

## ANALYSIS OF HOUSEHOLD POVERTY AT SOI VILLAGE, WEST MARAWOLA DISTRICT, SIGI REGENCY

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### ABSTRACT

This research aims at finding out the level of household poverty and analyzing the factors influencing the household poverty. The data were analyzed by using headcount index analysis, poverty gap analysis, distribution revenue analysis, total revenue of household analysis, and regression analysis. The poverty level can be seen from the seriousness of poverty index, namely 1.72 which means the poor household expenses various with the average value 1.72. the distribution revenue at Soi village, west Marawola district, Sigi regency showed that the average value of household income in 2017 was 246.000, with the coefficient Gini Ratio 0.22 or in the low inequality category. The results of regression analysis showed that the coefficient of terminated (R<sup>2</sup>) was 0.472. the total of household income variable gave negative significant influence with the coefficient of elasticity -2.341 ( $p < 0,05$ ), the number of elasticity 3.325 ( $p < 0,05$ ), the age of head of household variable gave negative variable of land ownership gave positive insignificant influence with the value 0.726 and dummy variable of educational status of household gave positive significant influence with the value 0.633.

Keyword : Houshold Poverty, Poverty, Poverty Analysis.

### INTRODUCTION

Poverty is a multidimensional problem, not only economic but also social, cultural and political. Due to its multidimensional nature, poverty also requires a multidimensional solution (Wulandari, 2014). According to Jhingan in Kaplale (2012), an underdeveloped or developing country is a country characterized by poverty or low per capita income. Based on that opinion, it is common knowledge for developing countries that low income and poverty is a major problem in economic development, both of which are always stated together in one sentence is the increase of national income and poverty reduction.

Various programs have been pursued by both central and local governments to tackle and reduce poverty. It has even become one of the important

national agenda under the name of SDGs (Sustainable Development Goals) which replaces the MDGs (Millennium Development Goals) by the end of year 2015. The Central Bureau of Statistics (BPS) reported in 2015, the number of poor people in Indonesia reached 28.5 million, increasing by 798,923 compared with the condition in 2014 of 27.7 million people. This is inversely proportional to 2014 data that decreased from the previous year ie in 2013 with a total of 28.5 million poor people.

Central Sulawesi Province is one of 21 other provinces that have an increasing number of poor people. Reported by the Central Bureau of Statistics (BPS) in 2014 the number of poor people in Central Sulawesi Province is 387,060 people and increased by 33,413 people to 420,513 in 2015. Although in 2013 to 2014 there was a decrease of 13,400 inhabitants, indicating that the number of poor people will be

constant in the following years. Judging from the ranking of the poor in Indonesia, Central Sulawesi Province, up 3 ranks in 2014 (ranked 13) to 2015 (10th rank) is not comparable with the 2 rank decrease from 2013 (rank 11) to 2014 (ranked 13th) .

The interesting thing is the increasing amount of poverty in Sigi regency of 3740 people in 2014 to 2015 which became 29,140. If seen from the distance between the Capital of the Regency and the Capital of the Province, the Capital of Sigi District is Bora District is the Capital of the nearest regency in the City of Palu as the Capital of the Province compared to the distance of other districts Capital directly adjacent to the City of Palu such as Parigi Moutong and Donggala. This should provide more access to Sigi Regency in terms of equitable distribution of development and improving the welfare of the population.

West Marawola District is the highest percentage of poor households, 80.58% or 1,581 households, and Marawola sub-districts with the smallest percentage of poor households, 36.16% or 1,862 households. Furthermore, seeing CPM data. ie data on the number of poor households per village in West Marawola District, it can be seen that the largest number of poor households are in three villages: Wugaga Village with 313 poor households, Soi Village 255 poor households and Lewara Village with 210 households poor. It is interesting from the existing data, Soi Village is a village with an area of 68.48 Km<sup>2</sup> and with the smallest density of 11 people / km<sup>2</sup>. It should be with such a wide range of areas and with the potential of natural resources available, the people in this village can utilize the land optimally to increase income, but based on BPS data. Soi Village is still in the top 3 with the highest number of RTM in West Marawola District. Therefore, this research will focus on the Soi Village of West Marawola District.

