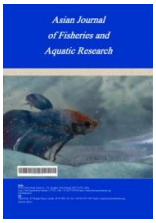

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Analysis of Added Value of Catfish Raw Leather Cracker Product (Case Study at CV. Raja Patin, Sugiharjo Village, Deli Serdang Regency, North Sumatra Province)

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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

This study aims to analyze the added value of the catfish skin cracker product in CV. Raja Patin, Sugiharjo Village, North Sumatra Province. The method used in this research is a case study method and quantitative descriptive analysis as data analysis used. The sampling technique was carried out using a purposive sampling method. The added value of the fish skin cracker product is IDR 31,700 / kg with an added value ratio of 67.44%. Fish products that are processed into fish crackers are worth 0.47 times the price of fresh fish. This indicates that processing activities provide a sizeable contribution to economic value added and product added value.

Keywords: Business performance; fish crackers; profit; added value.

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1. INTRODUCTION

Deli Serdang Regency is a potential area for fishery and marine product processing activities to be a driving factor for efforts to increase fishery and marine production in North Sumatra Province. (Fisheries and Maritime Affairs Office of Deli Serdang Regency 2017). Fish skin cracker processing factory Raja Patin, located in Sugiharjo Village, Deli Serdang, is a famous cracker industry center in the Deli Serdang area, North Sumatra. The most famous product of the cracker industrial area is fish skin cracker [1,2]. The processed fish skin crackers in Sugiharjo Village have been exported to various countries in Southeast Asia, including Malaysia, Vietnam and Singapore. Fish cracker is an agribusiness product which is used as one of the superior products of Deli Serdang Regency and is still growing until now. The total production of fishery products in North Sumatra Province in 2017 experienced an increase of 4.1% [3-5]. and the contribution of North Sumatra fishery processing targets increased by 751,986.09 tons from the total production of fisheries processing products in Deli Serdang Regency, which has increased every year. (Department of Fisheries and Marine Affairs of North Sumatra 2015). The development of the fish skin cracker processing business is expected to improve the welfare of the community as seen from an increase in the community's economy [6,2]. 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. The existence of an industry that changes the primary form into a new product with higher economic value after going through the processing process will be able to provide added value because the costs are incurred so that new higher prices are formed and the profits are greater than without going through the processing process [7-9]. This is what encourages the author to conduct research so that he can find out more about the added value obtained from the fish skin cracker processing business (Case Study at CV. Raja Patin, North Sumatra). This study aims to analyze the added value of fish into a skin cracker product made from fish skin as raw material at CV. Raja Patin.

2. MATERIAL AND METHODS

Research was conducted in December 2019 at CV. Raja Patin in Sugiharjo Village, North Sumatra Province. The research method used is the case study method (case study). The type of data used is primary data. The sampling method used in this study was purposive sampling. Respondents who were interviewed at CV. Raja Patin, Sugiharjo Village, North Sumatra Province, is the owner of the company. Data collection methods used in this study include observation, interviews, and note-taking. The data analysis method used in this research is quantitative descriptive analysis.

2.1 Research Sites

Sugiharjo Village is one of the villages in Batang Kuis District, Deli Serdang Regency, North Sumatra Province. The area of Sugiharjo Village, Sindang District, Deli Serdang Regency is 15 hectares. The northern boundary is bordered by Unit Village, east by Masjid Village, south by Sidodadi Village, and in the west with Saentis Village. Orbitation / distance from the center of government of Sugiharjo Village to the district government center, which is five km. Sugiharjo Village consists of five hamlets with the socio-economic conditions of the Sugiharjo Village community with existing institutions and facilities. Based on the village infographic data, the number of worship suggestions in the form of one mosque and three prayer rooms and three churches, one polyclinic / community service center / puskesmas, while for educational facilities and facilities, there are two buildings for primary school groups.

2.2 Value Added Analysis

The advantages of the value added analysis method [10] are that it can be seen the value of output and productivity and the amount of remuneration for the owners of production factors. According to [10], added value is the added value of a commodity due to the treatment given by the commodity in question. The calculation of the added value of catfish skin processing can be carried out using the added value of Hayami as presented in Table 1. The added value obtained indicates that the processing of catfish skin provides added value or not. This can be seen based on the criteria for added value (Febriyanti et al. 2017), namely:

(a) If the added value (AV) is> 0, it means that the processing of catfish skin provides added value; and
(b) If the added value (AV) <0, it means that the processing of catfish skin does not provide added value.

3. RESULTS AND DISCUSSION

3.1 Analysis of the Value Added Fish Cracker Skin

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

Calculation of added value in fish skin cracker products is carried out per one production process. The output of catfish is the amount of processed fish skin cracker produced in one production process. The output of fish skin crackers at CV. Raja Patin is as much as ± 7000 kg with the input of the product being 15000 kg of fish skin which is processed for one production process. Labor is the number of working days of people who are directly involved in one production process of making fish skin crackers with the labor involved in the production of fish skin crackers where for one production process requires 35 HOK. The conversion factor is the amount of output that can be produced in one input unit, namely the number of processed fish cracker products produced from one kilogram of catfish. The resulting product is ± 7000 kg of fish skin crackers with catfish skin which is needed as much as ± 15000 kg so that the conversion factor is 0.47 due to the addition of additional ingredients in the catfish. The labor coefficient is the amount of direct labor required to process one kilogram of product, namely as much as 0.0023, where each kilogram of fish processed requires 0.0023 working days of people obtained from labor divided by the number of fish processed for one production (input). The selling price or the output price of fish skin crackers is IDR 100,000 / kg. The labor wage received by direct workers is Rp. 62,000, - / HOK, where every time the fish skin cracker production process, workers who take part in the production process get a wage of Rp. 62,000,-. The average price of catfish skin is Rp. 10,000, - / kg. In addition to the main raw material, there are other input contributions needed in the processing of fish crackers amounting to Rp. 5300.- for each production process.

