Added Value Of Smoked Tuna Household Industry In Bulukumba Regency, South Sulawesi, Indonesia

Hardianty Askar[*]

[*] Program of Management, Institut Teknologi dan Bisnis Nobel Indonesia. Jl.Sultan Alauddin 212, Makassar, South Sulawesi, Indonesia

Abstract- The catch of tuna in Bulukumba regency that is big enough to encourage the emergence of a smoked tuna household industry processing. The processing industry can create added value. Assessing the added value of processed fishery products will be an inspiration to examine more deeply the aspects of the market and marketing. The purpose of this study is to determine the added value obtained by the smoked tuna household industry business. This research was conducted from March to May. The type of research used is quantitative research. The sampling method used is the census method with a total sample of 8 household industries. The data analysis used is value-added analysis using the *hayami* method. This study shows that the 8 smoked tuna household industries obtained an average added value of processing fresh tuna into smoked tuna fish of Rp 3,769/kg of raw materials and a value-added ratio of 12.35%. Financially, the smoked tuna processing industry has benefited. However, it is expected to further increase the number of productions and expand the marketing area.

Index Terms- Tuna Fish, Household Industry, Add Value, Hayami Method

I. INTRODUCTION

One of the centers producing capture fisheries in Indonesia is South Sulawesi. In 2018 the catch of commodities (tuna, skipjack and cob) in South Sulawesi reached 56,292 tons with a value of US$ 342,930 [1]. Tuna fish *(Thunnus sp)* is one of the mainstay commodities of South Sulawesi. Tuna fish is a type of large pelagic fish that has high economic value [2]. Bulukumba Regency becomes a tuna production center in South Sulawesi. Bulukumba Regency has a total tuna production of 2,392.6 tons/year [3].

The production of catches of Bulukumba Regency has increased significantly, such as in 2012 by 32,735 tons, in 2013 by 33,094 tons, in 2014 by 53,612 tons, in 2015 by 52,870 tons, in 2016 by 50,072. The potential of tuna fishing is very profitable for fishermen. The number of tuna catches in Bulukumba Regency was 218 tons in 2012, 2013 was 221 tons and in 2014 it was 241 tons, in 2015 it was 338 tons and in 2016 it was 2,233 tons. Based on this data, tuna catches increase every year [4].

Abundant fishermen's catches are still not being utilized optimally. Fish caught by fishermen are often not sold out immediately. The catch cannot be marketed entirely in fresh form. The rest of the sale by fishermen is preserved so that it can still be resold. Preservation carried out is salting. drying and fumigation of fish. Starting from this fish preservation activity, the food processing industry emerged in the form of a fish smoking industry [5].

The empowerment of fishing communities through the agribusiness-oriented fisheries development paradigm is closely related to efforts to grow productive businesses at the household level that can generate added value for fishermen and their families. So far, the marketing of fishery products is still dominated in the form of primary products which tend to have relatively low selling prices and fluctuate. The increase in production is expected to increase fishermen's income by considering the handling process, processing, and marketing. Increased income is expected to improve the living standards of fishermen [6].

Therefore, many fishermen in Bulukumba Regency preserve the remaining fish catches by preserving them through the smoking method. This makes the emergence of fish smoking industry activities in Singa Village, Herlang District, Bulukumba Regency. This village is the center of fish smoking industry in Bulukumba Regency. The distinctive and delicious taste is loved by the public. Smoked tuna fish is a distinctive and popular superior product in Bulukumba Regency [7].

The tuna smoking household industry is a strategic business alternative to increase fishermen's income through product diversification. In addition to increasing added value, the importance of processing fishery products is because fishery products have perishable and seasonal characteristics [6].

One of the fishery products that has added value to the supply chain is tuna smoked. The results of this smoked fish product can be used as a ready-to- eat (finish product) or an intermediate product that still requires additional treatment before consumption. Micro industries in the field of fish processing with smoking methods are an effort to increase added value to tuna products, have the

potential to improve living standards and can help increase the income of the community, especially fishermen. The existence of this smoking industry can reduce the unemployment rate in the area by opening business opportunities to the community.

Based on this background, it is necessary to conduct research to get an idea of the added value of smoked tuna processed products. For this reason, this research is expected to provide direction for the development of smoked tuna business activities, so that the margins obtained in the smoked fish business by business actors can increase and have an impact on increasing added value and income.

