

Income Disparity Madura Island and Surabaya City After Suramadu Bridge Construction

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Abstract: The development of physical infrastructure is believed to reduce the number of inequality among regions. The purpose of this study is to analyze the income inequality that occurred in four districts on the island of Madura with the city of Surabaya after the construction of Suramadu Bridge. The calculation of inequality in this study using Gini Ratio. The result after the construction of bridge Suaramadu gini ratio in the period 2010-2012 in four districts of Madura Island namely Bangkalan, Sampang, Pamekasan, and Sumenep and Surabaya fluctuate. Not much different from the conditions before the construction of Suramadu Bridge in 2003-2009. After the construction of Suramadu Bridge, Surabaya still has better economic advantage compared to Madura Island.

1 INTRODUCTION

In poor countries, the main concern focuses on the dilemma between growth versus income distribution. Both are equally important, but almost always difficult to be realized simultaneously. Economic development requires higher GNP, and for that a higher growth rate is an option to take. However, the problem is not just about how to spur growth, but who enjoys the results. Welfare of each region is different, one of the factors that affect the macroeconomic conditions. Macro economic factors can grow or not depend on the productivity of each factor (Soejoto, Cahyono, Solikhah, 2017).

One way that is believed to reduce the number of inequality is by way of physical infrastructure development in the region. The development of Suramadu Bridge is focused on balanced economic development, which is synonymous with the focus of national economic development strategy, where balanced economic development strategy was implemented in 1950-1957, but implemented in the new order era until now (Adisasmitha, 2012: 63). In addition, the construction of Suramadu Bridge aims to facilitate transportation routes from the island of Madura to Java or vice versa which can further be a trigger of economic activity.

If seen from the growth rate of GDP of four districts in Madura Island still focused on agriculture

sector as a support in economic growth of society and region of Surabaya also still synonymous with industrial sector which sustains its growth rate. Equity of income is also a final indicator of the success of economic development. Where income distribution is quite crucial when compared to other indicators. Equity income also relates to the level of GNP per capita. Prior to the construction of Suramadu Bridge, the four districts already have a good income distribution.

However, basically evenness on the island of Madura is not as good as the evenness of the city of Surabaya. Distribution of household expenditures of Surabaya city showed even betterness than the four districts in Madura Island. This is indicated by the ratio of coefficient Gini city of Surabaya for 4 consecutive years are in category 4 (+) in 2005 with the ratio 0.1944, in 2006 with a ratio of 0.1803 and in 2007 with a ratio of 0.1555. With the operation of Suramadu Bridge is expected to generate a Big Push for both areas. Therefore, the purpose of this study is to analyze the income inequality that occurred in four districts on the island of Madura with the city of Surabaya after the construction of Suramadu Bridge.

2 LITERATURE REVIEW

Generally Revenue Distribution Indicators consist of Gini Coefficient and Williamson Index. The Gini coefficient description is a short measure of the degree of inequality income distribution in a country can be obtained by calculating the area between the diagonal line with the Lorenz curve compared to the total area of the square half where the Lorenz curve is located.

The growth gap and income disparity between regions is an unavoidable phenomenon, because the potential, conditions, and characteristics of the region vary from one another. The characteristics of the region vary physically, economically, socially, culturally, spatial, environment, and so on. Using technological and scientific advancements and enhancement of human resource capabilities is an important factor for promoting economic growth (region) and can reduce the income gap between regions.

3 METHODS

This research is a kind of quantitative research using secondary data. Where the data obtained from the Central Statistics Agency of East Java. The location of this study is the city of Surabaya, and four districts on the island of Madura, Namely Bangkalan, Sampang, Pamekasan, Sumenep. The data used are secondary data with GDP data and income per capita. The formula of Gini Ratio (GR) is:

$$GR = 1 - \sum f_i [Y_i + Y_{i-1}]$$

Where: f_i = number of percent (%) recipients of grade income i . Y_i = the cumulative number (%) of income in the i class.

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 inequality of perfect lame income or income is only received by one person or one group only. Gini coefficients from countries with high inequality ranged from 0.50-0.70; Moderate inequality ranges from 0.36 to 0.49; And those with low inequality ranged from 0.20 to 0.35 (Arsyad, 2010: 291).

4 RESULTS AND DISCUSSION

The economic structure of the Madura region is similar to that of southern East Java, as mentioned in the results of research (Cahyono, Subroto, Arisetyawan, 2016) that the agricultural sector has contributed substantially to the rate of economic growth.

