JOURNAL OF ECONOMICS
p- ISSN: 0000 - 0000 | e-ISSN: 0000 - 0000
Volume ume 2 Number 2 | July 2022

Factors Affecting Fishermen's Income in Kaili Village, Bissappu District, Bantaeng Regency

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Article Info

Technology, Capital, Work Experience and Income of Fishermen

Abstract

This study aims to determine the effect of technology, capital and work experience on the income of fishermen in Kaili Village, Bissappu district, Bantaeng Regency. The population and sample for this study were 67 fishermen in Kaili Village, Bissappu district, Bantaeng Regency. The data analysis technique used in this study is multiple linear regression analysis with the help of the SPSS 25 program. The results show that the technology has a positive but not significant effect on the income of fishermen, this can be seen in the results of data processing where the regression coefficient is 557537.223 with a significant value greater than 0.05 (0.145> 0.05) . Capital has a positive and significant effect on the income of fishermen, this can be seen in the data processing results where the regression coefficient is 1.456 with a significant value less than 0.05 (0.000 <0.05). And work experience has a positive but not significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency, this can be seen in the data processing results where the regression coefficient is 71170.501 with a significantly higher value than 0.05 (0.082> 0.05).

1. INTRODUCTION

Fishermen are people or individuals who are active in catching fish and other aquatic animals. The level of fishermen's income is largely determined by the catch, the number of catches is also reflected in the amount of income received by fishermen, which will be mostly used for family consumption. Thus the level of fulfillment of family consumption needs is largely determined by the income it receives. Coastal areas and seas which are rich and diverse in natural resources have been used by the Indonesian people as one of the main sources of food, especially animal protein, for centuries and have become a source of income.

The history of development that we have lived since independence until now is inseparable from the problem of poverty that befell some Indonesian people. From the liberal democratic order at the beginning of independence, to the reformation order since 1998 until now, it has not been able to eradicate the problem of poverty. The fishing community is a community that lives, grows and develops in the coastal area, which is a transitional area between land and sea areas. As a system the fishing community consists of social categories that form a social unit.

They also have a value system and cultural symbols as a reference for their daily behavior. This cultural factor is a differentiator of fishing communities from other social groups. Most of the coastal communities, either directly or indirectly. The fishermen do this work with the aim of obtaining income to sustain life, while in its implementation it requires several equipment and is also influenced by several factors in order to support the success of its activities.

Fishermen's income includes social and economic factors consisting of capital, number of boats, experience at sea, number of workers. There are still several other factors that also determine the success of fishermen. In the Bantaeng Regency area includes quite large fisheries and marine potential. The Bantaeng region has many of the largest producers and the sea is so wide, of course it will be able to produce sea fish (catch) which tends to increase. In addition, the lack of modern technology is also one that hinders the increase in fishermen. With limited time and energy owned by fishermen, technology is needed to help increase production because with technology, the production process becomes more effective and efficient so that the output

obtained is of higher quality. But without using sophisticated technology, this would be impossible to achieve.

Work experience or knowledge of fishing techniques for marine products is also very much needed, generally obtained from generation to generation and their parents or predecessors based on experience. With increasing age, it will always be followed by increasing work experience that is occupied. As a result of increasing experience in doing a job or producing an item, it can reduce the average cost per unit of goods. So that the higher the experience of a fisherman it is assumed that an efficient and effective process of catching marine products can increase fishermen's income.

Based on the description on this background and in order to increase the income of fishermen in Bantaeng Regency, research is needed on the influence of technology, capital, work experience, using direct research techniques or interviews. This research will take samples in one of the sub-districts in Bantaeng Regency, namely Kaili Village, Bissappu District, Bantaeng Regency. Therefore, in this study, the authors are interested in choosing the title "Factors Affecting Fishermen's Income in Kaili Village, Bissappu District, Bantaeng Regency".

2. LITERATURE REVIEWS

2.1 Income Theory

The purpose of holding a trading business is to earn income, where the income can be used to meet the necessities of life and the survival of the trading business. Income received is in the form of money, where money is a legal tender or means of exchange. Income is the amount of goods and services that meet the level of life of the community, where with the income owned by the community, they can fulfill their life needs. The average income owned by each person is also known as per capita income and serves as a benchmark for economic progress or development. Income is also the result of subtracting total output from total input.