II.   RESEARCH METHODOLOGY

Research site and time

This research was conducted in the smoked tuna household industry in Singa Village, Herlang District, Bulukumba Regency from March to May. The determination of this location was chosen deliberately (Purposive) with the consideration that the area is the center of tuna smoking in Bulukumba Regency so that it is used as a research site (Figure 1)
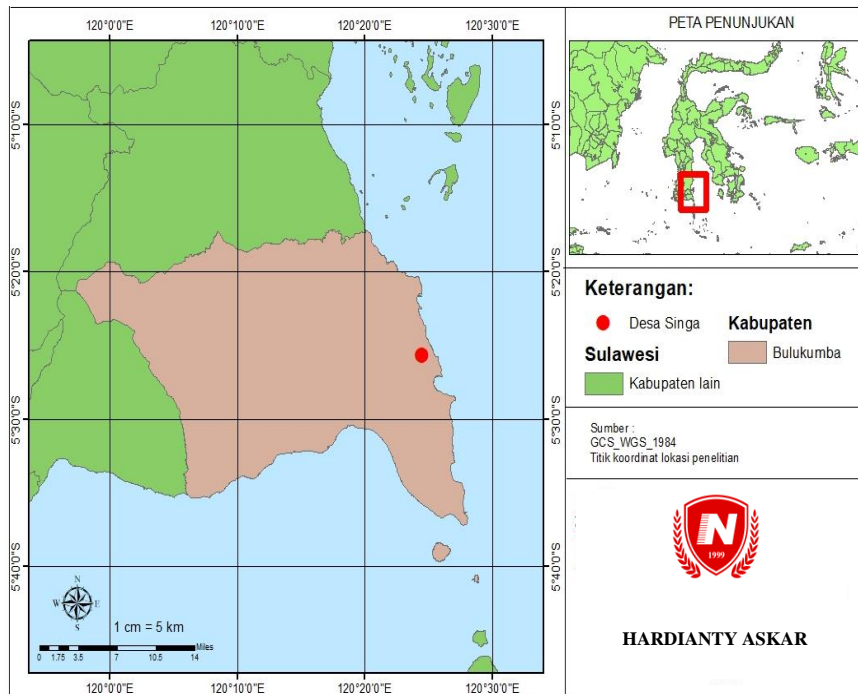

Figure 1: Map of research site

Data type and sources

The research method used is a descriptive method with a type of survey method. The data taken in this study are primary data and secondary data. Primary data obtained directly in the field through observation of tuna smoking activities and conducting interviews with industry players based on questionnaires. The primary data collected at the time of the study were the identity of the respondents, the business profile of the smoked tuna processing industry, the costs used or incurred during the smoked fish processing process, the number of workers used, the amount of smoked fish production, the income of the smoked tuna processing industry, and the marketing place for smoked tuna.

The secondary data collected at the time of the study was data from the Statistics of Bulukumba Regency and Fisheries Service of Bulukumba Regency. In addition, secondary data also includes data obtained through literature review sourced from research results, scientific articles and books needed in the research writing process.

Population and sample

The population in this study was a community involved in tuna smoking activities in Singa Village, Herlang District, Bulukumba Regency which consisted of 8 smoked tuna household industries, all of which were taken as samples. Sampling in this study used the census method, which is a sample determination technique when all members of the population are used as samples. This is done when the number of relatively small populations is less than 30 people or studies that want to make generalizations with very small errors [8].

Data Collection Techniques

1. Interview

Interviews are a technique of collecting data that is carried out by asking directly to respondents or informants. The interview method used is a guided interview method, which is carried out by the interviewer by bringing a series of complete and detailed

questions [9].In conducting interviews, researchers have prepared research instruments in the form of written questions. The purpose of these written guidelines is to guide the flow of the interview and avoid the possibility of forgetting some issues relevant to the research problem.

2. Observation

Observation is the process of recording systematic patterns of behavior of subjects (people), objects, or activities in the absence of questions or communication with the individuals studied. Observation is made through sight, smell, hearing, touch, and taste buds. Then. Observation can also be called direct observation. That is, observational research can be carried out with tests, questionnaires, image recordings, and sound recordings [9].

