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## PRODUCTION AND INCOME ANALYSIS OF DRIED FISH BUSINESS IN BENGKULU CITY

Analisis Produksi Dan Pendapatan Usaha Ikan Kering Di Kota Bengkulu

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## ABSTRACT

The research objective was to analyze the factors that influence the dried fish business and the dried fish business income in Bengkulu City. The research was conducted in Kampung Melayu District, Bengkulu City. The research population is salted and fresh dried fish. The total respondents respectively are 65 and 56 people. The analytical method used is the Cobb-Douglas production function model to answer the first objective and income analysis to answer the second objective. The results of the study concluded: (1) the results of the F test analysis of the business of making salted and fresh dried fish had a significant effect on the variable production of salted and fresh dried fish. The results of the T-test on the production model of the business of making salted dried fish have three influential factors, namely Raw Materials (BB), Labor (TK), and Dummy (D). The dry fish production model only has one factor that has a significant effect, namely Raw Materials (BB). (2) Based on the results of the analysis, the costs incurred for the production of salted dried fish are IDR2,874,932/week and the costs incurred for the production of fresh dried fish are IDR2,392,144/week. Revenue for salted dried fish makers are IDR6,116,308/week and for fresh dried fish makers are IDR4,557,411/week. The income of the salt dried fish makers are IDR3,241,375/week and the fresh dried fish

makers are IDR2,185,266/week. R/C Ratio analysis obtained efficiency values of 2.13 and 1.91 respectively so the business is carried out proved to be efficient.

## Keyword: dried fish, factor, income, production, revenue

#### ABSTRAK

Tujuan penelitian untuk menganalisis faktor-faktor yang mempengaruhi usaha ikan kering dan pendapatan usaha ikan kering di Kota Bengkulu. Penelitian dilakukan di Kecamatan Kampung Melayu Kota Bengkulu. Populasi penelitian adalah pembuat ikan kering asin dan tawar. Jumlah responden masing-masing adalah 65 dan 56 orang. Metode analisis yang digunakan adalah model fungsi produksi Cobb-Douglas untuk menjawab tujuan pertama dan Analisis pendapatan untuk menjawab tujuan kedua. Hasil penelitian menyimpulkan: (1)hasil analisis uji F usaha pembuatan ikan kering asin dan tawar berpengaruh nyata terhadap variabel produksi ikan kering asin dan tawar. Hasil uji T pada model produksi usaha pembuatan ikan kering asin terdapat tiga faktor yang berpengaruh yaitu Bahan Baku (Bb), Tenaga Kerja (TK) serta Dummy (D). Model produksi ikan kering tawar hanya terdapat satu faktor yang berpengaruh nyata yaitu Bahan Baku (Bb). (2) Berdasarkan hasil analisis bahwa Biaya yang dikeluarkan untuk produksi ikan kering asin Rp2.874.932/minggu dan biaya yang dikeluarkan untuk produksi ikan kering tawar Rp2.392.144/minggu. Penerimaan pembuat ikan kering asin yaitu Rp6.116.308/minggu dan pembuat ikan kering tawar Rp4.557.411/minggu. Pendapatan pembuat ikan kering asin yaitu Rp3.241.375/minggu dan pendapatan pembuat ikan kering tawar Rp2.185.266/minggu. Analisis R/C Ratio diperoleh nilai efisiensi berturut-turut 2,13 dan 1,91 sehingga usaha yang dijalankan terbukti efisien.

Kata Kunci: ikan kering, faktor, pendapatan, produksi, pendapatan

#### **INTRODUCTION**

Bengkulu Province has an area of 32,365.6 Km<sup>2</sup> of which consists of an area of 12,335.2 Km<sup>2</sup> of sea waters. These sea waters are capable of producing 70,829 tons of fish caught by various types of fish that have different economic values. (BPS, 2019). Marine fisheries with high economic value are usually sold directly by fishermen to collectors and/or large companies to be resold domestically and abroad. Sea fisheries with low economic value that do not meet the criteria to be sold at high prices.