Changes in income levels will affect the amount of goods consumed. Theoretically, the increase will be able to increase consumption. It is often encountered with an increase in quantity, but the quality also increases. For example, before there is an increase in income the rice consumed is of poor quality but after there is an increase in income the rice consumption increases and the variants purchased are of good quality. Fishermen business income is the difference between revenue (TR) and all costs (TC). So pd=TR-TC.

Fishing business revenue (TR) is the multiplication of the production obtained (Y) and the selling price (PY). Fishing business costs are usually classified into two, namely fixed costs and variable costs. Fixed costs (FC) are costs that are relatively fixed in number and continue to be incurred even if a lot or a little production is obtained. Variable costs (VC) are costs whose size is affected by production, for example costs for labor. Total cost (TC) is the sum of fixed costs (FC) and variable costs (VC), so TC=FC+VC. Income that emphasizes the embodiment of remuneration from one's participation in a production activity which is reflected in the contribution of production factors for added value (value added) at a certain level of output. This added value is the main principal of remuneration, hereinafter referred to as income. This income is selected according to a certain period so that its practical meaning is visible, for example one month, and so on. The level of household income depends on the types of activities carried out. Types of activities that involve capital or skills have higher labor productivity, which in turn is able to provide greater income.

2.2 Technology

Technological advances occur because new ways or improvements are found over old ways of dealing with traditional jobs, and are the result of human inventions. Technology can be said to be a double-edged sword. On the one hand, it can bring people to a higher level of prosperity and welfare, but at the same time it can also bring damage to humans themselves.

Technology is a way of doing something to meet human needs with the help of tools and reason, thus strengthening or making more effective the limbs, the five senses and the human brain.

The dependence of fishermen on fishing technology is very high. This is because in addition to the condition of fisheries resources that are mobile, that is, they easily move from one place to another, fishermen also need aids to catch them so that they can survive for a long time on the water. In general, fishermen still experience limitations in fishing technology. With simple fishing gear, the area of operation is limited, only around the coastal waters. In addition, the dependency on the season is very high, so fishermen cannot go out to sea all the time, especially the wave season, which can last for more than one month. As a result, in addition to the monthly yield being smaller, and the income earned during the season will be consumed during the famine.

The low level of education and the limited ability of fishing communities to use fishing gear technology has made fishing communities synonymous with the poor. In addition to the low fishing technology owned by fishermen in general, another thing faced by fishermen is that not all fishermen have fishing gear. For fishermen like this, there is no other alternative except having to work for other people who need their energy, namely being a fishing laborer tends to be less profitable for labor fishermen. The production of marine products obtained by fishermen will only have added value if they are not only used for food, but also to meet various needs of daily life. Therefore, marketing issues are an important aspect of fishermen's lives. The problem is that fishermen often do not have access to markets, especially those living on small islands.

2.3 Capital

Capital can be interpreted physically and not physically. In a physical sense, capital is defined as everything that is attached to factors of production, such as machines and production equipment. Capital is usually found in the area of operation only to obtain it is determined by its own environment. The business runs slowly because it is also marked by a scarcity in the availability of capital. The amount of capital is relatively limited, and besides that it is difficult to obtain. As a result, there is intense competition in fighting over funds for venture capital. Capital is indeed an important and very decisive factor to be able to start and develop a business.

Capital in a business is like fuel or the initial driving energy of a motor. The greater the existing capital, the greater the possibility of the size of the business being run. Small businesses are sufficient with small capital, and vice versa for large businesses, the largest capital is also needed. Generally, the term capital is always associated or associated with money so that no money means no capital. Capital accumulation occurs when part of the income is saved and reinvested with the aim of increasing output and income in the future.