In this research, the following analysis is used a value-added analysis tool. One of the most important indicators of company economic activity is valeue added. Added valus also has complex indicators that have much meaning in the economy and finances of company [10]. Value added analysis using the Hayami method. There are 2 ways to calculate added value, namely added value for processing and added value for marketing. The procedure for calculating added value according to the Hayami method as shown in Table 1 below ([11]; [12]; (Aji et al. 2018)).

Table 1: Calculation of the added value of the Hayami method

	Output. Input. Price	Formula
1	Production Results (kg/year)	A
2	Raw materials (Kg/year)	B
3	Workforce (HOK)	C
4	Conversion Factors	D= A/B
5	Coefficient of Labor	E= C/B
6	Price (IDR/Kg)	F
7	Salary (IDR/HOK)	G
Income		
8	Price of Raw Materials (IDR/Kg)	H
9	Another Input (IDR/Kg)	I
10	Product Value (IDR/Kg)	J= D x F
11	a. Add Value (IDR/kg)	K= J- H- I
	b. Add Value Rate (%)	L%= (K/J)%
12	a. Labor Incentive (IDR/Kg)	M= E x G
	b. The Labor Section (%)	N%= (M/K)%
13	a. Benefits (IDR)	O= K-M
	b. Benefits Rate (%)	P= (O/K)%
Recompense to Production Factors		
14	Margin (IDR/Kg)	Q= J – H
	a. Direct Labor Income (%)	R= (M/Q)x100
	b. Another Input Donation (%)	S= (I/Q)x100
	c. Company Profits (%)	T=(O/Q)x100

Source: [11]*, * [12]*, (Aji et al. 2018)*

The amount of added value obtained can show that the processing of smoked tuna fish provides added value or not. This can be seen based on the value-added criteria (Febriyanti et al. 2017), namely: (a) if the added value (NT) > 0, meaning that fish processing provides added value; and (b) if the added value (NT) < 0, meaning that the processing of fish does not provide added value.

III. RESULT AND DISCUSSION

Household Industry Smoked Tuna Fish

The processing subsystem in the agribusiness structure of fisheries is an economic activity that converts primary commodities (raw materials) into processed products to produce commercial added value. Smoked fish as one of the fish processing products has a distinctive flavor, taste and color so that it is in great demand by the public [6].

The process of processing smoked tuna is carried out simply because it uses traditional equipment and is manual. Fish smoking is usually done in the side or back yard of each house. Fumigation activities are generally carried out from 14.00 – 18.00. This time was chosen because morning to noon is the process of providing raw materials and additional materials as well as the marketing process of smoked tuna fish. Smoked tuna can be stored within 24 hours before processing and the uniqueness of smoked

tuna is the distinctive flavor and taste of the product and its color becomes golden or brown. Stabbing fresh tuna using stick to help for texture or meat of smoked tuna is not easily broken. The length of fumigation time it takes is on average 2 hours.

The processing process of smoked tuna in Singa village uses a hot smoking method using coconut husk and sawdust as a heat source. Based on research by Junianingsih (2013) that in the Situbondo the process for producing smoke, only use the coconut husk as the only fuel. As explained by Haras (2004) that the best type of wood that produces smoke quality will affect the quality of smoked products. A type of wood that is good for smoking is hard wood that is slow to burn, contains many flammable compounds, such as: cellulose, hemicellulose, lignin, and produces acid (Utomo et al. 2012). Coconut shells and coir are classified as types of hardwoods that are widely used to produce smoke both gas and liquid because the composition of hardwoods consisting of lignin and cellulose provides good organoleptic properties [18].

The tuna smoking place in Singa Village is located on the side page or the house of each house. The smokehouse is made from wood *(nipa)* with a size of 3 x 3 meters. While the furnace is made of cement and bricks, at the top of the furnace there is a shelf used to store smoked fish made of bamboo and there is iron as a bamboo support tool with a size of 1 x 1 meter to 3 x 1.5 meters. The intensity of the fish fumigation production process is carried out on average every day with the consideration of adequate raw materials.

The type of smoking carried out by household industry players is hot fumigation where fish cannot last long and can only last up to a few hours with a maximum time of 24 hours. The application of quality assurance quality and quantity in each stage of the production process produced does not yet have quality assurance standards. Based on this research, it is in accordance with the opinion of Sulistijowati (2018) that the smoking process carried out is hot fumigation. The hot smoking process carried out by members of "Mina Asri" is after the manyung fish is thoroughly washed, cut into pieces according to the desired size and then smoked with a temperature of ± 70 °-80 ° C.