Of the 70,829 tons of fish caught in Bengkulu, only 16,152.549 tons are consumed by the population (Kementrian Kelautan dan Perikanan, 2019). 68.49% of the catch can be marketed to meet consumer demand or utilized into various processed products, especially fish caught with low economic value. Processed fish products are carried out by fishermen and their household members. Several types of processed products are made such as smoked fish, dried fish and others (pempek, crackers, shredded, etc.). Manufacture of these processed products with the aim of obtaining a higher price than selling fish in a

fresh condition. (Sumantri, 2016; Patra & Nurlinda, 2017; Ohoiwatun et al., 2017). Dried fish makers sell their products to collectors who come to their place of business. Traders pay by cash to dried fish makers. The problem faced by dried fish makers is that the price they receive is relatively low when compared to the price they receive if they can sell directly to consumers (Fauzi, 2019; Fajar et al., 2014; Sinta, et al., 2022; Susilawati, 2019)

One of the processed capture fisheries products is dried fish. Bengkulu City is one of the Dried Fish producing areas. 108,342 tons per year are produced in this area (Kementrian Kelautan dan Perikanan, 2021). The production of dried fish is carried out by fishermen's families and housewives (IRT) who live and settle around the coast of Bengkulu City. There are two districts that produce dried fish. This activity is carried out as an additional livelihood for fishermen's families and or as the main livelihood for non-fisherman communities around the coast.

According to Darianto et al. (2018); Sutarni (2013); Kartika, et al. (2022); Pratiwi & Meylin (2018); Ravi (2022), the production of dried fish that is run is influenced by the use of production factors. The use of dry fish production factors such as fresh fish, salt and ice cubes is an important factor to be prepared in advance. According to Wahyuningsih et al. (2018); Evi & Sofyan (2011); Sudana (2019); Fitriani, et al. (2021); Laili et al. (2018) the use of inefficient production factors in a business will result in low production results and vice versa will increase the use of costs which ultimately reduce the income of dried fish makers.

Efforts to increase dried fish production are inseparable from various factors. The unstable price and quantity of fresh fish has an effect on the income earned by dried fish producers. The high cost of production factors such as fixed costs and variable costs causes expenses to become uncontrollable. When the use of costs is greater than production receipts, it will have an impact on the income earned by dried fish makers. In the Sumber Jaya sub-district, dried fish producers use production factors with large enough expenditures so that the revenue they receive cannot fully cover subsequent production costs. This must be addressed immediately so that the income received by dried fish makers can increase. Jamilah & Mawardati, 2018; Wickrama, et al., 2021; Khadijatul, et al., 2020; Sriyono, et al., 2021; Zaenal, et al., 2020; Arifin, 2019; Mudzakir & Suherman, 2019 states that income is one measure of prosperity, Income is the result obtained from carrying out an activity so that the greater the income generated by an entrepreneur will indicate the level of welfare.

Where according to Jamilah & Mawardati (2018), income is one measure of prosperity, income is the result obtained from carriyng out an activity, so that the greater the income generated by an entrepreneur will show the level of prosperity. Therefore, based on the background above, the researcher is

interested in conducting research with the aim for analyze factors production and income from salted dried fish and fresh dried fish in Bengkulu City.

There are two districts that produce dried fish. This activity is carried out as an additional livelihood for fishermen's families and or as the main livelihood for non-fisherman communities around the coast. Dried fish makers in the research area do not all make both types of dried fish. Some of them only make salty dried fish or fresh dry fish. This difference in work makes these two jobs have different incomes from one another. Dried fish makers use different amounts of fresh fish in each production process. The use of fresh fish by dried fish producers is highly dependent on the amount of fresh fish that can be obtained from household members who are fishermen, by buying from neighbors who are fishermen or other people. Fresh fish which is made into dried fish is fresh fish which has relatively low economic value. For example, the types of fish such as beledang, palak batu, kerong, kase, geleberan and anchovies.

## **RESEARCH METHOD**

This research was conducted in Sumber Jaya Village, Kampung Melayu District, Bengkulu City. The research location was chosen deliberately with the consideration that 53.75% of dried fish producers in Bengkulu City are located in the Sumber Jaya Village (Badan Pusat Statistik, 2022). The research was conducted from November to December 2021. Respondents were selected using the census method. The research is equipped with a list of questions in the form of a questionnaire. Questionnaires are structured as the main tool for collecting specific research data (Isti, 2010; Ma'ruf, 2015). The population of this research is salted dried fish and fresh dried fish. Total the population of salted dried fish is 65 people and fresh dried fish is 56. The data used comes from primary data and secondary data. The data is analyzed to answer the research objectives. The analysis used in this study is qualitative and quantitative that is Analyze Production Factors.