Based on the description of the background can be formulated the problems

that become the focus of this study are as follows:

1. What is the poverty level of households in Soi Village, West Marawola District, Sigi Regency, Central Sulawesi Province?
2. What factors affect the poverty of households in Soi Village, West Marawola District, Sigi Regency, Central Sulawesi Province ?

Based on the formulation of the problem, the objectives to be achieved from this research are as follows:

1. Knowing the poverty level of households in Soi Village, West Marawola District, Sigi Regency, Central Sulawesi Province.
2. Analyzing the factors that affect household poverty in Soi Village, West Marawola District, Sigi Regency, Central Sulawesi Province.

This research is expected to provide information and also input for:

1. For the Soi Village government, West Marawola District, Sigi Regency and Propins Central Sulawesi, as an information, evaluation and consideration in determining policies related to poverty alleviation.
2. For researchers, as a condition to obtain a Master's degree at Tadulako University.
3. Other researchers, the results of this study can be used as information materials to conduct further research in accordance with the growing paradigm.

## **RESEARCH METHODS**

Based on the objectives in this study, the analysis model used is:

1. Headcount Index Analysis, Poverty Gap and Income Distribution

To answer the first goal used three data analysis tools, first is data analysis Headcount Index to see the proportion of poor households in the study area, with the following formula:

$$H = \frac{q}{n}$$

Information :

H = Headcount Index

q = Number of poor households

n = Number of household population

Furthermore, to see the level of poverty using the poverty gap index approach with the analysis of Poverty Gap data with the following formula:

*PG average*

$$= \frac{1}{n} \sum_{i=1}^q \left[ \frac{z - y_i}{z} \right] PG \text{ individu} = \left[ \frac{z - y_i}{z} \right]$$

*PG average*

$$= \frac{1}{n} \sum_{i=1}^q \left[ \frac{z - y_i}{z} \right]^2 PG \text{ individu}$$

$$= \left[ \frac{z - y_i}{z} \right]^2$$

Information :

PG = Poverty gap

N = Population

Y<sub>i</sub> = Household income

Z = Poverty line

Next, the level of poverty will be seen from the inequality of income for poor households in the research area using the method of data analysis Gini Ratio to know the distribution of household income as in the following equation:

$$GR = 1 - \sum_{i=1}^n f_{pi} (Fc_i + Fc_{i-1})$$

Information :

GR = Gini Coefficient (Gini Ratio)

F<sub>pi</sub> = Frequency of population in expenditure class i

F<sub>ci</sub> = The cumulative frequency of total expenditure in the expenditure class i

F<sub>ci-1</sub> = Cumulative frequency of total expenditure in expenditure class to (i-1)

GR values lie between zero to one.

When GR = 0, income inequality is perfect, meaning that everyone

receives the same income as the other.

If GR = 1 means the income inequality is perfect unequal or income is only received by one person or one group only.

GR = 0 or GR = 1 value is never obtained in the field. Gini Ratio is usually accompanied by a curve called the Lorenz curve (BPS, 2017).

## 2. Analysis of Total Household Income and Regression Analysis.

To answer the second objective, first analyze the total household income to see the total income from poor households in the research area with the following equation:

$$PTRT = PUT + PNUT$$

Information :

PTRT = Total Household Income (Rp / Year)

PUTP = Household Income from Farming (Rp / Year)

PNUT = Household Income from Non-Farming (Rp / Year) (Damayanti, 2012)

Furthermore, to know what factors affect the household poverty used regression equation as follows:

$$\ln \text{POV} = \ln d_0 + d_1 \ln \text{PTRT} + d_2 \ln \text{JART} + d_3 \ln \text{UKRT} + \delta_1 D_1 + \delta_2 D_2 + \varepsilon$$

Information :

POV = Poverty is measured using Poverty Gap (P2)

δ = Dummy variable coefficient (parameter estimated) (i = 1)

d<sub>e</sub> = Intercept

d<sub>at</sub> = Regression coefficient (parameter estimated) (i = 1 to 5)

PTRT = Total household income (Rupiah)

JART = Number of household members (People)

UKRT = Age of head of household (Year)

D<sub>1</sub> = 1, if it has land, and = 0 if it has no land

D2 = 1, if minimum education is graduated from Elementary School, and = 0, if not attending school or dropping out of school

$\varepsilon$  = error term

## RESULTS AND DISCUSSION

**Poverty Severity Index (PG<sup>2</sup>) in Soi Village, West Marawola District.** Another dimension to consider in addition to the number and percentage of the poor is the severity of poverty. The severity of poverty indicates the poverty of the region, which is the average of the squared poverty gaps. This indicator not only estimates the distance that separates the poor from the poverty line, but also income inequality among the poor. This index is often also referred to as the poverty severity index.

