg) | 8.000,00 |
| | 10. Output Value (IDR) (4x6) | 165.000,00 |
| | 11 a. Value-added (IDR) (10-9-8) | 137.000,00 |
| | b. Value Added Ratio (%) (11a/10) | 83,03 |
| | 12 a. Direct Labor Income (IDR)(5x7) | 26.400,00 |
| | b. Share of Labor (%) (12a/11a) | 19,27 |
| | 13 a. Profit (IDR)(11a-12a) | 110.600,00 |
| | b. Profit Rate (%) (13a/11a) | 80,07 |
| III | Balas jasa pemilik faktor-faktor produksi | |
| | 14. Margin (IDR)(10-8) | 150.000,00 |
| | a. Direct Labor Income (%) (12a/14) | 17,60 |
| | b. Other Input Contributions (%) (9/14) | 5,33 |
| | c. Entrepreneur Profits (%) (13a/14) | 73,73 |

The added value obtained from fish drumstick is IDR 137,000.00 which is obtained from the value of the output minus the price of raw materials and the contribution of other inputs by the percentage added value, namely the result of added value divided by the output value multiplied by 100% so that a value added ratio of 83,03 is obtained. Based on Table 2, it explains that the processed fish drumstick provides positive added value or provides added value greater than zero, there is an value added of 83,03 (added value > 0). That means business is feasible to run.

There are 2 ways to calculate added value, according to Hayami [8] first Added value during processing Consists of technical factors (production capacity, amount of materials and labor), market factors (output prices, labor, labor wages, prices for raw materials and other inputs). Second Added value during the marketing process The distribution of added value relates to the technology applied in processing, quality of workforce in the form of expertise and skills, as well quality of raw materials. Based on this, it can be seen that technical factors and market factors greatly influence to determine added value.

The profit obtained from processing catfish into fish drumstick in one production with 12 kg of raw material resulting in an output of 4 kg of fish

drumstick is IDR. 110,600.00 with a profit percentage of 80.07%. Direct labor obtained IDR. 26.400,00/kg with a percentage value to the added value of 19,27%.

Fish drumstick products get a margin of IDR 150,000.00 / kg where the margin is the difference between the output value and the raw material or the contribution of the owner's production factors other than the raw materials used in the production process. The margins obtained can affect the percentage of direct labor income, other input contributions and the profits of the business owner. The results obtained are 17.60% for direct labor income, other input contributions of 5.33% and profits obtained by business owners of 73.73%.

4. CONCLUSION

The added value of processing catfish into a product that provides a added value of more than 0 (AV >0) means that this business is feasible to carry out. This processed product has an added value of IDR. 137,000.00 and an added value ratio for 83,03%. Fish products that are processed into fish drumstick cost 0.33 times the price of fresh fish. In order to obtain added value and profits, the fish processing industry must make the production costs more efficient. Added value and profit obtained by the fish processing

industry is strongly influenced by the production costs used.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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