Smoked Tuna Fish Processing Process

Based on the findings in the field, in the process of processing smoked tuna fish there are several activities carried out by business actors. A simple way of making smoked tuna can be seen in the following scheme (Figure 2):
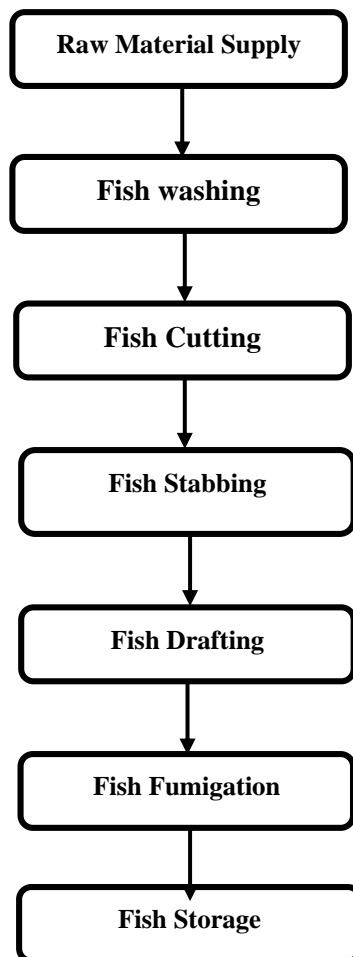

Figure 2: The flow of making smoked tuna fish

The processing process of smoked tuna fish in Singa Village, Herlang District, Bulukumba Regency is as follows:

1. Supply of Raw Materials

The main raw material used for smoking is fresh tuna fish. The raw materials are obtained at fish auction sites in Bulukumba Regency and Sinjai Regency. Raw materials are obtained at the Kajang fish auction place in Bulukumba Regency and the Lappa fish auction place in Sinjai Regency.

The amount of raw material purchased for smoked tuna is an average of 34 kg/day to 61 kg/day, with a fish size of 3-5 kg. The price of each type of fish is different and depends on the large or least supply of fish. Especially for raw materials for smoked tuna, namely fresh tuna, it has a fluctuating price influenced by the seasonality, for the abundant fish season, the price of fresh tuna is an average of IDR 24,000 to IDR 25,000/kg. With an average price of IDR 72.000,-/tail weighing 3 kg, IDR 96.000,-/head weighing 4 kg and IDR 120.000,-/tail weighing 5 kg.

The tuna fish used must be of good quality. This is because it is to maintain the quality of smoked fish. The quality of tuna used in making smoked tuna is tuna fish that has bright and clear eyes, light and clear fish skin, bright red or dark red gills, and fish meat when pressed with fingers will return to its original shape. As explained by Liviawaty and Afrianto (2010) that the characteristics of fresh fish are if the eyes are bright, clear, and not wrinkled with the condition that they are still protruding out, the fish's mouth is clenched or not open, has scales that still look bright and remains firmly attached when held, the aroma of the fish is fresher and distinctively specific, the skin is light and clear and not easily torn, especially on the abdomen, the fins in fish are elastic and when pulled or developed will return to their original shape, the gills are bright to dark red, light, and the gill lamella is regular and the lender is light in color, the texture of the meat is elastic or stiff and still firmly attached to the bone, the fish when pressed with the fingers will return to its original shape and the flesh on the abdomen still appears intact, the drains are pink or pale, and when the fish is put in the water it will drown.

Additional ingredients needed in making smoked tuna such as coconut husk are usually delivered directly to the smoked fish making place at a price of IDR 70,000,-. Meanwhile, stick is bought in the market or local residents at a price of IDR 2,500/tie.

