Analysis of Regional Economic Growth Potential Based on Shift Share Approach in Trenggalek District

Riko Setya Wijaya*, Cholid Fadil

Department of Development Economic Study Faculty of Economy and Business, Universitas Pembangunan Nasional "Veteran" Jawa Timur, Indonesia

*Corresponding author: E-mail: rikosetyawijaya.80@gmail.com

ABSTRACT

Economic growth is one of the benchmarks that can be used to increase the development of a region from various economic sectors, which indirectly describes the level of economic change, economic growth means the development of activities in the economy that causes goods and services to be produced to increase and the prosperity of society to increase. The purpose of this study was to determine the potential for economic growth in East Java Province, especially in Trenggalek Regency, to be used as a driver for economic growth and regional development in East Java Province. The analysis of this research is descriptive quantitative research. The data used in this study are secondary data and time series. Using the Shift Share analysis tool. Based on the average results of the Shift Share (Regional Potential) analysis which encouraged the growth of the Provincial Gross Regional Domestic Product in 2017-2018 in Trenggalek Regency as many as 13 sectors, while in 2018-2019 there were 12 sectors, while the sectors that grew relatively fast (Proportional Shift) at the provincial level in 2017-2018 there were 9 sectors in Trenggalek Regency, while in 2018-2019 there were 10 sectors, and there were 14 Sectors that had a Locational advantage (Differential Shift) in 2017-2018 in Trenggalek Regency, while in 2018-2019 as many as 9 sectors.

Keywords: Gross regional domestic product, shift share

Introduction

Economic development is an effort to improve the standard of living of a nation which is often measured by the level of per capita income. Economic development is a process that includes changes in structures, attitudes to life, institutions, in addition to increasing economic growth, reducing inequality in income distribution, and eradicating poverty (Tridico, 2010). As a result of differences and diversity of natural resource potentials, geographic location, and quality of human resources in various regions of Indonesia, followed by differences in the performance of each region, it has led to inequality in development between regions. Based on Law Number 32 of 2004 concerning Regional Government and Law Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Government, it has changed the existing concepts and regional authority. This law has a substantial meaning in granting regional authority which was initially aimed at the basis of a prominent portion of the central policy in the division of central-regional authority which is then directed towards regional independence in managing its territory including policies in financing.

The logical consequence of this has an impact on regional economic progress, which in turn creates increased regional development by taking into account the potential and regional diversity. Therefore, it has become a demand for regions to be able to develop their potential to increase regional economic growth. There are three main factors or components that influence the economic growth of a region, the three of which are capital accumulation, population growth, and
technological progress (Pelinescu, 2015). Capital accumulation includes all types of new investment, whether made by the government or the private sector, which are invested in land, physical equipment, and capital resources. Capital accumulation will occur when a portion of the income is saved (reinvested) to increase output or income at a later date.

East Java is a strategic region and has a significant economic contribution to the National economy and has become one of the national growth centers which have a relatively similar level of economic growth compared to the national economic growth. Where the average economic growth in East Java during 2013 - 2017 reached 5.98% higher than the national economic growth in the same year which reached 5.09%. If the economic growth is compared according to the northern and southern regions of East Java, it can be seen that the economic growth in the northern region includes: Tuban, Lamongan, Gresik, Surabaya, Sidoarjo, Probolinggo, and Situbondo, which has a greater contribution of growth to the economic growth of East Java when compared to the region. south which includes: Pacitan, Trenggalek, Tulungagung, Blitar, Malang, Lumajang, Jember, and Banyuwangi. BPS data for 2017 shows that the contribution of the northern region to the total GRDP of East Java is 51.22%, Meanwhile, the southern region only contributed 17.2% and the other regions contributed 31.44%.

One of the reasons for this disparity in economic growth is due to the orientation of the development policy of East Java which is still concentrated in the northern region which leads to the formation of a monocentric pattern in the Trenggalek Regency. This has resulted in relatively better economic development in the northern region compared to the southern region. Apart from the existence of a more concentrated policy pattern in the northern region, another thing that causes the northern region’s contribution to economic growth in East Java to be greater than that in the southern region is the better condition of infrastructure (roads, electricity, ports).

