

UDC 314

## EQUITABLE DEVELOPMENT AND POVERTY RATE ANALYSIS IN CENTRAL SULAWESI OF INDONESIA

Tope Patta

Faculty of Economics and Business, University of Tadulako, Palu, Indonesia  
E-mail: [pattatope@yahoo.com](mailto:pattatope@yahoo.com)

### ABSTRACT

This study attempts to see the effect of equitable income distribution on poverty in Central Sulawesi. The data was taken in the form of *time series* from 2011-2018. In an effort to obtain these results, a simple regression analysis was used. The findings show that there is no significant relationship between income inequality and poverty rate in Central Sulawesi. This means that the poverty rate in Central Sulawesi is not sensitive to income distribution (Gini Coefficient) but is likely to be sensitive to other factors such as the rising prices of basic needs which become the main basis in calculating the poverty line. This study is expected to give special consideration to the government in reducing poverty in Central Sulawesi.

### KEY WORDS

Equity, development, income, poverty, Central Sulawesi.

The improvement in economic development illustrates the development of a region's economic activities which are marked by the improvement of regional economic structure through the activities of production, consumption, and investment that have an impact on employment and increase in community income. Economic growth will be more beneficial if it can be enjoyed by all levels of society which is often followed by changes in income structure especially for the lower-class society (Hidalgo and Iturbe, 2018). The problem faced in various developing countries is economic disparity or income distribution inequality between groups of people who are below the poverty line (Lustig and Silber 2016). An income disparity that is quite large will lead to income differences arising from diverse resources and production, especially in terms of capital goods.

Most of the poor population in Central Sulawesi lives in rural areas and some others are urban residents who are unable to access the economy properly. Poverty is closely related to income disparity in community groups. In September 2018, Indonesia's Gini Coefficient was 0.384 points while Central Sulawesi was in the number of 0.317 points. Compared to other regions in Sulawesi Island, the Gini Coefficient in Gorontalo was 0.417 points while South Sulawesi was in 0.388 points followed by Southeast Sulawesi by 0.392 points, North Sulawesi by 0.372 points, and West Sulawesi by 0.366 points. This means that the income distribution in Central Sulawesi is better compared to Indonesia and other provinces on Sulawesi Island.

Bresson (2010) believed that the relationship between inequality and poverty is a pragmatic relationship that disparity causes poverty to get worse or that inequality is a form of poverty. Moreover, Bargain (2015) stated that there is a positive relationship between poverty and inequality, both spatial and inter-personal.

In Central Sulawesi, based on the statistical data released by the Central Bureau of Statistics (*Badan Pusat Statistik*, abbreviated as BPS) (2019), the number of poor people in rural areas is higher than in urban areas. In March 2019, it was estimated that around 15.26 percent of the population living in rural areas were classified as poor while in urban areas, the poor population amounted to 9.32 percent. However, there was a downward trend in Central Sulawesi's poverty rate from time to time.

From here, it can be said that the information about poverty and disparity in the community is important to make the community aware to the current problems. It is expected that appropriate steps and policies can be formulated to overcome these problems (Klasen, 2016). Badrudin *et al.* (2018) revealed that economic disparity or income distribution

inequality is a true reality in Central Sulawesi both in rural areas and urban areas. It is an important issue to be reviewed by which it also needs various efforts from local governments in making policies to improve the community's economy through different programs and activities. Therefore, given the importance of the problem of income inequality and poverty, this paper takes part in analyzing the level of income distribution as well as the level of community poverty in the framework of equitable regional economic development so that it has an impact on improving the welfare of the people in Central Sulawesi.