Basically, the gap between regions always happens in the development process. This is a very universal thing and can happen at any level. Because income data is difficult to obtain, the measurement of income distribution has been approached using expenditure data. The economic structure of the Madura region is similar to that of southern East Java, as mentioned in the results of research (Cahyono, Subroto, Arisetyawan, 2016) that the agricultural sector has contributed substantially to the rate of economic growth. In general, the Gini Ratio in the period 2010-2012 in four districts of Madura Island namely Bangkalan, Sampang, Pamekasan, and Sumenep and Surabaya fluctuate. Basically Gini Ratio Fluctuation Ratio indicates a change in the distribution of population expenditure. Gini Ratio is also used to see whether the equality of population expenditure is getting better or worse. Prior to the construction of Suramadu Bridge, the four districts have a fairly good income distribution.

Distribution of revenues of the four districts in 2003-2009 was in category 4, low inequality ranging from 0.20-0.35 ratio. Basically, of the four districts also exist which fall into the category that exceeds category 4 (low inequality), but not included in category 0 (perfect equity), with a ratio of 0.10. Bangkalan District in the year 2003-2009 which is in category 4 (+) is in 2007 that is equal to 0.1797.

Regency of Pamekasan which is in category 4 (+) that is in year 2004 with ratio 0,1744 and year 2009 that is 0,1946. While Sampang Regency and Sumenep Regency from 2003-2009 did not belong to category 4 (+), evenness was in category 4 that is low inequality. However, basically evenness on the island of Madura is not as good as the evenness of Surabaya. Distribution of household expenditures of Surabaya city showed even betterness than the four districts in Madura Island. This is indicated by the ratio of coefficient Gini city of Surabaya for 4 consecutive years are in category 4 (+) in 2005 with the ratio 0.1944, in 2006 with the ratio 0.1803, in 2007 with the ratio of 0.1555, and in 2009 with the ratio 0.1054, while at In 2008, the ratio of the city of Surabaya is almost in perfect fairness of 0.0664.

After the construction of Suramadu Bridge as the Big Project of the development of economic equity,

the revenue distribution of Madura Island can be said to be on the better distribution of income, than before the Suramadu Bridge. In this case, the year range that is used as a reference to see the condition of post Suramadu Bridge is the year 2010-2012. The condition of income distribution of Madura Island after Suramadu Bridge development is quite fluctuating. Bangkalan District in 2010-2012 is in the category of low inequality (category 4). Where in 2010 with Gini Index 0.1958 (category 4 (+)), 2011 with Gini Index 0.2136 (category 4), and in 2012 with Gini Index ratio of 0.2398 (category 4).

Sampang regency in 2010-2012 is in low inequality, almost even in the Gini Index 0.10 ie category 4 (+). Where Sampang Regency is located in category 4, after the construction of Suramadu Bridge is the year 2012 with Gini Index 0.2327. While the category 4 (+) in Sampang Regency, occurred in 2010 with the Gini Index of 0.1940 and in 2011 with the Gini Index of 0.1932. Pamekasan Regency after the construction of Suramadu Bridge, with the range of 2010-2012 is almost in category 4 (+). Pamekasan Regency is in category 4 (+), ie in 2010 with Gini ratio 0.1979, and 2011 with Gini ratio 0.1993. While the ratio Gini Pamekasan regency in 2012, is in category 4 that is with the index 0.2276.

While Sumenep Regency, post Suramadu Bridge has not indicated a better change in income distribution. This is caused because the income distribution of Sumenep Regency, from pre-bridge development to post Suramadu bridge construction in 2010-2012, is in category 4. However, this is not a bad situation, because even though the Gini Sumenep Index score does not fluctuate, But the distribution of district income is still in a low inequality, meaning that it can be said that there is equality in the distribution of income in Sumenep regency.

Not much different from the condition of pre-development Suramadu Bridge year 2003-2009. After the construction of Suramadu Bridge, Surabaya still has better economic advantage compared to Madura Island, in terms of Gini Index ratio. Ratio of Surabaya Gini Index Post Suramadu Bridge in 2010-2012, almost closer to perfectness. Where the perfect fairness occurred in 2010 and 2011, with the Gini Index of 0.0791 and 0.0510. While in 2012, the category of Gini Index of Surabaya City is category 4 with ratio 0.1919. Among the 5 (five) regions that became the most distributed areas of income distribution of Surabaya city than the four districts on the island of Madura. Although the initial focus of the development policy of Suramadu Bridge is to emphasize the economic progress of Madura Island. But the economic capability of the city of Surabaya is

still far above the economic condition of four districts on the island of Madura.