The southern region of East Java, of the eight districts that contributed the lowest to East Java’s Gross Regional Domestic Product, is Trenggalek Regency with a GDP contribution of 4.22 percent, Trenggalek Regency is part of the central corridor on the south coast of Java whose territory stretches along the southern coast of Java Island Physical condition and the topography of Trenggalek Regency which consists of mountainous, hilly and coastal areas (sea) holds a lot of potential in several economic sectors. Based on the description of the above problems, it is necessary to calculate or analyze the regional economy using one of the analytical methods, namely shift-share analysis.

**Literature Review**

*Regional economic development*

Economic development is an illustration of the planning that regional governments will undertake to improve the regional economy. This economic development is a development that is continuous and sustainable which includes various existing aspects, both economic and non-economic.

The current development pattern and planning system of a region is based on the potential of the region and the problems that occur in each region. The main difference between the analysis of national economic growth and analysis of regional growth is that what is emphasized in the analysis lately is factor displacement (Stoica et al., 2020).

The transfer of these factors can be in the form of existing labor or capital so that the growth rate between regions will be different. Regional economic development and growth will be faster if it has the advantage of being rich in natural resources and has a comparative advantage if the area is more efficient than other regions in carrying out production and trade activities (Ke et al., 2020).
Regional economic potential

The regional economic sectoral potential is a certain condition in which the regional economy is mapped based on the business sector in Gross Regional Domestic Product with certain advantages in each business sector. According to Ali & Bakar (2018) the main problem in regional development lies in the emphasis on development policies based on the uniqueness of the region concerned by using human resource potential. On the other hand, very important factors are also needed, namely technology and human resources (Pesurnay & Parera, 2018).

According to (Pratiwi & Warnaningtyas, 2017) there are four conditions so that a certain sector becomes a priority sector, namely 1) the sector must produce products that have a large enough demand; 2) because there are changes in technology that are creatively adopted; 3) there must be an increase in investment returns from the production results of the priority sector, and 4) the sector must develop. Measurement of regional potential is carried out using several analytical tools, including Location Quotient (LQ), Shift Share, and Klassen Typology.

Shift share

The process of economic transformation can be different between districts which in turn can change the position of a province in the provincial economy. This difference is due to differences in the provision of raw materials, technology, investment, and human resources. Given these differences, it is known that economic transformation in a region is important, especially for guidance in allocating limited development funds, human resources, technology, and important inputs for production between provinces. In this case, the analysis that is generally used to evaluate structural changes is the Shift-Share analysis (Khusaini, 2015). The Shift Share analysis method can be used to project the economic growth of an area and as an analytical tool in rural development research (Khusaini, 2015).

This analysis technique begins with the calculation of changes in the Gross Regional Domestic Product of a sector in an area between 2 periods, namely:

$$\Delta Q_t^{ij} = Q_t^{ij} - Q_0^{ij}$$  \hspace{1cm} (1)

Where:

$$\Delta Q_t^{ij}$$ = Change in Gross Regional Domestic Product

$$Q_t^{ij}$$ = Gross Regional Domestic Product sector i region j period year t

$$Q_0^{ij}$$ = Gross Regional Domestic Product sector i region j base year period

Research Methods

The research on the investment acceleration strategy of Trenggalek Regency will use two basic research designs, namely Explotary and Descriptive Research, which is carried out in stages. Exploratory Research aims to make research more familiar with the research environment by exploring theories based on available data so that they are more familiar with the research environment by exploring theories based on available data so that a framework of thought can be prepared. Descriptive Research seeks to understand and explain how an event occurs based on a framework that has been arranged so that a conclusion can be drawn.

The type of data used in the activity of the Trenggalek Regency investment acceleration strategy is secondary data. Secondary data is data obtained or collected by researchers from various existing sources. The analysis used includes the following analyzes:

Shift share

This analysis technique is divided into 3 main components, namely regional share, proportional shift, and different shifts, then equation (1) can be expanded into:
\[ \Delta Q_{ij} = Q_{ij}^0 \left( \frac{Y_i}{Y_0} - 1 \right) + Q_{ij}^i \left( \frac{Q_{ij}^i}{Q_{ij}^0} - \frac{Y_i}{Y_0} \right) + Q_{ij}^0 \left( \frac{Q_{ij}^0}{Q_{ij}^0} - \frac{Q_{ij}^i}{Q_{ij}^0} \right) \] 