## LITERATURE REVIEW

The term poverty was first described by Seebohm Rowntree in 1901 (Viet, 1986) who said that a family is included in severe poverty if the overall income could not meet the minimum requirements of physical needs (ie food consumption, and etc). Poverty is not only described as a failure of meeting the standard needs for food but also more generally based on the poverty line standard where it is said to be poor if the income is lower than the poverty line. Seen from the approach of disparity, poverty is the inequality that occurs in one group of society, especially between lower-class society and the others. Lustig and Silber (2016) wrote that the poverty line of an individual can be defined as the amount of money needed by an individual to reach the minimum welfare level so that they will not be called as poor. The concept and definition of poverty that is widely used in Indonesia is the concept of basic needs that are commonly used by the Central Bureau of Statistics. With this approach, poverty is seen as the economic inability of someone to meet basic needs, either food or non-food, as measured by expenditure. By that, it can be said that the poor population is the population that has an average monthly per-capita expenditure under the poverty line. The data that is commonly used is the National Socio-Economic Survey (*Survei Sosial Ekonomi Nasional*, abbreviated as Susenas). Someone is said to be poor if their income in a month is less than the poverty line. Poverty Line (*Garis Kemiskinan*, abbreviated as GK) is the sum of the Food Poverty Line (*Garis Kemiskinan Makanan*, abbreviated as GKM) and Non-Food Poverty Line (*Garis Kemiskinan Non-Makanan*, abbreviated as GKNM).

GKM is the value of minimum food expenditure that is equivalent to 2100 kilocalories/capita/day. The commodities of basic food needs are represented by 52 types of commodities (grains, tubers, fish, meat, eggs and milk, vegetables, nuts, fruits, oils, and fats, etc). Whereas, GKNM is the minimum requirements for housing, clothing, education, and health. The commodities of basic non-food necessities are represented by 51 types of commodities in urban areas and 47 types of commodities in rural areas.

Income inequality can not be separated from the problem of poverty. Unequal distribution of income is a major problem in developing countries (Afandi *et al*, 2017). Income distribution is the distribution of income within a community. In the process of production, the owners of the factors of production will receive a reward equal to the factor of production donated in the production process. In this income distribution process, there will be a cycle (turnover) where consumers have to pay the price of the goods. On the other hand, consumers also become the provider of capital, labor, natural resources, or expertise so that besides paying the price of the goods, they will receive a share of income at certain times (Maryono, 2018). In the production process, each provider of production factor will receive a service compensation as follows: (1) Owners of natural resource factors (land) will receive land rent, (2) Owners of labor factors will receive wages, (3) Owners of capital will receive capital interest, and (4) Entrepreneurs will receive operating profits.

Economic disparity or income distribution inequality always occurs between high-income groups and low-income groups (Wahiba and Weriemmi: 2014). Afandi *et al.*, (2017) added that there is a positive relationship between poverty and inequality, but is this supposed to apply in all countries or regions? In this connection, this paper will try to see the extent of the relationship between the level of income inequality in Central Sulawesi and its poverty rate.

## METHODS OF RESEARCH

This study used a quantitative analysis which includes secondary data collection activities in the form of time series regarding the distribution of individual income (Gini Coefficient) with the percentage of poverty rate in Central Sulawesi from 2011 to 2018. The data was obtained from the Central Bureau of Statistics of Central Sulawesi.

- The first regression equation model

$Y_1 = AX_1^{\beta_1} E$  is transformed in the form of Ln so it becomes a liner as follows:

$$\ln Y = \beta_0 + \beta_1 \ln X_1 + \varepsilon$$

Where:

$Y$  = The percentage of poverty in Central Sulawesi

$X_1$  = Gini Coefficient in Central Sulawesi

$\beta_0$  = Constant

$\beta_1$  = Regression coefficient, which also acts as elasticity

$\varepsilon$  = Epsilon

These are the steps to test the hypothesis of the regression coefficient ( $\beta$ ):

- Formulating the hypothesis.
- Specifying the Level Of Significant (LOS) at  $\alpha = 0.01$  or  $\alpha = 0.05$ .
- Determining the value of t-count.

$$t\text{-count} = \frac{\beta}{s\beta}$$

$$s\beta = \frac{S_e}{\sqrt{\sum(X^2) - (\sum X)^2/n}}$$

$$S_e = \sqrt{\frac{\sum Y^2 - a \sum Y - \beta \sum XY}{n-2}}$$

- Making decisions on hypotheses by comparing the value of t-count and t-table:  
 If  $t\text{-count} \leq t\text{-table } \alpha/2 (n-k)$ , then  $H_0$  is accepted.  
 If  $t\text{-count} > t\text{-table } \alpha/2 (n-k)$ , then  $H_0$  is rejected.