#### **Production Analyze**

The production factors that influence the production of dried fish in this study are known by using the Cobb Douglas Production Function. This method is also been used in research by Saputra (2016); Achmadi (2022); Liasiska & Anik (2018); Rahim et al., (2018); Fitri (2014); Sharma & Bhagwa (2006); Rahim et al, (2018); Elinur & Heriyanto (2019); Sumartin (2017). Mathematically the Douglas cobb model is formulated as follows:

#### Salted Dried Fish (IKA)

Systematically the Cobb-Douglas function can be formulated as follows:  $P_{IKA} = a \cdot B^{b1} \cdot G \cdot b^2 \cdot Tk \cdot b^3 \cdot D \cdot b^4 \cdot Pb \cdot b^5 \cdot P \cdot b^6 \cdot M \cdot b^7 \cdot e$ 

To facilitate the Cobb-Douglas estimation, the above equation was transformed into a multiple linear models in the form of a logarithm (log Ln) as follows:

## Ln $P_{IKA}$ = ln a + b<sub>1</sub>.ln Bb + b<sub>2</sub>.ln G + b<sub>3</sub>.ln Tk + b<sub>4</sub>.ln D + b<sub>5</sub>.ln Pb + b<sub>6</sub>.ln P + b<sub>7</sub>.ln M + e

### Fresh Dried Fish (IKT)

CD model also applies to fresh-dried fish production factors. Systematically the Cobb-Douglas function can be formulated as follows:

P<sub>IKT</sub> = a . Bb <sup>b1</sup>. Eb <sup>b2</sup> tk <sup>b3</sup>. D <sup>b4</sup>. Pb <sup>b5</sup>. P <sup>b6</sup>. M <sup>b7</sup>. e

To facilitate Cobb-Douglas estimation, the above equation can be converted into a multiple linear models in the form of logarithms (log Ln) as follows:

# Ln $P_{IKT} = \ln a + b_1 . \ln Bb + b_2 . \ln Eb + b_3 . \ln Tk + b_4 . \ln D + b_5 . \ln Pb + b_6 . \ln P + b_7 . \ln M + e$

Where,  $P_{IKA}$ =Salted Dried Fish Production(Kg),  $P_{IKT}$ =Fresh Dried Fish Production(Kg), a=Constant, b <sub>1</sub>-b <sub>7</sub>=Partial Regression Coefficient, Bb=Total Raw Materials (Kg), G=Amount of Salt (Kg), Eb=Amount of Ice Cubes (Kg), Tk=Labor (HOK), D=Dummy drying place n (0: drying area for rent and 1: own drying area), Pb=Business experience(Th), P=Education(Th), M=Capital(Rp), e=error.

#### **Income Analysis**

Analysis to find out the amount of income in this study was carried out using the income analysis method, income analysis was carried out to find out and calculate income from the business being carried out. According to Soekartawi (2011); Hendrik (2010); Fitri et al., (2020); Sutanto & Sri (2014); Saleh (2022) and Sumantri et al., (2016) to calculate income can be done using the following calculation formula:

 $\pi$  = TR - TC Where,  $\pi$  = Income TR = Total Revenue TC = Total Cost

## **RESULT AND DISCUSSION**

#### **Descriptive of Respondents**

Sumber Jaya village where this study was conducted is a fishermen settlement. Certainly it was not only easily for dried fish makers to buy raw

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material with low price but also to get labor around their home production. In addition, this village is located relatively not far from center Bengkulu City where they used to sale dried fishes freely.

#### **Characteristics of Respondents**

Profile dried fish makers shortly could describe as follow. First, they are on average 42 year old and 46.2% of them between 40 to 49 years old. Means wiles, those home businesswomen have done their business 12 years and more than half of them less than 9 years. Then they have four children with them on average and majority (66%) they get four children or less. Lastly, dried fish makers are on average 8 year on school or they are not finished their junior high school and majority of them (73%) they finished junior high school.

## Production Factor Test of Salted Dried Fish (PIKA) and Fresh Dried Fish (PIKT)

Results of data analysis on dried fish production factors using the SPSS program application obtained results as shown in the Table 1.

Factors	Production of Salted Dried Fish		Production Fresh Dried Fish			
Influence Variable	Regression	Std.	t stat	Regression	Std.	t-stat
(Production Factors)	Coefficient	Error	t-stat	Coefficient	Error	
Fresh fish	0.934	0.202	4.619*	1.160	0.341	3.396*
Salt	0.361	0.037	0.116	0.094	0.060	0.374
Labor	0.153	0.092	1.679*	0.111	0.105	1.052
Dummy	-0.177	0.071	-2.479*	-0.082	0.093	-0.877
<b>Business Experience</b>	0.10	0.036	0.267	0.027	0.029	0.901
Education	-0.17	0.073	-0.231	0.12	0.082	0.147
Capital	0.10	0.255	0.037	-0.123	0.412	-0.299
Salted Dried Fish Fresh Dried Fish						
constanta	-1.339		0.058			
R-Square	0.948		0.955			
F-count	177.673		130.641			
F-Table	1.82		1.84			
t- Table	1.672		1.677			

Table 1.Results of Partial Analysis of the Production Factors of Salted DriedFish and Fresh Dried Fish

Descriptive : \* significance at 90%, a=0.2

Based on Table 1. it can be shown that the coefficient of determination ( $R^2$ ) in the salted and fresh fish production factor models is 0.948 and 0.955, respectively. This shows that 94.8% of the salted fish production function and 95.5% of the dependent variable can be explained by the independent variables.