Table 1. Hayami method in seeking value added

Variabel		Perhitungan
	Output, Input dan Price	
1.	Output (Kg/month)	(1)
2.	Fish / shrimp input (Kg/month)	(2)
3.	Labor (hr/day)	(3)
4.	Factor Conversion	(4) = (1)/(2)
5.	Labor Coefficient	(5) = (3)/(2)
6.	Output price of fish / shrimp (crackers (IDR/Kg)	(6)
7.	Wage Rate (IDR/Hr)	(7)
II.	**Profit**	
8.	Raw Material Input (Rp/kg)	(8)
9.	Other current input(Rp/kg)	(9)
10.	Product(Rp/kg)	(10) = (4) x (6)
11.a.	Value-added	(11) = (10) – (9) – (8)
b.	Value added ratio (%)	(11) = (11a)/(10) x 100%
12. a.	Labour Income	(12a) = (5) x (7) (Rp/Kg)
b.	Labour's share (%)	(12b) = (12a)/(11a) x 100%
13. a.	Processor Profit (Rp/Kg)	(13a) = (11a) – (12a)
b.	Profit Rate (%)	(13b) = (13a)/(11a)x100%
III. Remuneration for the owner of the factors of production		
14.	Margin (Rp/Kg)	(14) = (10) – (8)
	a. Direct labor income (%)	(14a) = (12a)/(14) x 100%
	b. Other Input Contribution (%)	(14b) = (9)/(14) x 100%
	c. Owner Profit (%)	(14c) = (13a)/(14) x 100%

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

Table 2. Analysis of the value added processing company fish crackers in CV. Raja Patin

Variabel	Perhitungan
Output, Input dan Price	
1. Output (Kg/month)	7,000
2. Fish / shrimp input (Kg/month)	15,000
3. Labor (hr/day)	35
4. Factor Conversion	0.47
5. Labor Coefficient	0.0023
6. Output price of fish / shrimp (crackers (IDR/Kg)	100,000
7. Wage Rate (IDR/Hr)	62,000
II. Profit	
8. Raw Material Input (Rp/kg)	10,000
9. Other current input(Rp/kg)	5,300
10. Product(Rp/kg)	47,000
11. a. Value-added	a. 31,700
b. Value added ratio (%)	b. 67.44%
12. a. Labour Income	a. 142.6
b. Labour's share (%)	b.0.4%
13. a.Processor Profit (Rp/Kg)	a.31,557.4
b. Profit Rate (%)	b.99.55%
III. Remuneration for the owner of the factors of production	
14. Margin (Rp/Kg)	37,000
a. Direct labor income (%)	a.0.39%
b. Other Input Contribution (%)	b.14.32%
c. Owner Profit (%)	c.85.29%

The output value is obtained from the conversion factor multiplied by the output price of fish skin crackers, which is IDR 47,000. The added value obtained from fish crackers is Rp. 31,700, - 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 67 is obtained. , 44% of the total output. According to [1] there are two ways to calculate added value, namely added value for processing and added value for marketing. The factors that affect the added value of processing can be categorized into two, namely technical factors and market factors. Technical factors that influence are production capacity, amount of raw materials used and labor. Market factors that influence are output prices, labor wages, raw material prices and the value of other inputs besides raw materials and labor. The amount of added value because the processing process is obtained from reducing the cost of raw materials and other inputs to the value of the product produced, excluding labor. Based on this, it can be seen that technical factors and market factors greatly influence to determine added value. Direct labor income is Rp. 142.6.

Labor income divided by added value multiplied by 100% obtained the result of labor share of 0.4% which shows the percentage of labor income from added value so that the profit obtained is IDR 31,557.4, - which is obtained from added value minus labor income live. The percentage of the profit rate is the profit divided by the added value multiplied by 100% so that you get a profit rate of 99.55% of the added value. Fish cracker products manufactured by CV. Raja Patin obtained a margin of Rp. 37,000, - / kg where the margin is the difference between the output value and the raw material or the amount of the owner's contribution of production factors other than the raw materials used in the production process. The margin obtained can affect the percentage of direct labor income, other input contributions and business owner profits with the results obtained by 0.39% for direct labor income, other input contributions of 14.32% and 85.29% of profits obtained by business owners against the margin.

3. CONCLUSIONS

The added value in fish processing is influenced by the price of output, the contribution of other inputs, and the price of raw materials. Based on the calculation of added value using the Hayami

method, the added value of fish skin cracker products was Rp. 31,700 / kg and an added value ratio of 67.44%. Fish products that are processed into fish crackers are worth 0.47 times the price of fresh fish. The added value and profit obtained by the fish processing industry is strongly influenced by the production costs used. In order to obtain added value and large profits, the fish processing industry must make the production costs more efficient.

CONSENT

As per international standard or university standard, respondents' written consent 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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