To measure the effect of Gini Coefficient on the poverty rate, the coefficient of determination ( $R^2$ ) is used.

The coefficient of determination is obtained through this following formula:

$$R^2 = \frac{\beta_1 \sum Y_1 X}{\sum Y^2}$$

$$R^2 = \frac{\beta_2 \sum Y_2 X}{\sum Y^2}$$

The calculation of regression model analysis and data processing were performed using a computer with the help of a professional statistical data processing program or SPSS (*Statistical Product and Service Solution*) v.19.

## RESULTS AND DISCUSSION

It is argued that Sulawesi has a record that is not very impressive in reducing poverty. The figure below clearly shows that the overall development of poor society in Central Sulawesi from 2011 to 2018 experienced a trend of fluctuation. Through its impressive economic growth performance, Central Sulawesi has not been able to reduce the percentage

of poor people from 16.04% in 2011 to 13.69% in 2018 (<https://sulteng.bps.go.id>). During this period, there were several main sources of economic growth in Central Sulawesi including rapid growth in the mining sector, manufacturing sector, and agriculture sector.

The figure below illustrates that the poverty rate in Central Sulawesi experienced a decrease in the period of 2011-2018. In 2012, the poverty rate was 14.94% and decreased to 14.32% in 2013. It was decreased again in 2014 reaching the number of 13.61%. Unfortunately, the percentage of poverty in Central Sulawesi started to increase in 2015, 2016, and 2017 respectively by 14.07%, 14.09%, and 14.02%. In 2018, the poverty rate was suppressed again at 13.69% (see figure below).

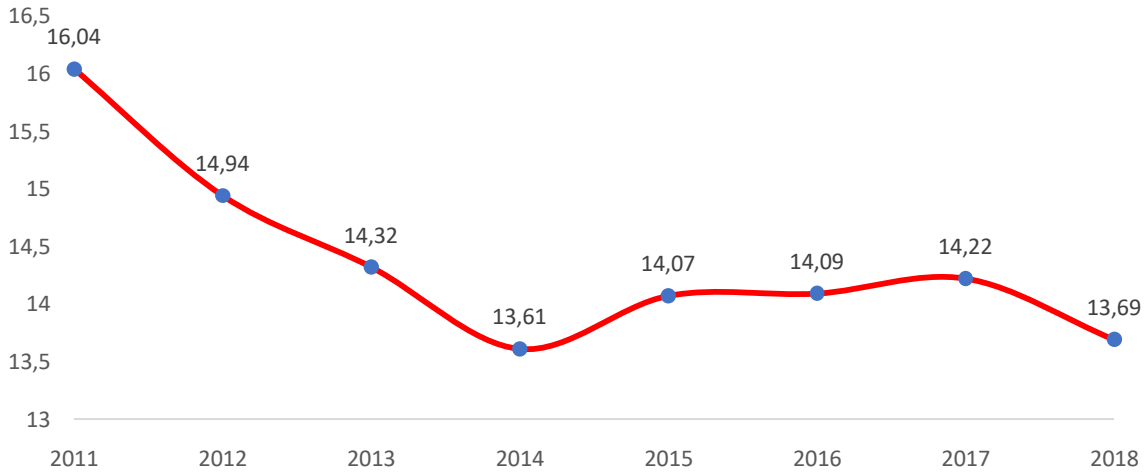


Figure 1 – Poverty Rate in 2011-2018  
(Source: Processed Data, 2019)

