

The Regional Economic Growth: Superior Economic Sector of Pandeglang Regency

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Abstract

The economic growth of Pandeglang Regency is represented on the superior sector. Therefore, it is important for Pandeglang Regency to identify their superior sector which must be suitable for the economic growth in the current situation. Although, nowadays the superior sectors at Pandeglang Regency have identified yet and there is no analysis about whether or not the superior sector could push the stability of economic growth. Referring to this case, this research determined to analyze the superior sectors of Pandeglang Regency which is intended to push the stability of the economic growth regional sector, with the combine of method of Shift-Share Analysis, LQ Analysis, and Klassen Typology analysis. The implication about this study is the regional economic growth can be represented by all activities of sectors basis economic in the region.

Keyword: *Regional economic growth; Superior Sector; Shift Share; Location Quotient; and typology klassen analysis.*

JEL codes: O10; O17; R11

1. Introduction

Economic national growth implemented in Indonesia is purposed to build the stability of society with the other modern nations, so that the people could live their life peacefully, and could create well-being life. The success of national development cannot be separated from the role of government in Indonesia who implements the development, especially in the economy cases.

The ability of region really determines the success of the effort to increase economic growth in case of empowering the existence of natural and human sources. Each effort of economic development in a region aim to increase the amount and kind of job opportunity for society. To gain the goal of this effort, the government with the people's participation could predict the resource potential that needed to design and build the region economy by using the available resources(Arsyad, 1999:109).

Pandeglang is one of the four regencies that exist in Banten Province in Indonesia. The potential of natural resource at Pandeglang regency can be seen from the distribution or supporting of each sector in the development of Gross Regional Domestic Product (GRDP) which focuses on how a sector could allocate the economy in some sectors. The contribution of each sector can be seen in the Table 1 as follow under below:

[insert table 1]

Table 1 describes the economic situation of Pandeglang regency from 2015 until 2019 that are dominated by the agriculture sector followed by Mining and Quarrying sectors, and Wholesale and Retail Trade sector. This situation can be seen from the contribution of each sector on GRDP formation of Pandeglang regency. The contribution of each sector of agriculture to GRDP in 2019 gave 6.307.449 million rupiahs. Wholesale and Retail Trade sector gave contribution of 2.573.387 million rupiahs, and the Mining and Quarrying sectors gave contribution of 1.552.901 million rupiahs.

The economic base theory classified into basic and non-basic economic activities. The Basic Economic activities is an economic activity that can be developed and can be provide a high contribution to regional economic growth that does not depend on local demand. Meanwhile, non-basic economic activities aim to satisfy a local consumption needed. The demand for this sector is strongly influenced by the level of people's income, so that this sector is depending on regional economic conditions and cannot being develop more than just economic development in the region.

Based on these assumptions, the researcher interesting to conduct a basic analysis in terms of projections and studies of regional economic growth through prospective sector economic analysis.

2. Research Method

This study used secondary data from Indonesia Statistic Data (BPS), the data consist of GRDP Pandeglang Regency Data and GRDP Banten Province on period 2015 – 2019. The analysis data used Shift-Share analysis, Location Quotient (LQ) analysis, and Typology Klassen's Analysis.

SHIFT-SHARE ANALYSIS

Shift-Share analysis used to determine the economic structure and economic shifts in regions by comparing the economic sector growth in regions with the same sector at a higher regional or national level. Shift-Share analysis is a technique used to analyze regional industrial statistical data and analyze regional economic activities(Kurniawan, 2017).

Shift-share analysis used to determine the shift in economic sector of a region under study; to analyze the overall economic growth in Pandeglang Regency; to determine the effect of economic growth on an economic sector in Pandeglang Regency; to find out which sectors have added value to PDRB in Pandeglang Regency; and to determine the economic shift in Pandeglang Regency as a result of regional changes.

In this shift-share analysis, it takes GRDP data of the area to be studied (GRDP of Pandeglang Regency) and the GRDP of the reference area (GRDP of Banten Province) with the data from period 2015 - 2019 that used in this study. In the calculation of this shift share analysis, the value sought is the value D_{ij} namely the net shift value, which describes the structural shift economy and the value of D_{ij} is obtained from the sum of N_{ij} , M_{ij} and C_{ij} . The value of N_{ij} is a component of provincial or national

growth, M_{ij} is a component of proportional growth, and C_{ij} is a component of competitive advantage. In order to know the values of N_{ij} , M_{ij} , and C_{ij} , the values of R_{ij} , R_{in} and R_n must be known.