Capital is divided into two, namely fixed capital and moving capital. Fixed capital are goods used in the production process that can be used several times, even though these capital goods eventually run out, they are not completely absorbed in production. Examples of fixed capital are machinery, factories, buildings, and others. Movable capital is goods used in the production process that can only be used in the production process, such as feed, fuel, and others. This difference is used in connection with the calculation of moving capital costs that must be calculated at all in real cost prices, while fixed capital costs are calculated through depreciation.

Capital can be formed from a number of sources or activities, in the case of fishermen, at first the fishermen caught fish only by hand, after a while this method was considered inefficient, because the energy spent did not match the results obtained. Because of that, a way was devised to be able to get more results with less time and effort. So the idea arose using tools such as nets. To make these nets it takes time, as long as the fisherman makes the nets, during that time he cannot catch fish, and

fish must be available to eat. If the net is finished with the tool, more results are obtained. Then this result (net) is used as a production tool in further fishing, then it is referred to as capital. So, in general, capital is formed due to production, saving from production, and using savings for further production. The value of immovable assets in one capture unit is also capital.

In general, for one fishing unit, capital consists of fishing equipment (trawlers and other boats or canoes and catching, processing or preserving equipment on board, and sea transportation equipment). With the existence of various fishing gears and fishermen's progress levels, the number of these tools in each fishing unit is not the same. Modern fishing units such as trawlers are generally always equipped with preservatives such as ice, while many simple fishing equipment have a small canoe with a trawl or net. In trawling trawls, the differences are also found in the size of the boat and the size of the engine and the number of trawlers.

2.4 Work experience

Work experience is knowledge or skills that are known and mastered by someone as a result of actions or work that has been done for a certain time. Experience is needed in every job. Experience is needed for fishing production. Looking for fish in need of time, equipment, location of fish. And the right fish bait. This can be known by fishermen based on the passage of time. The more a fisherman understands the conditions of the sea and the characteristics of the fish, the easier it is for the fisherman to catch fish. The use of tools that are still simple forces fishermen to use experience to catch fish, the longer the experience, the more sensitive fishermen are to the position of the fish making it easier for fishermen to catch fish in the sea.

Experience as a fisherman to use directly or indirectly, has an influence on fishing results, the longer a person has experience as a fisherman, the greater the results from fishing and income earned, with this analysis we can later see how the influence of technology, capital , and experience, towards increasing fishermen and using what has been used or their income. Of the three groups, generally skipper fishermen are not poor, fishermen poverty tends to be experienced by individual fishermen and fishing workers. Because the majority of these two types of groups are fishermen with only low education, of course their choice of work is to become labor fishermen.

As a result of increasing experience in doing a job or producing an item, it can reduce the average cost per unit of goods, this is logical because with increasing experience a person has in doing the job, of course, lessons will be learned to do it better and more efficiently. What he has done can be known and henceforth it will not be repeated again for the same mistake. So, if the work experience increases from reaching a doubling of all then there will be a significant reduction in production costs per unit.

Experience as a fisherman, directly or indirectly, has an influence on fishing results. Experience as a fisherman, directly or indirectly, has an influence on fishing results, the longer a person has experience as a fisherman, the greater the results of fishing and income earned.

2.5 Fisherman

The fishing community is a community that depends on the sea for its life. They make a living by harvesting marine products, such as fish, seaweed or others. For this activity they use various methods. Fishermen are a group of people whose lives depend directly on sea products, either by catching or cultivating them in general living on the beach, a settlement which is very much made for people who are fishing in the sea, and what they have to do with fishing at sea.

Fishermen are not a single identity, they consist of several groups to catch fish in the sea and seaweed, fishermen can do and use fishing, labor fishermen, skipper fishermen, and

individual fishermen, which can be used to catch fish at sea, fishermen who only use nets that are fishing in the sea, and they are close to the location of their activities. In terms of livelihood, fishermen are those whose activities are related to the marine environment.

Labor fishermen are fishermen who work with other people's fishing gear. Even though the work of fishermen is hard work, in general they only have simple skills. Most of them working as fishermen is a profession passed down by their parents. Aragan fishermen are fishermen who own fishing gear operated by other people. Individual fishermen are fishermen who have equipment and catch fish in their own sea and do not involve other people in their operations. Basically, fishing by fishermen technically and economically is a production process that is extractive, namely taking natural products without returning some of the results for future needs.