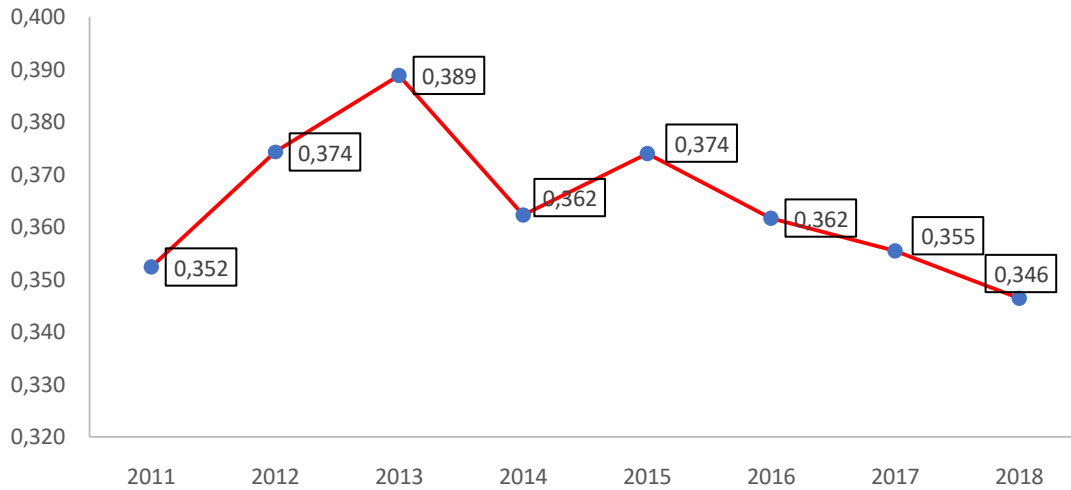


Figure 2 - Gini Coefficient in 2011-2018  
(Source: Processed Data, 2019)

Gini Coefficient or Gini Index is an indicator that shows the overall level of income inequality. The values of the Gini Coefficient range from 0 to 1 (<https://sulteng.bps.go.id>). If the Gini coefficient is 0, it indicates a perfect income distribution where every person has an even income. The Central Bureau of Statistics in 2011 measured the level of population inequality in Central Sulawesi with the help of the Gini Coefficient and obtained a result of 0.352 points. It was higher by 0.22 points than the percentage in 2012. The results of the data publication above showed that there has been an increase in income inequality between individuals in Central Sulawesi during the period 2011-2013. However, it is fortunate that this coefficient value can be suppressed in 2014 by 0.362 points although it experienced an increase in 2015 at the level of 0.374 points. In 2016, the Gini Coefficient value was reduced

to 0.362 points and in 2017, it was lowered again to 0.355 points and went back down to 0.346 points in 2018.

In recent years, the poverty rate in Central Sulawesi shows a fluctuating trend. Those who have been able to get out of poverty are those who live at the threshold of poverty line which means that there is no need for strong support to get them out of poverty. However, in line with this decline of poverty, it is the groups that are at the bottom of the poverty line that now must be helped to rise and escape poverty.

Through a simple regression analysis, the results of this study point out that there is no significant relationship between the values of the Gini coefficient and the reduction in poverty rates. Now the question is, what is the cause of high poverty in Central Sulawesi? As presented in Figure 2 above, the trend of Gini coefficient in Central Sulawesi in the last few years has declined relatively but the poverty has not dropped significantly. In the previous discussion, it has been explained that the poverty line is measured by the price of food and non-food necessities with a composition of 76.14% food and 23.86% non-food. Since the consumption of Indonesian people, particularly the people of Central Sulawesi, is quite high, the price of foods, especially staple foods, should be quite affordable. Unfortunately, this did not happen. Marks (2017) found that the prices of staple foods in Indonesia were far more expensive than international prices. As for an example, Indonesian people have to pay 64% more expensive for rice, 48% more expensive for sugar, 37% more expensive for meat, and 24% more expensive for fruits. This becomes one of the causes of high poverty in Indonesia, especially in Central Sulawesi. Indonesia's poverty line in September 2018 was IDR 410,670/month, while at the same time, the poverty line in Central Sulawesi was IDR 424,040/month. This means that the prices of basic food and non-food needs in Central Sulawesi are higher than in other Indonesian regions. Even more, the poverty line of Central Sulawesi is far above the poverty line of other regions on Sulawesi Island. The poverty line of North Sulawesi was only IDR 356,906 followed by South Sulawesi which was only IDR 315,378, Southeast Sulawesi by IDR 316,729, Gorontalo by IDR 325,129, and last but not least, West Sulawesi that was IDR 324,042.