The analysis is formulated into the following formula (Abidin, 2015):

- The real impact of economic growth

$$D_{i,j} = N_{i,j} + M_{i,j} + C_{i,j}$$
- The effect of economic national or provincial growth

$$N_{i,j} = Y_{i,j} \cdot R_n$$
- Proportional shift

$$M_{i,j} = Y_{i,j} (R_{i,n} - R_n)$$
- The effect of comparative advantage

$$C_{i,j} = Y_{i,j} (R_{i,j} - R_{i,n})$$

When R_{ij} , R_{in} , R_n are provincial and regency growth rates respectively, that is defined as follows:

- $R_{i,j} = (Y_{i,j}^* - Y_{i,j})/Y_{i,j}$
- $R_{i,n} = (Y_{i,n}^* - Y_{i,n})/Y_{i,n}$
- $R_n = (Y_n^* - Y_n)/Y_n$

LOCATION QUOTIENT (LQ) ANALYSIS

The Location Quotient (LQ) analysis in this study using the Static Location Quotient (SLQ) and Dynamic Location Quotient (DLQ) analysis to identify which sectors have prospects or economic bases in the Pandeglang Regency, with a comparison between the Provincial Gross Regional Domestic Product (GRDP) and Gross Regional Domestic Product (GRDP) of Pandeglang Regency. In this study, the researcher to investigate which sectors are included in the economic base sector which can be said to be prospective sector.

Static Location Quotient (SLQ) is an index that measures whether a sector is a basic economic sector or not for a region (Siswanto, n.d.). The formulation of SLQ Analysis that used as under as follows (Prishardoyo, 2008) :

$$SLQ = \frac{Y_i}{Y_t} \cdot \frac{Y_t}{Y_i}$$

Criteria :

- if $SLQ > 1$, This sector is a basis economic sector on Pandeglang Regency and this sector is able to be compete with the same sector in other regions.
- if $SLQ < 1$, This sector is non-basis economic sector on Pandeglang Regency and the prospective level is lower than the provincial level.

Dynamic Location Quotient (DLQ) analysis used to identify rate of growth in the gross value of an economic sector over time. The formulation of DLQ Analysis that used as under as follows (Fajar, 2014) :

$$DLQ_{i,j} = \left(\frac{(1+g_{i,j})/(1+g_i)^t}{(1+G_i)/(1+G)} \right)$$

Criteria :

- If $DLQ > 1$, that's mean sector i development in Pandeglang Regency is faster than the same sector at the provincial level
- If $DLQ < 1$, that's mean sector i development in Pandeglang Regency is slower than the same sector at the provincial level

The combination of the results of SLQ analysis and DLQ analysis will produce the following criteria:

[insert table 2]

TYPOLOGY KLASSEN'S ANALYSIS

Klassen Typology analysis used to determine the regional economic growth by looking at the patterns and structures of regional economic growth. The growth characteristics of each economic

sector in Pandeglang Regency can be seen from the economic growth and income of each economic sector.

Sjahfrizal (1997) in quotation by Fajar Dwi Putra et al states that the formula for analyzing Klassen Typology is as follows (Fajar Dwi Putra et al., 2017):

$$R_I = \left(\frac{V_{it} - V_{io}}{V_{io}} \right) \times 100\%$$

$$r = \left(\frac{V_i - V_o}{V_o} \right) \times 100\%$$

According to Klasen's typology, each economic sector in a region can be classified as leading sector, growing sector, prospective sector and underdeveloped sector. This analysis based on the grouping of a sector by looking at the growth and contribution of certain sectors to the total GRDP of a region.

Determination of the category of a sector is based on the growth rate of its sectoral contribution and the average size of its sectoral contribution to GRDP, with a classical typology matrix table below:

[insert table 3]

3. Result and Discussion SHIFT – SHARE ANALYSIS

[insert table 4]

The result of Shift – Share Analysis shows that all sectors have contribution on GRDP region. Based on the table Shift – Share Analysis above, the calculation of the shift share analysis shows that the value of D_{ij} is positive for all sectors, indicating that the real impact of all sectors on the economic growth of Pandeglang Regency is positive on period 2015 - 2019. That's meaning all economic sectors on Pandeglang Regency growth up on period 2015 - 2019. A positive C_{ij} value on the table above has a meaning that the sector has a competitive advantage, while a negative value has a meaning that a sector does not have a competitive advantage. The M_{ij} value on the table above shows that the proportional growth which is positive indicates that the sector's growth is relatively fast and vice versa. Meanwhile, the negative value of M_{ij} indicates that the sector's growth is relatively slow. The N_{ij} value shows the components of provincial or national growth shows positive values, that's meaning the effect of all sectors on the economic national or provincial growth is positive.

LOCATION QUOTIENT (LQ) ANALYSIS

[insert table 5]

The results of SLQ analysis show that an SLQ value of more than 1 is an economic basis sector or superior economic sector, while those less than 1 is a non-basis economic sector. Based on the results of SLQ analysis data, it can be seen the SLQ value is more than 1 ($SLQ > 1$), namely the Agriculture, Forestry, and Fishery sectors; Mining and Quarrying sector; Accommodation Supply sector; Government Administration and Defense sector; and Education Services sector. That's mean these sectors are basic economic sector or superior sectors that has perspective to be developed and has more contribution on GRDP Pandeglang Regency. Then, can be compete with the same sector at the provincial or national levels.

Meanwhile, sectors that are not the leading sectors are the Manufacturing Industry sector; Electricity and Gas Supply sector; Water Supply sector; Construction sector; Wholesale and Retail Trade sector; Transport and Warehousing sector; Information and Communication sector; Financial Services sector; Real Estate sector; Business Services sector; Health and Social Services sector; and Other Services sector. These sectors have not a big contribution on PDRB of Pandeglang Regency.