The poverty severity index (PG2) of households in Soi Village, West Marawola District shows a value of 0.172 in 2017, this value means that the expenditure of the poor in the study sites varies by 0.172. This is due to the income and the amount of human resources owned by each poor household in the research area.

Economic development can not be measured solely from the growth rate of income or income per capita, but it must also be seen how the income is distributed to the population in the sense of who perceives the development (Todaro, 2000). For a developing country like Indonesia, if the policy orientation of development only focuses on the level of economic growth alone in its implementation will obviously sacrifice the process of other social objectives such as equal distribution of income. High economic growth does reduce poverty, but on the other hand the poor can become poorer.

Looking at the weaknesses of such policy as well as realizing the importance of income distribution, policies to promote economic growth will be more meaningful if followed by equity of development outcomes that will benefit the public.

Efforts to minimize inequality is a strategy for achieving equilibrium and stability, so that all variables that support primary sector capability such as employment, land area, family size, labor wage, education level, and means of production must all be in order as a system to influence or determine the production area.

According to Tambunan (2001), there are several approaches to measure the level of inequality in income distribution, namely stochastic dominance and axiomatic approach. The size of inequality can also be seen from the ordinal or cardinal size (Foldvary, 2000). The basic measure often used by economists in general is the inequal distribution of individual income or better known as the imbalance of the income distribution between groups (size distribution of income).

There are two categories of poverty levels: absolute poverty and relative poverty. Absolute poverty is a condition where a person's income level is not sufficient to meet basic needs such as food, clothing, shelter, health and education. The relative poverty is the calculation of poverty based on the proportion of regional income distribution (Sukino, 2013).

The unequal distribution of income is between rural and urban. The low level of education and skills possessed by the population also gives them difficulties to enter normal jobs and have jobs that can provide adequate income. The uneven distribution of income of an area, will not create prosperity for society in general.

The main cause of the poverty of a household is the low income they receive. While one of the characteristics of the poor is that most of them have a lot of dependents. The number of household members is a dominant indication in determining the poor or impoverished household. Distribution of income is one indicator of equity. Equity will be realized if the proportion of income controlled by a particular group of people is as large as the proportion of the group. Tools commonly

used are Gini Ratio and calculation methods used by the World Bank.

Generally, villagers who are mostly farmers have a diversity of livelihoods to meet the needs of families. The uneven distribution of income leads to inherent incomes that become the start of poverty.

Based on the value of Gini coefficient (Gini Ratio) ranged from 0 (perfect equalization) to 1 (perfect inequality). Distribution of income will be more evenly if the value of Gini coefficient close to 0 and vice versa if the value of Gini coefficient close to 1 then the income distribution will be more uneven or decreasing.

The average income of the population in the year 2017 is Rp 246.000, - with the value of Gini coefficient (Gini Ratio) for income distribution of residents in Soi Village, West Marawola District Sigi Regency in the year 2017 is 0.22. it can be seen that the level of income inequality in Soi Village, West Marawola District Sigi Regency is in low category. Inequality occurs because of differences in sources of household income as well as the number of family members who productively work and generate income for the family. The low coefficient gini in Soi Village, West Marawola District Sigi District shows low income level and evenly, giving meaning that the value does not reflect the distance income between the rich and the poor but the index depicts the income of all people with low income.

Sugiyarto, *et al.* (2015) in his research in Poverty and Inequality of Household Income in Bojonegoro Regency obtained Gini index value of 0.459 which means there is inequality income distribution in the community at intermediate level. The further the Lorenz curve from the evenness line shows the higher inequality. The perfect inequality occurs when the Gini index is worth 1. Thus the inequality is indicating that some households are richer than other households, or some are poor among other

households. The effect of inequality of income distribution to poverty is influenced by the increase of population. Population growth tends to have a negative impact on the poor, especially for the very poor. Most of the poor families have a large number of family members so that their economic conditions that are on the poverty line have worsened with the deterioration of income or welfare imbalances (Todaro, 2000).