2. Fish Preparation

Before the fish is smoked, it is washed first to remove dirt, the scales are removed as well as mucus. Then the fish is weeded by separating part of its head first without splitting so that the head remains intact. After that, split the belly of the fish up to near the anus. The fish is split into butterflies and the meat is taken only. The tail of the fish is separated also into two parts. Fish meat is also pierced using sticks so that the fish meat does not break easily and can withstand the smoking process. So, the part of the fish that will be smoked is the fish head, fish meat (fish belly to fish tail) and fish entrails called *Dapa'* or *Pepes.* (Figure 3)

Figure 3: Splitting fish meat to butterfly-shaped (A), Separated part of its head (B), and Stabbing Process (C)

3. Fish smoked Process

The process of smoking fish includes fuel preparation, preparation, fumigation, storage and packaging:

1) Fuel

This stage of combustion usually uses materials from coconut husk and wood. Another alternative fuel used is sawdust if the main ingredients, namely coir and wood, are difficult to obtain and this usually happens in the rainy season. (Figure 4)

Figure 4: Sawdust (A), Coconut Husk, and Smoked Fish Place (C)

2) Drafting

Sorted fish are arranged inside the smoker. This arrangement is carried out regularly in separating the fish head, fish belly and fish entrails *(Dapa')*. The way the fish is arranged on the shelf will determine the smoked fish produced. The fish is smoked with a horizontal model, with this position the contact between the smoke and the fish is less evenly distributed. The bottom of the fish will receive more heat and smoke, so the fish needs to be turned over so that it is evenly distributed. The smoked fish when cooked will be reddish in color. (Figure 5)

Figure 5: Drafting Process (A,B)

3) Fumigation

   The temperature used for hot fumigation is high enough that the fish meat becomes cooked. Too long fumigation will eliminate the fish's meltdown because too much water is lost [21]. Heat fumigation basically consists of three stages. The first stage is an initial drying stage that takes place slightly above room temperature. The second stage is the first maturation stage, while the third stage is the final maturation. In the smoking carried out takes 2 hours until the fish is cooked.

   The heat of combustion will kill the microbes that cause decay in fish and reduce the water content so that the fish are more difficult to damage by microbes. Smoke contains phenol and formaldehyde compounds, each of which is bactericidal (removes bacteria). The combination of these two compounds is also fungicidal (removes mold) [22] (Figure 6).

Figure 6: Fumigation

4) Storage

   The storage of smoked tuna will play a very important role in its distribution and marketing. If the storage is not good, then smoked tuna will be easily damaged so that the market reach will be low. Storage carried out in the home industry business is smoked tuna fish stored on banana leaves with cloth on the grounds that the smoked tuna fish is aerated so that it dries easily so that the fish is not damp because it can cause the fish to be affected by mold. Then, the next day before the fish are ready to be distributed the fish are put in and neatly arranged in a basket container. (Figure 7)

Figure 7: Storage in a basket container

5) Packaging

   Fish that are ready to be marketed will be brought to markets in Bulukumba Regency. The smoked fish is sold without a packaging process first. Smoked fish is sold only wrapped in banana leaves or plastic bags. So this causes the market reach to be low or the selling value of smoked tuna fish is low.

3. Marketing Place for Smoked Tuna Fish

   The process of distributing smoked fish by fishermen (producers) is carried out with two system, namely directly to consumers without involving marketing institutions and indirectly through intermediaries of marketing institutions, namely collecting merchants and retailers.

The marketing of smoked tuna production in Singa Village is generally local, which is mostly marketed in Herlang District and other districts in Bulukumba Regency. However, there are also those who market between regions, namely in Gowa Regency, precisely in Bajeng Market and Makassar City by online if there is an order.

The increasing market demand so that the production of smoked fish to date reaches 40 kg/day. Processors must market their products until they run out because the shelf life of smoked fish is not long, which is around 1 day. Usually marketers already have regular consumers in the market who buy their products.

The high market demand makes the production of smoked fish to date reach 40 kg/day. The household industry must market its products until it runs out because the shelf life of smoked fish is not long, which is around 1 day. Usually marketers already have regular consumers in the market who buy their products.

Marketing of smoked tuna in Herlang District is found in Gunturu Market, Batuasang Market and Tanuntung Market. Meanwhile, in Bontotiro Subdistrict, it is sold at Bontotangnga market, Kupang Market and Batang Market. There is also fish marketing in Kajang District, namely Kalimporo Market and Bonto Bahari District, namely Tanah Beru Market. In Bulukumba City, precisely in the Central Market, Cekkeng Market and Old Cekkeng Market, there are also sales of smoked tuna fish delivered directly by public transportation by one of the respondents of fish smoker manufacturers.