Fishermen are a group of people whose lives depend directly on marine products, either by catching or cultivating. They generally live on the beach, an environment close to the location of their activities. In its development fishermen have been bound by dualism in accordance with the development of science and technology so far. Judging from the fishing equipment technology used, it can be divided into two categories, namely modern and traditional fishermen. In the context of fishermen, it can be interpreted as people working in the marine sector using sailboats without engines are traditional fishermen, while those who use machines are modern fishermen, or it can be said that modern fishermen use more sophisticated technology compared to traditional fishermen. With reference to the historical development of Indonesian fishermen, in the long term Indonesian fishermen are a hereditary group of people.

3. RESEARCH METHODOLOGY

3.1 Data analysis techniques

The data analysis technique used in this study is the Multiple Linear Regression analysis technique with the help of the SPSS-25 program.

a. Multiple Linear Regression Analysis

Multiple linear regression analysis is a linear regression model that involves more than one independent variable (Sugiyno, 2012). The multiple linear regression model is described by the following equation:

$$Y=\alpha + \beta1\ X1 + \beta2\ X2 + \beta3\ X3 + \mu$$

Information:

Y = Fishermen's Income (Bound Variable)
X1 = Technology
X2 = Capital
X3 = Work Experience
A = Constant
β1, β2, β3= Regression coefficient
μ = Error term

b. Classic assumption test

1) Normality test

Has a goal to test whether the regression model found a correlation of independent variables. A good regression model does not have correlation between the independent variables, if the dependent variable is equal to zero. This test can be seen by the value with the tolerance value and the variance inflation factor (VIF). These two sequences show every other independent variable. In the sense that each independent variable becomes the dependent variable and is regressive against the other independent variables.

So, a low tolerance value is the same as a high VIF value because (VIF = 1 / Tolerance). The cutoff value that is commonly used to indicate the presence of multicollinearity is a tolerance value <0.01 or the same as VIF >10.

2) Multicollinearity Test

Multicollinearity test is defined as a situation where one or more independent variables can be expressed as a linear combination of other variables. The purpose of the multicollinearity test is to find out whether in the regression a correlation is found between the independent variables, if a correlation is found it means that it contains a

multicollinearity problem. Several methods are used to detect multicollinearity, namely:

- If the R2 test is high enough (0.7 – 0.1), but the variable t test in the significant level of the independent variables is very little or not significant.
- A high R2 is a sufficient condition, but this condition is not a necessary condition for multicollinearity to occur, because in a low R2 <0.05 multicollinearity can also occur.
- Regressing the independent variable X with other independent variables, then calculating R2 with the F test: If F*>F variable Ho is rejected, there is multicollinearity if F*<F variable means Ho is accepted, not in a model, one of which is by looking at the correlation coefficient greater than 0.8, there are symptoms of multicollinearity (Syamsul, 2012).

3) Heteroscedasticity Test

Heteroscedasticity Test A regression model is said to contain heteroscedasticity if there is inequality of the variance of the residuals from all other observations, if the variance of the residuals from one observation to another observation remains, then it is called homoscedasticity. If the variance is different, it is called heteroscedasticity. The nature of this heteroscedasticity can make the estimation in the model inefficient. In general, heteroscedasticity problems are more common in cross-section data of time-series data variables.

c. Statistic test

Regression Analysis Statistical Test is a procedure used to test if there is an error or correctness of the null hypothesis results from the sample, there are 3 types of criteria in the test, including the coefficient of determination test (R2) and the t-statistic test.

1) Determinant Coefficient Test (R2)

The R2 test is used to find out how much the regression model is in explaining the dependent variable and measuring the goodness of fit of a model. Or in other words, the determinant coefficient shows the variation in the decrease of the Y variable which is explained by the linear effect of X. The determinant coefficient value is between 0-1, if the determinant coefficient value is close to 0 (zero), this means that the ability of all independent variables to explain the dependent variable is very limited. If the value of the determinant coefficient is close to 1 (one), this means that the independent variables provide explanatory information in predicting the dependent variable.