Equation (2) can be separated into 3 main components that affect regional economic growth:

\[ PR_{ij} = Q_{ij}^0 \left( \frac{Y_i}{Y_0} - 1 \right) \]  \hspace{1cm} (3)

\[ PS_{ij} = Q_{ij}^0 \left( \frac{Q_{ij}^i}{Q_{ij}^0} - \frac{Y_i}{Y_0} \right) \]  \hspace{1cm} (4)

\[ DS_{ij} = Q_{ij}^0 \left( \frac{Q_{ij}^0}{Q_{ij}^0} - \frac{Q_{ij}^i}{Q_{ij}^0} \right) \]  \hspace{1cm} (5)

Where:

- \( Y_t \) = Gross Regional Domestic Product East Java Province, period \( t \)
- \( Y_0 \) = Gross Regional Domestic Product East Java Province in the base year period
- \( Q_{ij}^t \) = Gross Regional Domestic Product East Java Province sector \( i \) in year \( t \)
- \( Q_{ij}^0 \) = Gross Regional Domestic Product East Java Province

From the results of these calculations, it can be interpreted that if:

1) \( PS < 0 \) hence the sector grows relatively slowly at the Trenggalek district level
2) \( PS > 0 \) hence the sector is growing relatively fast in the Trenggalek district level
3) \( DS < 0 \) then the sector has slower growth than the same sector in Kabupaten Trenggalek or in other words the sector does not have a good local advantage
4) \( DS > 0 \) then the sector has a faster growth than the same sector in Southeast Sulawesi or in other words the sector has good local advantages.
5) \( PR < \Delta Q_{ij} \) hence production growth in Trenggalek Regency has an impact that tends to encourage the growth of East Java Province
6) \( PR > \Delta Q_{ij} \) hence the production growth in Trenggalek Regency has an impact that tends to hinder the growth of East Java Province.

Results and Discussion

**Shift share analysis**

In this research, we using HV agar media to isolate Actinomycetes from the termite’s nest sample. Its classify into nutrient-poor The shift-Share analysis also compares the difference in growth rates of various sectors (industries) in regions with national regions. The Shift-Share method details the causes for changes to several variables. This analysis uses the method of isolating various factors that cause changes in the industrial structure of a region in its growth from one period of time to the next. This includes the breakdown of the factors causing the growth of various sectors in a region but about the National economy.

The results of the shift-share analysis are as follows:

1. The sectors that encouraged (PR) in Trenggalek Regency from 2017 - 2019 were 13 sectors, while in 2018-2019 there were 12 sectors, while the sectors that grew relatively fast, while those that had the highest score were the Agriculture, Forestry and Fisheries sectors in 2018 with a value of 168,58. While the lowest value was in the Electricity and Gas Procurement sector in 2017 of 0,26.
2. The relatively fast sectors (PS) in Trenggalek Regency in 2017-2019 were 9 sectors while in 2018-2019 there were 10 sectors while the ones with the biggest negative value were
the Agriculture, Forestry and Fisheries sectors with a value of -232.71 in 2018. Meanwhile, the lowest score with a negative value was -0.07 in 2017 with the Health Services and Social Activities sector. Meanwhile, PS with the largest positive value was in the Manufacturing Industry sector with a value of 35.52 in 2018. And the smallest positive value was in the Corporate Services sector at 0.02 in 2017.

3. Sectors that have local profitability (DS) in Trenggalek Regency in 2017 - 2019 totaled 14 Sectors while in 2018-2019 there were 9 sectors while the one with the largest positive value was the Manufacturing Industry sector in 2018 with a value of 68.41 and a value the lowest was in the Water Supply, Waste Management, Waste, and Recycling sector with a value of 0.04 in 2019. Meanwhile, the negative value with the largest value was in the Mining and Excavation sector with a value of -12.60 in 2017 and the lowest value was in 2017 with a value of -0.02 in the Water Supply, Waste Management, Waste, and Recycling sector.

Conclusion

Based on the formulation of the problem and the results of the discussion described in the previous chapter, several important things can be concluded as follows:


4. Based on the results of the Shift Share analysis, Trenggalek Regency is a competitive sector, both encouraging, growing relatively faster, and having a local advantage over the province, namely the Manufacturing Industry Sector.
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References