Value Added Analysis

The development of a business plan requires an added value analysis to determine the potential of the business development. A commonly used value-added analysis method is the *Hayami* method. By using the *Hayami* method, the ratio of added value and the level of profit from the business to be developed will be obtained [23]. Value added analysis is carried out to obtain information on estimated added value, employee benefits, rewards for financiers and management of each kilogram of raw materials into processed products. Information about the rewards for production factors in the production process is very important for business people [24].

Added value in the product processing process is the difference between the value of the product and the value raw materials as well as other inputs [25], but excluding labor [11]. Process value added is formed when there is a change in the shape of the original product, so that the formation of added value is important for farmers to increase their income (Priantara et al. 2016).

The process of processing tuna into smoked fish causes added value to the fish. Thus, the selling price of processed fish products in the form of smoked tuna will be higher when compared to fish that have not undergone processing. The calculation of the added value of smoked tuna processing aims to determine the value addition of the raw material processing process into smoked fish. The entire component of the analysis is measured and expressed in one kilogram (1 Kg) of raw materials. This is done so that it is known the amount of value added from 1 kg of raw materials formed by processing activities.

The stages of value-added analysis have variables in the form of production results (outputs), raw materials (inputs), labor, raw material prices and product prices, labor wages, and the number of other inputs used. Value added analysis uses the Hayami method, resulting in the added value received in each element. The advantages of this method are in the ease of understanding and use, as well as providing quite complete information for actors and investors and workers (Priantara et al. 2016).

In this study, the raw material used for smoked fish was Tuna fish with an average use of 48 kg per day. The average size of tuna used per day (one production) with a size of 3-5 kg. The amount of added value from the processing of smoked tuna can be calculated using components of the production structure in Table 2.

Table 2. Results of value-added calculation of Hayami method

	Output. Input. Price	Formula	Result	Unit
1	Production Results	A	10.605	Kg/year
2	Raw materials	B	11.288	Kg/year
3	Workforce	C	456	HOK
4	Conversion Factors	D =A/B	0,939	-
5	Coefficient of Labor	E =C/B	0,040	-
6	Price	F	32.500	IDR/Kg
7	Salary	G	10.000	IDR/HOK
	Income			
8	Price of Raw Materials	H	25.875	IDR/Kg
9	Another Input	I	874	IDR/Kg
10	Product Value	J = D x F	30.518	IDR/Kg
11	a. Add Value	K = J-H-I	3.769	IDR/Kg
	b. Add Value Rate	L% = (K/J)%	12,35	%
12	a. Labor Incentive	M = E x G	400	IDR/Kg
	b. The Labor Section	N% = (M/K)%	10,61	%
13	a. Benefits	O = K-M	3.369	IDR
	b. Benefits Rate	P = (O/K)%	89,39	%
	Recompense to Production Factors			
14	Margin	Q = J-H	4.643	IDR/Kg

a. Direct Labor Income	R = (M/Q) x 100	8,62	%
b. Another Input Donation	S = (I/Q) x 100	18,82	%
c. Company Profits	T = (O/Q) x 100	72,5	%

Source: Processed data (2022)

From the results of this research, the raw material for tuna used is 11,288 kg / year so as to produce processed smoked tuna products as much as 10,605 kg / year. In one month, the average smoked tuna household industry carries out production activities as much as 19 times the production. The range of working days lasts for 4-6 working days. In the processing of the smoked tuna household industry, each labor production process required is as many as 2 people. The smoked tuna fish processing labor does the work for 2 hours per day. Thus, the number of working people's days (HOK) devoted to smoked tuna labor is 456 HOK in a year.

The conversion factor is a comparison between the results obtained with many raw materials used and is worth 0.939. That is, for every one kg of processed tuna will be obtained 0.939 kg of smoked tuna.

The labor coefficient obtained from the ratio between the number of working days and the treated raw materials. The calculation results obtained a labor coefficient of 0.040 which means that each worker in 1 working day is able to process raw materials as much as 0.040 kg.

Other input donations are the total distribution of other input donations by the amount of raw materials used. The components in the calculation of other input contributions to the processing of smoked tuna fish consist of coconut husk, stick, electricity and equipment shrinkage. The total contribution of other inputs in the processing of smoked tuna is IDR 36,689 every production process while per input of raw materials is IDR 874/kg.

The average price of processed smoked tuna products in Bulukumba Regency in its marketing is IDR 32,500 / kg. While the average price of raw materials is IDR 25,875/kg. The donation of other inputs or supporting materials in the processing of smoked tuna fish amounted to IDR 874 / kg of raw materials.