Meanswills, the remaining 5.2% is influenced by other factors that are not included in the analysis model. The coefficient of determination is carried out to determine the most effective level of accuracy in the regression analysis. The value of this regression coefficient test ranges between 0 and 1. In this research the coefficient of the determinant is close to 1, meaning that the greater the influence of the independent variable on the dependent variable (Adha et al., 2019; Sulistya & Meylin, 2018; Walpole et al., 2011; Ghozali, 2016). Then, a simultaneous test was performed on the regression model, the F test. and bargaining it is known that the calculated F values are 177.673 and 130.641. Both calculated F values are greater than F table (1.82), this means that the independent variables (factors of production) together have a significant effect on the dry fish production variable. Then followed analysis is a partial test to analyze the effect of each production factor on salted and fresh dried fish production.

# Effect of Amount of Raw Material (Bb) on Salted and Fresh Dried Fish Production

The results of the analysis show that the independent variable number of fresh fish (Bb) has a significant effect on the production of salted and fresh dried fish ( $P_{IKA}$ ). This is indicated by the large t value calculated from the regression equation model of salted and fresh fish production. The calculated t value of each regression equation is 4.619 and 3.396. This calculated t value is greater than the t table value with a 90% confidence level. This fact shows that the amount of fresh fish used to make foreign or fresh fish has a real effect on the production of salted or fresh dried fish made by dried fish makers. The value of each variable regression coefficient of fresh salted or fresh fish obtained figures of 0.934 and 1.160. and thoes value are positive. This means that if there is an increase in the amount of fresh fish by 1%, it will increase the production of salted dried fish by 0.934%, and the production of dry fresh fish by 1.160%.

The raw material factor in the form of fresh fish has proven to be very influential on the production of salted and fresh dried fish. Therefore, the amount of raw material used or not by dried fish makers will greatly affect on the production of dried fish. This is similar to what was stated by Muhammad et al. (2019); Ayu et al. (2013); Sutarni (2013); Kartika (2022). There are 7 types of fresh fish used by dried fish makers, namely beledang fish, palak batu fish, kase fish, kerong fish, galaberan fish, bleberan fish and anchovies.

## Effect of Salt (G) on Salted and Fresh Dried Fish Production

The results of the analysis shows that the independent variable the amount of salt (G) has no significant effect on the production of salted ( $P_{IKA}$ ) or fresh ( $P_{IKT}$ ) dried fish. This is indicated by the large t value calculated from the regression equation model of salted and fresh fish production. The calculated t value of each

regression equation is 0.116 and 0.374. Thoes calculated t values are smaller than the t table value (1.672 and 1.677) with a 90% confidence level. Eventhough, in this reseach salted is not significanly effect on production but dried fish makers in the study area always use salt to help the production process. The amount of salt addition on dried fish processing is different in the manufacture of dried salted and fresh fish (Roberto et al., 2013; Nanda & Lilin, 2018; Jaitun et al., 2019; Indrastuti et al., 2019).

The dried fish makers soak the fresh fish in a salt solution. The salt concentration used during the soaking process is approximately 10-15%. Soaking in salt solution is done to prevent the process of decay in fish, especially for medium and large fish. Soaking with this salt solution also serves to help increase salt absorption into the fish muscle thereby increasing the yield weight and reducing the salting time (Oliveira et al., 2012).

Salt functions include preservative, flavor enhancer, as well as to improve the appearance and texture of fish meat. Both, traditional fish processing and the salted fish processing industry are use salt in their business. So by adding the right amount of salt according to the amount of fresh fish, it will produce salted and fresh dried fish that have a taste that is liked by consumers. However, it is also necessary to regulate the time and duration of soaking, so that it does not depend on the amount of salt used, in other words, the amount of salt has no effect on increasing the amount of salted dried fish production.Effect of Labor (Tk) on Salted Dried Fish Production

The labor factor (Tk) partially affects the production of dried salted fish ( $P_{IKA}$ ) because the value of t count (1.679) is bigger than t table (1.672). It means H1 is accepted and H0 is rejected.

