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## **Fishermen's Income Analysis in Jangka Buya Subdistrict Pidie Jaya District Aceh Province**

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### **Abstract:**

*This Research was conducted in order to acknowledge the impact of capital, fish selling prices and fish catching towards fishermen's income in Jangka Buya sub district, Pidie Jaya District, Aceh Province. Analysis model used is double linear regresion by having 40 respondents. The estimation result shows that the test on capital, fish selling price and fish catching variables simultaneously and partially give positive and significant impact towards fishermen's income in Jangka Buya subdistrict Pidie Jaya District. Fishermen's income in Jangka Buya Subdistrict Pidie Jaya District is influenced by capital, fish selling price and fish catching as much as 99,3 percent, and the remaining of 0,7 percent is influenced by other variables such as fishermen knowledge, travelled distrance, and others. From three variables given above, the most dominant impact towards fishermen's income in Jangka Buya subdistrict Pidie Jaya District Aceh province is fish catching.*

**Keyword :** Fishermen's income

### **1. Introduction**

The increasing poverty condition urges the government to provide basic needs and community business activities. This program implementation will be more effective and on target if the local government's role increases (provide facilities to the local communities) (Jasmina, 2001 : 101), as only the local government knows what their communities' needs are.

Nowadays world population have reached 6,3 billion people, and World Bank predicts that in 2030, the amount will increase up to another 3 billion, which 2 billion comes from the middle income countries which income per day is below 2 dollars. Lauenbach (1999 : 3) states that in modern countries, once in several centuries, their population will be doubled. While in developing countries, this increase will happen within less than 50 years.

Although international efforts has been performed to reduce population's growth. Population's growth is related to the increasing of young people growth in developing countries. Among important factors is the decreasing of mortality rate as the health facilities are getting improved. To acknowledge the poverty rate development and number of populations in Aceh province, it can be seen in Figure 1.

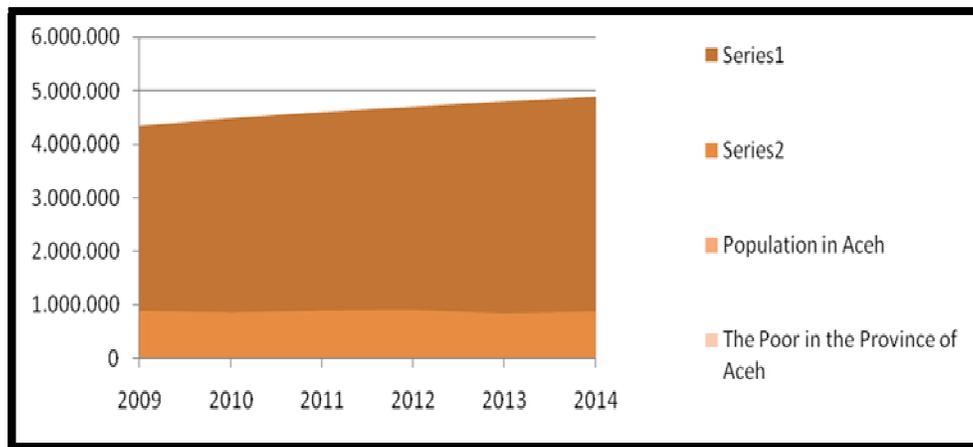


Figure 1: Number of Poverty Populations in Aceh for Period 2009 - 2014  
Source: Central Bureau of Statistic, 2015

Number of poor people in Aceh province from 2009 up to 2014 was a bit fluctuative and getting decreased but not significant. Number of poor people in 2009 was 892,87 thousand, decreased to 861,85 thousand in 2010. Number of poor people in Aceh up to 2014 decreased to 881,26 thousand people. The decreasing number of poor people becomes a good change in encountering social problem within the society and focus in implementing development for decreasing number of poor people.

Nowadays in Aceh a large number of poor people work in many economic sectors, however the focus of this research is only in fishery sector especially poor fishermen. Fishermen or coastal communities are identically related to a dirty environment, bad hygiene and sanitation as well as high poverty number. This becomes a dilemma as Aceh waters has a potential high fishery production. Based on Aceh Province Central Bureau of Statistic in 2014, Aceh potential fish catching production was 145.833,6 Ton, while the potential fishery production in general waters is 1.352,2 ton. In addition to that, in early new socialpolitical order (Orde Baru) until now there are many government's programs for overcoming fishermen poverty. However in the reality, poverty and retardation are still become fishermen's daily life in Aceh Province.