The value of the product is obtained from the multiplication between the conversion factor and the price of the product. The amount of product value in the processing of smoked tuna fish is IDR 30,518 / kg. which shows that every processing of 1 kg of raw materials will produce smoked tuna worth IDR 30,518/kg. The value of this product is influenced by the magnitude of the conversion factor value.

The added value of processing fresh tuna into smoked tuna is IDR 3,769 / kg of raw materials. This figure is the difference between the value of the product and the price of raw materials and the contribution of other inputs. The amount of added value of the product obtained is influenced by several factors including the cost of contributing other inputs in addition to the cost of raw materials. An added value greater than 0 indicates that smoked tuna processing is able to provide profitable added value [27]. The ratio of value added to product value is 12.35%. This means that for every IDR 100,- the value of the product will be obtained an added value of IDR 12,-. So that. the amount of value-added ratio in the processing of smoked tuna is 12.35% meaning that the product value of IDR 30,518/kg is 12.35% of the added value of the product. Higher value-added implied a higher level of efficiency and higher selling price of the fish product (Hidayat et al. 2020).

Added value is the difference between the value of output and the price of raw materials and the contribution of other inputs. The added value is a gross added value because it contains a share for labor income. The added value of *pindang* fish processing is IDR 14,356 / kg of raw materials. From the calculation of added value, it can be known the ratio of added value, which is to divide the added value by the output value. In other words, the value-added ratio is the percentage of value-added to the output value. The amount of value-added ratio in *pindang* fish processing is 39.14% meaning that from the output value of IDR 36,680/ kg, there is 39.14% of the added value of output [29]. The added value obtained from the processing of 1 Kg of soybeans into tofu in Chinese tofu is IDR 2,284,816-/Kg. This added value is obtained from reducing the value of the product with the price of raw materials and other input values. The added value earned is still a gross plus, because it has not been reduced by labor rewards. The value-added ratio is a comparison between added value and product value. The value-added ratio obtained was 22.83%. This means, in the processing of soybeans into Chinese tofu, it provides an added value of 22.83% of the product value [30].

Labor incentives are the result of the multiplication between the labor coefficient and the average wage of labor. Labor rewards are the income that labor earns from each processing of one kilogram of raw materials. The labor incentive given for each kilogram of raw materials processed into smoked tuna is IDR 400 / kg of raw materials. Meanwhile, the labor share is the ratio between labor incentives and added value which is worth 10.61%.

Further analysis on the processing of smoked tuna fish shows that the profit obtained in the processing of smoked tuna fish is IDR 3,369 / kg of raw materials with the profit rate of processing smoked tuna fish is 89.39%. The profit value is the difference between added value and labor rewards so that it can be said to be a net added value because it has been reduced by labor rewards.

The profit value shows the amount of compensation received by entrepreneurs for the smoked tuna processing business. The contribution of factors of production can be indicated through the margin obtained from the result of reducing the value of products at the price of raw materials. The contribution of factors of production consists in income for labor. Another inputs and profit rates. Based on the calculation of the margin obtained in the processing of smoked tuna fish has IDR 4,643 / kg. The margin is distributed for each production factor, which is 8.62% for the workforce 18.82% for the contribution of other inputs and 72.56% for the company's profits. The proportion of labor and the employer's profits to the added value can indicate whether the business is capital-intensive. In the processing of smoked tuna fish, the margin distributed for the company's profits is greater than that of labor,

so both processing is a capital-intensive activity. Capital intensive means that in carrying out smoked tuna processing activities, more capital is needed compared to labor.

IV. CONCLUSION

Based on the results of research and data processing, conclusions can be drawn is the added value obtained from the processing of the smoked tuna household industry of IDR 3,769,-/kg of raw materials with an added value ratio of 12.35% meaning that the product value of IDR30,518/kg there is 12.35% added value of the product. Thus, the selling price of processed fish products in the form of smoked tuna will be higher when compared to fish that have not undergone processing and value added greater than 0 indicates that smoked tuna processing is able to provide profitable added value.

ACKNOWLEDGMENT

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AUTHORS

Author – Is Hardianty Askar, M.Si, Nobel Indonesia Institute, hardianty@nobel.ac.id.

Correspondence Author – Is Hardianty Askar, hardianty@nobel.ac.id, +6285211162060.