#### The Effect of Labor on Salted and Fresh Dried Fish Production

The labor variable (Tk) has a significant effect on the production of salted dried fish (P<sub>IKA</sub>), but has no real effect on the production of dry fresh fish. This is shown from the results of the regression analysis on the Parsial test (t test). The calculated t value for the production factor of salted dried fish is 1.679 and the factor value of fresh dried fish production is 1.052 for the production factor of fresh dried fish. The calculated t value for salted dried fish production is greater than the t table value, while the t calculated for fresh dried fish production is smaller than the t table value. Labor is a production factor that is needed to carry out the production process in the manufacture of goods, including in the manufacture of dried fish, both salted and fresh fish. According to Antara & Luh (2016); Sulistya (2018); Sutarni (2013); Sutanto & Sri (2014) and Jelliani et al. (2020) labors are a very important factor in the production process where labors are able to become a driving factor for other input factors. Labor can come from within and outside the family with an irregular quantity. Variable labors (HKP) are significant effect on the production of salted fish at a significant level of 10%.

Thoes are due to the labor used for the manufacture of dried fish Salted fish has a very dominant function at every stage of work for making salted fish, labor starts with searching or collecting/purchasing raw materials to marketing. In the manufacture of salted dried fish, the work of labor is added by carrying out activities up to mixing salt in fresh fish that is ready to be salted to drying it until the salted dried fish is ready to be marketed. On the other hand, the use of labor in the manufacture of fresh dry fish is quantitatively relatively less than the labor required in the manufacture of salted dried fish. In the manufacture of salted dried fish, the workforce must be careful in carrying out each process of making salted dried fish. They must be able to calculate the amount of salt mixture, arrange fresh fish that must be salted regularly in a specially prepared place and adjust the soaking time. This is intended to obtain salted dried fish that consumers are interested in. While in the manufacture of fresh dried fish, it is relatively not necessary to be careful in arranging the fresh fish to be processed. Workers are given wages with the daily system on a daily basis. The wages given to male workers are IDR 50,000/day, and female workers are IDR 30,000/day. This wage system has the same weakness in the workforce that does not own and has high work performance, so that the use of labor is thought not to contribute to the production of fresh dried fish.

#### Effect of Dummy Variables on Salted and Fresh Dried Fish Production

The dummy variable (D) in this study is a place for drying fresh fish to be used for salted or fresh fish. There are not dried fish makers have a place to dry fish, just 73% of them have it own toll while 27% the others don't have it. The makers of salted dried fish use a drying rack made of bamboo which is arranged neatly in shelves. Shelves for drying dried fish are made on their own land because they still have a relatively large yard of land. Dry fish makers who don't own a place to dry their dried fish, they rent out to the community who deliberately make a place to dry their fish for rent. The results of the t-test analysis on the dummy variable, the regression model for salted and fresh dried fish production are as follows. The t-count for the dummy variable of the salted dried fish production regression model is -2.479 and the t-count for the freshwater fish production regression model is -0.877. The calculated t value on the dummy variable in the regression model for salted dried fish production is greater than the t table value at the 90% confidence level, while the t calculated value on the dummy variable regression model for dried freshwater fish production is smaller than the t table value at the 90% confidence level.

This means that the dummy variable has a significant effect on the production of salted dried fish, but has no significant effect on the production of fresh dried fish. The process of drying dried fish is generally carried out by makers of dry salted or fresh fish by drying the processed fresh fish in the sun by placing them on shelves made of split bamboo which are arranged neatly in the yard. Drying is done in an open place so that the hygiene of the fish produced is not maintained because it can lead to the growth of microbes in the dried fish and results in the shelf life of the dried fish not being long and the taste not being good for consumption (Yunus et al., 2009). The production of salted dried fish requires a relatively clean and wide drying area. This relatively clean and wide drying area will produce salted dried fish that are in demand by consumers. Salted dried fish is lifted from its drying place when the dried fish is still relatively wet with a final moisture content of 15.20% – 15.70%. The initial water content value is 22.98% (Kaparang, 2013; Kaimudin, 2014).

The process of drying natural or traditional dried fish takes two days when the weather is sunny with a drying temperature of ±33.43°C. However, this drying process creates additional workload and low anchovy productivity. To increase the productivity of salted dried fish it is considered necessary to change the drying process from traditional to convectional (Susana & Santosa, 2015). The drying process occurs due to the difference in heat between the surface and the inside of the dried fish so that the water vapor in the fish moves out due to the pressure difference. The initial process of drying fish requires a low drying temperature with the aim of removing the water content of the fish. Then high temperature is required to remove the number of moles of water needed for dried fish. Constraints during the process of drying fish using solar heat can be overcome by replacing solar thermal energy with fuel from agricultural waste such as coconut shell waste, coconut shell, sawdust, rice husks, straw, wood chips and others (Yunus et al., 2009; Basmal & Utomo, 2013, Sirait, 2019)