Based on Lembaga Kajian Pusat Studi Hukum Adat Laut dan Kebijakan Perikanan Universitas Syiah Kuala, it showed that more than 70 percent of Acehnese fishermen are fisherman labors and still live in poverty. These fisherman labors are those who don't have fishery tools and only become labors to the minority of capital/fishery tools owner who are not working as fishermen.

The most dominant factor that cause poverty and helplessness of the fishermen is the structural factor which is the uncondutive government policy and program as well as less focus in income enhancement and the provision of cash loan facility for fishermen so that they can be free from the moneylenders.

Pidie Jaya district is one of new districts in Aceh province, which was formed based on the decree no 7 in 2007 which has 1.162,84 square meters and consists of 8 subdistricts, 34 mukim and 213 villages and the capital city is Meureudu.

## 2. Literature of Related Review

### 2.1. Poverty Concept

Poverty problem is multidimensional problem, all parties have to interfere in order to overcome this problem not only the government, private institution but also the society in general. Poverty is a condition where someone is unable to fulfill his/her clothing, food and housing needs.

Todaro (3004), absolute poverty is the society inability to fulfill basic need, and they live below poverty line. Yahya (1997 : 18), poverty is the lack of fulfillment on needy goods to fulfill a proper need. Nababan (2005), poverty is the human inability in fulfilling his needs individually and collectively and they are in weak and exploited condition.

Todaro (2004:51), in a country poverty can be seen within two major factors, which are; (1) average national income rate, (2) discrepancy of income distribution. From the above poverty definitions, we can conclude that poverty in general is a condition where a person or some people live in improper life based on certain criteria. Incapability can be seen from lacking of access in getting minimum services in life, and difficult in getting access for policy making process.

Poverty problem is not only involve economic problem but also multidimensional problem, in fact it is also related to non economic problem (social, cultural and politics). Because of its complexicity, poverty is related to not only material well being, but also social well being (Sumodiningrat, 1986:45)

## 2.2. Income

Economic development can be directed to production increase in order to fulfill needs such as food, clothing and housing. National development objective that will be reached by Indonesian is increasing standard of living by improving national income.

National income is all goods and service value which are produced in a country in a certain period of time, usually in a year. Income per capita or individual is all income gained from goods and service production in a certain period of time by each individual or society (Ackley, 1992:34). Rosyidi (1996:485), There are four forms of capital which are: wage, rent, interest and profit. These four incomes are the compensation from four production factors which are:

- Wage is the compensation from human resource production factor
- Rent is the compensation from natural resource production factor
- Interest is the compensation from capital production factor and
- Profit is the compensation from skill production factor.

From the above opinions, it can be concluded that income is the value which is gained by each individual or families or a group of society after deducted by costs during production process. A measure of the income size received depends on the capability of an individual in managing his/her productions, revenues and expenditures. In this case, income that is received by the individual is influenced by climate, capital, fish price, fish catching, travelled distance and fishing tools and other factors that are used.

## 2.3. Factors Which Affect Fishermen's Income

Generally for eastern fishermen, most of their incomes is obtained from east season which happens for three months, while in west season they live by having debt, it is because in west season the wind is so strong and the sea wave is higher that the fishermen are reluctant to sail, and on the contrary the western fishermen will not also sail in the east season. That means most of the fishermen are living in poor condition. By having poor culture, low assets, low education and skill as well as lack of experience, it is impossible for the fishermen to participate more in improving their income apart from survival.

Suyanto (1996:9), in the fish season the fishermen families will not have any problem in survival. Although the fish price is a bit decrease as it's harvest season, but the income is a little bit increase. The problem occur when it is not fish season. Beside that problem, the fishermen also face education and poverty problem. Lack of education, experience and skill will cause poor culture, so the use of the sophisticated tools will fail besides time is not dominant.

Economic experts feel dissatisfied if the capital discussed only the physical or material capital, as the immaterial capital within human is also important such as education and training. Education plays important role in forming attitudes and organizing mind and predicting future. Poverty in fishermen is also caused by lack of education, skill and experience (Soekartawi, 1996:15).

This expenditures on education and training as well as skill improvement have to be seen as investment expenditure. From this problem it is concluded that education for fishermen is essential in order to increase production and production quality, so it is important to have fishery extension as informal school for rural fisherman families.

Mubyarto (1989) has strongly suggested the distinction of human capital and physical capital. Human capital is relation between capital and technology. The technology refers to new ways and methods which can decrease production costs and increase production output, beside there is also market for production.

## 2.4. Production Theory

Assauri (1998:7) stated that production is all activities in creating and adding goods and service quality use. Barttie and Taylor (1994:3), production is combination and material coordination process which are inputs, resources and services in goods and service making. Production is the final output and process or economic activity by utilizing some inputs. Production theory describes about correlation between good production rate and number of labors employed in order to produce various good production. In the analysis it is assumed that other production factors have permanent number, which are capital, land and technology are assumed in the same amount and the only production factor amount that can be changed is labors (Sukirno, 2012).