For this reason, the poverty rate in Central Sulawesi is not sensitive to income distribution (Gini Coefficient) but is likely to be sensitive to inflation. In this matter, inflation is very sensitive to the rising prices of basic needs. There are many factors causing the high prices of food needs in Central Sulawesi, both in terms of demand and supply or production. One of which is the trading system that must be addressed properly. Often, the regulations or trading procedures carried out by the government only aim to hit the economic chain hunting system. At first, the intention of the government was to protect consumers and farmers but it turns into the giving of privilege for big traders or those who are in collusion with them. The regional government of Central Sulawesi through the Regional Inflation Control Team (*Tim Pengendali Inflasi Daerah*, abbreviated as TPID) needs to be serious to resolve high food prices because it has been going on for a long time. Referring to the annual development of the consumer price index and compare it to the poverty line, it appears that the poverty line is relatively rising faster than inflation (<https://sulteng.bps.go.id>). This means that the inflation faced by lower-class society always rises faster than the inflation faced by society in general.

## CONCLUSION

Based on the results of the calculations above, it can be known that there is no significant relationship between the improvement of income disparity and the reduction of poverty rate in Central Sulawesi. The high regional poverty line is assumed to be the main factor that causes the high number of poor people in Central Sulawesi. The problem becomes worse with the condition that poverty line is relatively increased faster than inflation. This means that the price development of basic needs faced by the lower-class society always increases faster than the price development faced by society in general.

## REFERENCES

1. Afandi, A., Wahyuni, D., & Sriyana J. (2017). Policies to Eliminate Poverty Rate in Indonesia. *International Journal of Economics and Financial Issues*, 7, 435-441.
2. Afandi, A., Rantung, V., & Marashdeh. (2017). Determinants of Income Inequality. *Economic Journal of Emerging Markets*, 9, 159-171
3. Badan Pusat Statistik. (2019). Angka Kemiskinan. Retrieved from [sulteng.bps.go.id](http://sulteng.bps.go.id)
4. Badrudin, R., Kusuma, M. W., & Wardani, R. Y. (2018). The Inclusive Economic Development Model. *Economic Journal of Emerging Markets in Sulawesi Island*, 10, 128-136.
5. Bargain, O. (2017). Tax-benefit Systems, Income Distribution and Welfare Analysis Special Issue in Homage to Tony Atkinson. *The Journal of Economic Inequality*, 15, 301-302.
6. Bresson, F. A. (2010). General Class of Inequality Elasticities of Poverty. *The Journal of Economic Inequality*, 8, 71-100.
7. Hidalgo-Hidalgo, M., & Iturbe-Ormaetxe, I. (2018). Long-run Effects of Public Expenditure on Poverty. *The Journal of Economic Inequality*, 16, 1-22.
8. Klasen, S. (2016). International income poverty measurement: which way now? *The Journal of Economic Inequality*, 14, 199–225.
9. Lustig, N., & Silber, J. (2016). Introduction to the Special Issue on Global Poverty Lines. *The Journal of Economic Inequality*, 14, 129-140.
10. Marks, V., & Stephen. (2017). Non-Tariff Trade Regulations in Indonesia: Nominal and Effective Rates of Protection. *Bulletin of Indonesian Economic Studies*, 53, 55- 63.
11. Maryono, J. (2018). Descomposition Total Factor Productivity of Indonesian Rice Production. *Economic Journal of Emerging Markets*, 10, 121-127.
12. Viet-Wilson, J. H. (1986). Paradigm of Poverty: A Rehabilitation of B.S. Rowntree. *Journal of Social Policy*, 15, 69-99.
13. Wahiba, N. F., & El Weriemmi, M. (2014). The Relationship Between Economic Growth and Income Inequality. *International Journal of Economics and Financial*, 4, 135-143.