# The Effect of Business Experience (Pb) on Salted and Fresh Dried Fish Production

The variable of business experience partially does not affect the production of salted (P<sub>IKA</sub>) or fresh (P<sub>IKT</sub>) dried fish. The results of the regression analysis with the t test obtained the calculated t value which is smaller than the t table value. There is no effect on business experience in increasing dried or fresh fish production because dried fish makers already have techniques for making dried fish in a precise and structured manner that does not require special skills. Dried fish makers in the research area run a business because of the necessities of life, not because it is based on a business orientation, so that many business actors gain experience as the business goes on. In addition, several respondents ran a salted fish processing business based on previous experience, meaning that running a salted fish business was generally a hereditary business, thus making them interested in running the business. Dried fish makers who have a lot of experience in making dried fish are obtained through guidance since childhood by their parents. (Arnis, 2019; Fatchiya, 2022; Harahap & Hilmy, 2021).

#### Effect of Education (P) on Salted and Fresh Dried Fish Production

The educational variable of the dry fish maker has no effect on the production of salted or fresh dried fish. This is shown by the t value of the education variable for the two functions of dry and fresh fish production which is smaller than the t table value. The high level of education of dried fish producers is not able to have a significant effect on increasing dried fish production. Sriyono (2015) said that the level of a person's education l determines his attitudes and behavior patterns. So that the higher a person's education level, the higher the level of behavior patterns was broken because many people with a low level of education actually had a high level of behavioral patterns due to factors of understanding of religion as well as other understandings of education where the increase in output and the level of education were in fact in a position that did not coincide. When a person has broad skills, it will increase the value in him. So that when education has no effect, there could be other factors that have an effect, namely skills.

## Effect of Capital (M) on Salted and Fresh Dried Fish Production

Partially, the capital variable has no significant effect on salted or fresh dried fish production. This is shown by the t value calculated for the capital variable for the two functions of dry and fresh fish production which is smaller than the t table value at the 90% confidence level. Every business requires capital. Capital is used to purchase raw materials in the form of fresh fish and other financing, for example, to pay labor wages. (Geffken, et al., 2017; Bank Indonesia, 2012; Hendrik, 2010; Reswita, 2014; Fitri et al., 2020). The results of this study indicate that capital has no significant effect on dried fish production. This is because the producers of dried fish in the study area always use capital to buy fresh fish from their previous business receipts.

#### Income Analysis of Salted and Fresh Dried Fish Business

#### Total Revenue of Salted and Fresh Dried Fish Business (TR)

According to Sumantri, et al. (2016), the amount of dried fish production come from one production process of the manufacture of raw resource. There are two kind resource, first, come from by catching directly at sea (10.91%) and second, buying from fishermen (89.09%). In a period of one week dried sold makers are able to produce salted dried fish and fresh dried fish 3 times. Meanwils, this research could find out the results of production and acceptance of dried fish as show in the following table:

	Types Of	Raw	Production	Selling	Revenue	Percentage
No	Fish And	Materials	Result	Price	(IDR	(%)
	Processed	(Kg/Week)	(Kg/week)	(IDR/Kg)	/Week)	(/-)
1.	Cutlassfish					
	Salted	10,851	5,568	18,392	102,405,000	15.66
	Dried					
	Fresh Dried	12,249	6,468	18,715	121,050,000	18.51
					223,455,000	34.17
2.	Smelt Fish					
	Salted	6,903	3,525	25,000	88,125,000	13.48
	Dried		3,020	25,000	00,120,000	13.40
	Fresh Dried	210	105	25,000	2,625,000	0.40
					90,750,000	13.88
3.	Jarbua Terapo					
	Salted	6,165	3,201	25,000	80,025,000	12.24
	Dried		5,201	23,000	80,023,000	12.24
	Fresh Dried	225	114	25,000	2,850,000	0.43
					82,875,000	12.67
4	Kase Fish					
	Salted	10,440	5,439	15,000	81,585,000	17 / 9
	Dried		5,439	15,000	01,303,000	12.48
	Fresh Dried	5,646	2,946	15,000	44,190,000	6.76
					125,775,000	19.24
5	Galaberang					
	Salted	810	435	12 000	E 220 000	0.90
	Dried		435	12,000	5,220,000	0.80
	Fresh Dried					
					5,220,000	0.80
6	Bleberan Fish	L				
	Salted	2,130	1.155	15,000	17 325 000	2.65
	Dried		1.133	13,000	17,325,000	2.03
	Fresh Dried	4,863	2,508	15,000	37,620,000	5.75
					54,945,000	8.40
7	Anchovy Fish	ı				
	Salted	1,800	015	25.000	<b>22</b> 975 000	2 50
	Dried		915	25,000	22,875,000	3.50
	Fresh Dried	3,540	1920	25,000	48,000,000	7.34
				-	70,875,000	10.84
	Total Revenue 653,895,000					

Table 2.Production And Revenue Of Salted and Fresh Dried Fish

Source: Primary Data Processed, 2022

Based on Table 2. If it is divided into two different types of manufacture, of the total revenue of 60.80% is generated by salted dried fish with revenues of IDR 397,560,000/week so that the revenue of each producer is IDR

6,116,308/week/ Maker, while 39.20% fresh dried fish is produced with revenues of IDR 256,335,000/week so that the average producer revenue is IDR 4,557,411/week/maker. thus if the maker consistently and continuously produces it, he can get salted dried fish revenue of IDR 24,465,232/month and fresh dried fish revenue of IDR 18,229,644/month.