Every fisherman in performing his activities always has production costs in order to produce some production. In this case the production costs are fuel costs, food costs and other tools purchase costs, as well as labor costs for certain period.

Mulyadi (2005:88), production costs for fishermen are real expenses and unreal expenses. Real expenses consists of cash and non cash expenses. Cash expenses are for fuel and lubricant; preserving ingredients (ice and salt); food; repair; retribution and tax. Real expenses are boat, machine and fish catching tools depreciation expenses. While the non cash expense is fishermen labor which generally production sharing and will be paid after the products are sold.

Mubyarto (1989), production costs are divided based on its use which are variable costs and permanent costs. Variable costs are costs that are used in a production process. Variable costs in this research are fish bait, fuel, labors costs and other costs. Permanent costs are consumable costs in a production process, such as fish catching tools purchase for example boat, fishing rod, rope, light etc.

Daniel (2002:120) production costs are received compensation by production factors owners, or costs spent by fishermen in production process, either cash or non cash. Rosyidi (1996:333) production costs are costs that are spent by the

entrepreneur to gain outputs. A fisherman who performs production has to provide production factors. All production factors can't be obtained by free, they must be purchased. So it is obvious that production costs are all production factors value that is used to produce outputs.

### 3. Research Metodology

This research is conducted in Jangka Buya subdistrict Pidie Jaya district Aceh Province. To obtain the data, there are two kinds of research which are field research and literature research. Field research was conducted to gain direct prime data from respondents (research location), by using the following techniques:

- Interview, which is to gain direct data/information from respondents through interview.
- Observation, which is directly observe the fishermen's condition in research subdistrict Pidie Jaya district.
- Questionnaire, by distributing list of questions which are arra ged in multipe choices.

The population in this research is all group of poor fishermen in Jangka Buya subdistrict Pidie Jaya district. In research population formulation the poor fishermen were categorized in several criteria which are (1) fishermen who use machine boats, (2) fishermen who use no machine boats, (3) and fishermen who have labors maximum 3 persons. Number of samples in this research were determined by random sampling towards 40 fishermen out of 57 fishermen in Jangka Buya subdistrict Pidie Jaya district.

### 4. Discussion

To acknowledge the impact of capital, fish selling price and fish catching towards fishermen's incomes in Jangka Buya subdistrict Pidie Jaya district, it can be analyzed in the following estimation result:

Variabel Bebas	B	t	Sig
Constant)	0,079	0,241	0,811
capital	0,009	0,185	0,854
fish selling prices	0,977	13,682	0,000
Fish catching	1,002	14,812	0,000
R	R Square	Adjusted R Square	F Change
0,997	0,994	0,993	1.963,968

*Tabel 1: Hasil Estimasi Model  
Source: Data Processing Result (2018)*

Fishermen's incomes in Jangka Buya sub district Pidie Jaya district is influenced by capital, fish selling price and fish catching as much as 99,3 percent, which means that the variation from capital, fish selling price and fish catching variables impact the variation of fishermen's incomes as much as 99,3 percent and the remaining 0,7 percent is influenced by other variables such as fishermen knowledge, travelled distance, technology used etc.

From three analyzed variables, the most dominat variable towards fishermen's income in Jangka Buya subdistrict Pidie Jaya district is fish catching variable.

F calculation value as much as 1.936 is higher than F table 2.606 at convident interval rate 95% which means capital, fish selling price and fish catching simutaneously impact significantly towards fishermen's income in Jangka Buya subdistrict Pidie Jaya district.

Three variables T-test result which are capital, fish selling price and fich catching have higher calculated value than t-table which means that partially capital, fish selling price and fish catching positively and significantly give impact towards fishermen's income in Jangka Buya subdistrict Pidie Jaya district.

### 5. Conclusion

- The estimation result shows that either simultaneouly or partially tests on capital, fish selling price and fish catching variables give positive and significant impact towards fishermen's income in Jangka Buya subdistrict Pidie Jaya district.
- Fishermen's income in Jangka Buya subdistrict Pidie Jaya district is influenced by capital, fish selling price and fish catching as much as 99,3 percent, and the remaining as much as 0,7 percent is influenced by other variables such as fishermen's knowledge, travelled distance and technology used etc.

### 6. Saran

- Government policies are needed in order to form a Micro Financial Institution which provides all operational capital needs for small and medium fishermen with production sharing system that emphasize fishermen welfare.
- Government intervention is needed in determining fish selling price that will support fishermen welfare.

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