The existence of a direct relationship between the productivity of the agricultural sector with the distribution of income distribution reflected from Gini Rasio. So it can be interpreted that every 1 percent increase in agricultural productivity is expected to increase the distribution of income evenly to the Gini Ratio. This is because the stake sector is the dominant sector which is still the best substitution of the profession that is in demand by the residents in the four districts on the island of Madura. Just as the results of Cahyono, Subroto, and Anwar, 2017 studies suggest that in Gerbangkertosusila has some potential sectors that can support economic development along with the reduction of income inequality that occur, manufacturing, mining, and agriculture.

In addition, with sufficient harvested area and a balanced workforce with maximal workforce (in the absence of reduced production law), it is believed to be able to increase maximum yield. However, it should be remembered that with the accessibility of labor from the existence of the Suramadu Bridge, it is certain that many of the people who have not worked or have been working primarily in this subsistence sector will have a desire to turn to jobs that are capable of improving the consumption of the population ultimately Can decrease income inequality. Thus, with the ease of access, the residents no longer want jobs in the agricultural sector. So that the productivity of the agricultural sector no longer rely on workers in the sector, but requires other supporting factors in addition to workers who can increase agricultural productivity. Thus, the factor of agricultural labor does not increase, the consumption of workers working in the sector does not increase as well. Although the number of workers in this sector is increasing but the people who work in this sector have relatively low wages that are less able to increase the consumption of the population, so the Gini Ratio figure as a reflection of even distribution of income increases the gap of inequality. Yet the increase in income is one important factor to reduce inequality. As a result of a study conducted in China by Wei in 2011 that the wage income is still a dominant factor of inequality in urban China (Wei, 2011).

The productivity of the industrial sector also affects the distribution of income distribution. Basically, productivity improvements also result in a direct increase in the standard of living under the same distribution conditions, from earning productivity to labor inputs. However, it is necessary to reexamine whether workers who are able to

increase productivity are increasing, able to increase the interval of workers expenditure, at a higher level.

If this is believed to be the case, then the interaction can take place well, resulting in growth (growth) on the distribution of income distribution. Thus, from that growth will result in progress (progress) on the Gini Index value that describes the decline in income gap. This is what is required to occur in the area affected from the existence of Suramadu Bridge.

Ease of access of industrial society to the availability of raw materials can improve the competitiveness of the population in increasing the amount of industrial production, in order to improve the welfare of the population and the regional economy in general. It should also be noted, however, that increased productivity of the industrial sector can also increase the rate of open unemployment. The competitiveness of the increasingly open population mobility in the Madura-Surabaya region is able to shift the less productive population to the highly competitive population especially in the industrial sector. If that happens, then it will also affect the consumption of public spending. It is able to increase the value of Gini Ratio in the affected area. But another important thing to note again, is the value of wages received by industrial sector workers. Fuest and Huber, 2006 show that investment subsidies in the poor region can improve welfare if the labor market is competitive. So with the rational wage rate can increase the expenditure of the population in that sector, in such condition, it can decrease the Gini Ratio figure in the affected area due to the existence of Suramadu Bridge.

The existence of a positive relationship between changes in agricultural productivity and productivity of the industrial sector on the distribution of income distribution. In addition, it is known that the areas that have the biggest distribution of income distribution are Surabaya, Sampang, and Bangkalan. While that has the smallest distribution of income distribution is Sumenep and Pamekasan. This is because Bangkalan Regency and Sampang Regency have a considerable amount of agricultural productivity and the three regions have high productivity of industrial sector. In addition, the three areas are located not too far from the presence of Suramadu Bridge. While Pamekasan and Sumenep regency are remote regency, with the existence of Suramadu Bridge and has big agricultural productivity value but not balanced with growth in productivity of industrial sector. Therefore, it is assessed will affect the distribution of income distribution in the region. In contrast to the results of

Kemp-Benedict research 2011, which says the Analysis of Inequality in Income Negative Relationship with the Level of Social Trust. If there is a relationship between income. This study did not include elements of social trust.

5 CONCLUSIONS

Sumenep and Pamekasan districts, post Suramadu Bridge have not indicated a better change in income distribution. Sampang Regency is in a low inequality. Bangkalan regency fluctuates. However, it is still in a low inequality. The city of Surabaya still has a better economic advantage compared to four districts in Madura Island.

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