In the study area, the types of hornet and kase fish are the most common types, the existence of these fish which are not too deep to the surface of the sea makes it easier for fishermen to get them even though the fishing gear used is still relatively simple. A similar study was conducted by Sumantri, et al (2016) which stated that the most widely produced salted and fresh dried fish were dried kase fish of IDR 555,679.00/week and dried Cutlassfish type of IDR 612,916.00/week. This is because both types of fish are close to sea level making it easier for fishermen to catch using simple tools with the maximum number of catches. Thus the production of dried fish in the study area (Bengkulu City) is the production with the largest total revenue compared to the other two areas with similar research, this could be due to the fact that during the study the amount of fresh fish obtained by fishermen was quite abundant which resulted in a decrease in prices selling fresh fish, this is what encourages producers to make dried fish in large enough quantities because the cost of purchasing fish raw materials is relatively low .

### Total Cost of Salted and Fresh Dried Fish Business (TC)

The accumulation of these costs in detail can be seen in the following Table 3.

Cost Type	Salted Dried Fish		Fresh Dried Fish	
	IDR	%	IDR	%
Fixed Cost (FC)				
Rent	630,000		525,026	
Depreciation	287,946		249,464	
Tax				
Total Fixed Cost (TFC)	917,946	0.51	774,490	0.62
Variable Cost				
Raw Material	124,302,000		84,381,000	
Auxiliary Materials	29,324,250		20,049,750	
Labor	24,450,000		20,160,000	
Total Variable Cost (TVC)	178,076,250	99.49	124,590,750	99.38
Total Cost (TC)	178,994,196	100	125,365,240	100
	Fixed Cost (FC) Rent Depreciation Tax Total Fixed Cost (TFC) Variable Cost Raw Material Auxiliary Materials Labor Total Variable Cost (TVC)	IDR     Fixed Cost (FC)     Rent   630,000     Depreciation   287,946     Tax   70tal Fixed Cost (TFC)   917,946     Variable Cost   917,946     Raw Material   124,302,000     Auxiliary Materials   29,324,250     Labor   24,450,000     Total Variable Cost (TVC)   178,076,250	IDR   %     Fixed Cost (FC)   IDR   %     Rent   630,000   630,000     Depreciation   287,946   630,000     Tax   7   917,946   0.51     Variable Cost (TFC)   917,946   0.51     Variable Cost   29,324,250   124,302,000     Auxiliary Materials   29,324,250   24,450,000     Total Variable Cost (TVC)   178,076,250   99.49	IDR   %   IDR     Fixed Cost (FC)   630,000   525,026     Rent   630,000   525,026     Depreciation   287,946   249,464     Tax   70tal Fixed Cost (TFC)   917,946   0.51   774,490     Variable Cost   84,381,000   84,381,000     Auxiliary Materials   29,324,250   20,049,750     Labor   24,450,000   20,160,000     Total Variable Cost (TVC)   178,076,250   99.49   124,590,750

Table 3. Total Cost Of Salted and Fresh Dried Fish Business

Source: Primary Data Processed, 2022

Based on Table 3. Overall, the fixed costs incurred by the manufacturer for making salted dried fish amounted to 0.51% with the use of variable costs of 99.49% so that an average production cost of IDR 2,753,757/week/maker was obtained. while the fixed cost of making fresh dried fish is 0.62% with the use of variable costs of 99.38% so that the average cost of the maker is known to be IDR 2,238,665/week/maker.

Thus, if the manufacturer carries out the production process continuously and consistently, it will incur a production cost of IDR 11,015,028/month for the production of salted dried fish and IDR 8,954,660/month for the production costs of fresh dried fish. In Sutanto & Sri (2014) the average cost spent on salted dried fish production in Pekalongan City is IDR 15,381,874/month. Based on the comparison above, it can be seen that the production costs incurred by the manufacturer at the research location are smaller compared to the two previous studies, this small production cost can be caused by several things including: the use of equipment that is put to good use in accordance with the maximum economic life makes the equipment durable for long period of time so that the depreciation costs incurred are small, then auxiliary materials such as salt and ice cubes used by the maker with a calculation of 1:4 (100 Kg of fresh fish using 25 Kg of auxiliary materials) are proven to be efficient in spending costs and the dried fish produced is also in good condition .