2) Partial Test (T Test)

The test used to determine how much influence each independent variable has on the dependent variable in a regression model. Ho hypothesis formulation : $\beta 1 = \beta 2 = 0$, meaning that simultaneously there is no influence of the independent variable on the dependent variable. Ha : $\beta 1 \neq \beta 2 \neq 0$, meaning that there is an individual influence between each independent variable on the dependent variable. In making decisions in this study, the authors used $\alpha = 0.05$. If the probability of the independent variable was > 0.05, then the hypothesis Ho was accepted, meaning that the independent variable partially had no effect on the dependent variable.

4. RESULTS AND DISCUSSION

4.1 Analysis and discussion

Based on the research that has been done, the test results can be explained as follows:

a. The Influence of Technology on Fishermen's Income in Kaili Village, Bissappu District, Bantaeng Regency.

Based on the regression results, it was found that technology had a positive but not significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency. . One reason is that if the engine is hot or damaged it will require additional capital or costs to repair it, this is what hinders fishermen from going out to sea to find fish. This research is in line with research conducted by Muhammad Arliman (2013) who examined the effect of capital, working hours and technology on the income of fishermen in

Tamasanju Village, North Galeson District, Takalar Regency. This states that technology affects fishermen's income, because if this variable increases it will have an impact on increasing fishermen's income.

b. The Effect of Capital on Fishermen's Income in Kaili Village, Bissappu District, Bantaeng Regency .

The results of the regression analysis show that capital has a positive and significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency. This can be seen from the results of the data where the regression coefficient is 1.456 with a significant value less than 0.05 (0.000<0.05). Thus it can be explained that if the capital variable is increased it will be followed by an increase in fishermen's income. Conversely, if the capital variable is small, it will be followed by a decrease in fishermen's income.

This research is in line with research conducted by Danda Sasmita (2006) who examined the analysis of the factors that affect the income of fishing businesses in Asahan District. This states that capital has a positive and significant effect on fishermen's income. And this research is also in line with the research of Karof Alfentino Lamia (2013) who examined the factors that influence the level of income of fishermen in Tumpaan District, Minahasa Regency which states that capital has a positive and significant effect on fishermen's income.

c. The Influence of Experience on Fishermen's Income in Kaili Village, Bissappu District, Bantaeng Regency..

Based on the regression results, it was found that work experience had a positive but not significant effect on fishermen's income in Kaili Village, Bissappu District, Bantaeng Regency.). One reason is because fishermen's catches are not always influenced by the length of experience in fishing. It is possible that fishermen who have only been fishing for a few years but have the skills and techniques in fishing will produce a large catch. This research is in line with research conducted by Danda Sasmita (2006) who examined the analysis of the factors that affect the income of fishing businesses in Asahan District. This states that work experience has a positive but not significant effect on fishermen's income.

5. CLOSING

5.1 Conclusion

Based on the results of research and discussion, it can be concluded as follows:

The technology variable has a positive but not significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency, as evidenced from the results of data processing where the regression coefficient is 557537.223 with a significant value greater than 0.05 (0.145 > 0.05).

The capital variable has a positive and significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency, as evidenced from the results of data processing where the regression coefficient is 1.456 with a significant value less than 0.05 (0.000 <0.05).

The work experience variable has a positive but not significant effect on the income of fishermen in Kaili Village, Bissappu District, Bantaeng Regency, as evidenced from the results of data processing where the regression coefficient is 71170.501 with a significant value greater than 0.05 (0.082> 0.05).

5.2 Suggestion

Based on the results of research conducted on fishermen in Dikapung Kaili, Bissappu District, Bantaeng Regency, the following suggestions can be given:

a. To increase income for fishermen, the government or the private sector must provide counseling and guidance to fishermen so that fishermen's knowledge increases in order to increase income.
b. This research was also carried out so that this research would be useful and helpful for further research. And can provide suggestions to further researchers in order to increase the time period for further research.

c. For further research, it is hoped that researchers can examine other variables that can affect employment and expand the discussion of the study. .

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