[insert table 6]

The Result of DLQ Analysis shows that the growth of the economic base sector has been repositioned from time to time so that it can be seen whether its development is constant or changing. Based on the results of DLQ analysis data, it can be seen that the DLQ value is more than 1 ($DLQ > 1$), namely a Manufacturing Industry sectors; Transport and Warehousing sector; Financial Services sector; Business Services sector; and Government Administration and Defence sector. That's meaning these sectors can be develop on Pandeglang Regency to be faster than the same sector at the provincial level. Meanwhile, sectors that have a DLQ value less than the value of number 1 ($DLQ < 1$), namely

Agriculture, Forestry, and Fishery sectors; Mining and Quarrying sector; Electricity and Gas Supply sector; Water Supply sector; Construction sector; Wholesale and Retail Trade sector; Accommodation Supply sector; Information and Communication sector; Real Estate sector; Education Services sector; Health and Social Services sector; and Other Services sector.

[insert table 7]

A combination of SLQ and DLQ analysis shows that the Agriculture, Forestry and Fisheries sectors; Mining and Quarrying Sector; Accommodation Provision Sector; and the Education Services sector is a superior sector that has an advantage of exporting goods and services produced by this sector to other regions.

TYPOLOGY KLASSEN'S ANALYSIS

The results of Typology Klassen's analysis as under as follows:

[insert table 8]

The results of the Klassen Typology analysis can be seen which sectors are included in quadrants I, II, III and IV. The sectors included in Quadrant 1 are sectors that have a greater contribution on GRDP of Regency/city than provinces and have a higher growth rate than provinces. The sectors included in Quadrant 2 are sectors that have a smaller contribution on GRDP of Regency/city than provinces and have a higher growth rate than provinces. The sectors included in Quadrant 3 are sectors that have a greater contribution on GRDP of Regency/city than provinces and have smaller growth rates than provinces. The sectors included in Quadrant 4 are sectors that have a smaller contribution on GRDP of Regency/city than provinces and have smaller growth rates than provinces.

Quadrant 1 is Rapid Growth Region, that sectors can be developed and fast-growing. Quadrant 2 is Growing Region, that's sector can be developed but slow to growth up. Quadrant 3 is Retarde Region, that's sector can be growing-up but retarde. Quadrant 4 is Relatively Backward Region, the sector relatively lagging.

[insert table 9]

4. Conclusion

It can be concluded that when the Shift-Share analysis, LQ analysis, and Klassen typology analysis are combined, the economic basis sectors or a superior sector of Pandeglang Regency are obtained, namely Agriculture, forestry and fishery sectors; Manufacturing Industry Sector; Electricity and Gas Supply sector; Education Service Sector.

The meaning that's the basis economic sector is a sector or economy productive that can be developed as a potential development which becomes the basis for the regional economy compared to other sectors. These sectors are sectors that can serve market share in the region and outside the region, and indirectly Pandeglang Regency has the ability to export goods and services produced by these sectors to other regions.

Abbreviations

- GRDP	: Gross Regional Domestic Product
- LQ	: Location Quotient
- SLQ	: Static Location Quotient
- DLQ	: Dynamic Location Quotient
- D_{ij}	: Net shift value
- N_{ij}	: Component of provincial or national growth
- M_{ij}	: Component of proportional growth
- C_{ij}	: Component of competitive advantage.
- $R_{i,j}$: Regency growth rates
- $R_{i,n}$: Province growth rates
- R_n	: National growth rates
- $Y_{i,j}$: GRDP i sector on Pandeglang Regency
- $Y^*_{i,j}$: GRDP i sector on year period analyze at Pandeglang Regency
- $Y^*_{i,n}$: GRDP i sector on year period analyze at Banten Province
- Y^*_n	: GRDP i sector on year period analyze at National area
- γ_i	: GRDP of Pandeglang Regency
- γ_t	: GRDP total of Pandeglang Regency
- γ_j	: GRDP of Banten Province
- γ_t	: GRDP total of Banten Province
- g_{ij}	: GRDP of Pandeglang Regency
- g_i	: GRDP total of Pandeglang Regency
- G_i	: GRDP of Banten Province

-	G	: GRDP total of Banten Province
-	R_t	: Pandeglang Regency Economic Growth Rate
-	r	: Banten Province Economic Growth Rate
-	V_{it}	: GRDP sector i end year on Pandeglang Regency
-	V_{io}	: GRDP sector i first year on Pandeglang Regency
-	V_i	: GRDP sector i end year on Banten Province
-	V_o	: GRDP sector i first year on Banten Province

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Authors' contributions

The first author visualized the concept of this research, prepared data, and prepared this paper. The second author did the processing data. The third author review all concept, translating manuscript, and to be a corresponding for submit paper. The fourth author doing analyze. All authors read and approved the final manuscript.

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Competing interests

The authors declare that there are no competing interests

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