## Income and Efficiency of Salted and Fresh Dried Fish Business

After making observations, it can be seen that the net income from making salted dried fish is IDR 218,565,804/week and dry fresh fish IDR 130,969,760/week as measured by the number of manufacturers 65 and 56 manufacturers respectively. In detail the results of the analysis can be seen in the following table:

No	Types of Dried Fish	Amount (Rp/Week)	Percentage (%)	Description
1.	Total Revenue (TR)	653,895,000	100.00	
	Salted Dried	397,560,000		
	Fresh Dried	256,335,000		
2.	Total Cost (TC)	304,359,436	46.55	
	Salted Dried	178,994,196		
	Fresh Dried	125,365,240		
3.	Income (п)	349,535,564	53.45	
	Salted Dried	218,565,804		
	Fresh Dried	130,969,760		
4.	Efficiency(R/C Ratio)			
	Salted Dried		2,22	Efficient

Table 4. Revenue And Efficiency Of Salted and Fresh Dried Fish Business

No	Types of Dried Fish	Amount (Rp/Week)	Percentage (%)	Description
	Fresh Dried		2.04	

Source: Primary Data Processed, 2022

It can be seen in Table 4. the income of salted dried fish is IDR 218,565,804, which means that the average income earned by each maker is IDR 3,362,550/week, this can also be seen from the production income of fresh dried fish of IDR 130,969,760/week so that the average income for each maker is IDR2,338,746/week. So that if the manufacturer runs the business consistently and continuously, the producer will receive a monthly income of IDR13,450,200/month of salted dried fish and IDR9,354,984/month for fresh dried fish. In a similar study, Sutanto and Sri (2014), obtained an average income in a small-scale salted fish business of IDR 5,669,376. In Sari's research ( 2019), it shows that the average income earned by salted fish producers is IDR 13,278,588.47/ month.

Results no far different obtained on study Hartati (2021); Rahim & Azmi (2020), and Nisa et al. (2022) so that based on comparisons from previous studies it can be seen that the profits generated by dried fish makers in Bengkulu City are nominally superior compared to the results of other studies. In general, the components that make up income are revenue components and cost components, so that the amount of income is very high. influenced by the revenue generated and the costs incurred during the production process. From the results of the study it can be seen that the costs incurred by the manufacturer are at a percentage of 46.55%, which means that not up to 50% of the revenue is spent to return production costs so that the resulting income is large. Business efficiency is calculated based on the amount of costs that can affect revenue, in Table 4. it can be seen that business efficiency in the manufacture of dried fish is evidenced by the R/C Ratio analysis of 2.22 for salted dried fish business and 2.04 for fresh dried fish business. Successively the value of business efficiency proves that when the maker makes an additional fee of IDR 10,000 it can increase revenue by IDR 22,200 and IDR 20,400. This figure is a large number when compared to the research results of Supriadi et al. (2020) which show the efficiency value resulting from the business of making salted dried fish in Gebang Mekar Village, Cirebon Regency, which is 1.02. From the results of Jazila & Ramli (2021) stated that the results of the calculation of the R/C Ratio were 1.08 so that the manufacture of UD. Mutiara Laut deserves to be developed.

When compared with previous research, this considerable difference in figures can be caused by the large amount of revenue generated by manufacturers with low costs so that in the end the efficiency value obtained is high. Thus it can be concluded that the income earned by producers is superior compared to some previous studies, this is in line with the value of business efficiency which indicates that the business of making dried fish at the research location is feasible and will generate income continuously .

## CONCLUSION AND SUGGESTION

### Conclusion

All factor production influence production simultaneously for both salted dried fish and fresh dried fish business in Bengkulu. Meanwhile, partially there are three factors namely raw materials, labor and dummy variable are significantly effect on production of the salted dried fish business whereas just one factor influences production on fresh dried fish business namely the raw materials. In addition it known that the net income of salted dried fish Is IDR3,241,375/week and the net income of fresh dried fish is IDR2,185,266/week. Then both business are effienct and profitable.

## Suggestion

Base on the research above it could be suggest to government that it is badly need community development. So handicap on raw material could be resoulved by improve fish production spesially on dry seasaon. Morover improving on fish processing could enhance income specially dried fish instrument which depend on sun light steel right know. Research area, dried fish producers run their business only with private capital, so it is hoped that in the future the government can pay more attention to and distribute assistance in fishing gear and tools that can support the process of making dried fish in the form of capital assistance and other facilities.

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