**Factors Affecting Household Poverty Rate in Soi Village, Marawola Barat District.** Analysis of factors affecting household poverty in Soi Village, West Marawola District Sigi Regency is analyzed by multiple linear regression using data processing with SPSS 21 software. The analysis was done gradually to get a good alleged equation according to the dependent variable poverty gap (Y) and independent variables consist of total household income (X1), number of household members (X2), head of household (X3), land ownership status (D1) and education level of head of household (D2).

The result of Regression Test of Conformity Model (R<sup>2</sup>) based on the result of SPSS 21 Model Summary, analysis shows that the R Square is 0,473 or 47,3%. The poverty gap variable can be explained by the total income of household, the number of household member, the age of head of household, the land ownership status and the education level of the head of household is 47,3% and the rest 52,7% is explained by other variable outside model. The result of regression analysis of household poverty function in Soi Village, West Marawola District of Sigi Regency can be seen in table 8 below.

The influence of each variable affecting household poverty level is explained as follows:

In the total household income variable shows a significant negative effect with the value of the coefficient of elasticity of -2.341 (p <0.05), meaning that every 1% increase in total household income, it will decrease the poverty level of 2,341%.

In the variable number of household members showed a significant positive effect with the magnitude of the coefficient of elasticity of 3.325 ( $p < 0.05$ ), meaning that each addition of 1% household members, it will reduce the poverty rate of 3.325%. This suggests that the number of household members in a poor household will add to the number of labor in the household and result in an increase in total household income.

Economists generally agree that population growth can be a driving factor or an impediment to economic development. It is a driving factor because the development will increase the amount of laborer that can eventually expand the market. The bad consequences that might be caused by the development of the population to development are if such developments with high productivity levels of food will be unemployed in society (Maulana, 2013).

The age variable for the head of household showed negative influence which is not significant with the magnitude of the coefficient of elasticity of -2.788 ( $p < 0.05$ ), meaning that every increase of household head age by 1%, will not affect the household poverty level.

Dummy Variables of Land ownership shows positive but not significant numbers. Which means the status of household land ownership in the study sites have no significant effect on poverty level. This is because the land in question is a free land owned by the state that can be utilized freely by each household and can not be utilized well by the local community, especially in increasing production of agricultural products, livestock, plantation, forestry and others.

The result of regression shows that there is a difference of poverty level of 0.633 between the head of the household who graduated from elementary school and the head of household who is not attending school or not finished primary school, which means that households whose head of household is graduated from elementary

school have more opportunity to reducing poverty levels compared with heads of households not attending school or not completing primary school. The variable of head of household education status is made as dummy variable because of the uniformity of education status of respondents who mostly do not go to school or do not go / graduate from elementary school.

This result is in accordance with research conducted by Muhammad Nasir, *et al.* (2008), that the relationship between the education level of head of household and household poverty level is positive. A household with low household head education is likely to have high levels of poverty.

According Djojohadikusumo (1994) education is a prerequisite to improve human dignity. Through the education of the community members will have the opportunity to nurture their abilities and manage their lives accordingly. Expanding opportunities for higher education expansion means opening up economic opportunities to seek improvement and capacity in society.

## CONCLUSION

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

1. Poverty level in Soi Village District West Marawola Sigi Regency can be seen from the severity index of poverty ( $PG^2$ ) which shows the value of 1.72. Distribution of income in Soi Village West Marawola District by looking at the Gini Ratio of 0.22 indicates that the poverty imbalance in Soi Village is low.
2. Poverty rates are significantly influenced by the total income variable of households, the number of household members and the head of household's dummy educational status. While other variables such as age of head of household and dummy of land ownership have no significant effect on poverty level in Soi Village, West Marawola Sub-district, Sigi Regency.

## SUGGESTION

Based on the description above, the suggestions submitted from this research are as follows:

1. The way to reduce poverty level in Soi Village, West Marawola District is by increasing household income through increasing production of agricultural products, plantation, animal husbandry, forestry and others.
2. The number of household members is expected to be a human resource that can help household heads to increase household income, both farm income and non-farm income.
3. The need to improve the educational status of each household member, especially the head of the household in order to get a better job and certainly have an impact on increasing household income.

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