Analysis of Changes in Economic Structure and Determination of Potential Sectors of District Mojokerto

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A B S T R A C T

The sustainable development is the main objective of region government to do the authority in each region. Within the region development, it needs the existence which is done well in order to smooth that development. In order to reach the development objective which is planned, so that, it needs the existence of synchronization from all sectors which is exist in that region. This research is used to determine the sector which becomes priority in development which is useful to give information and consideration matter in determining policy and development strategy. Analysis instrument which is used are shift share, LQ and MRP, to find out the change of economic structure, base sector and potential sector in Mojokerto regency, by using the data gross domestic regional product Mojokerto Regency and East Java Province in year 2015-2019. From the result of the shift share analysis, there is economic structure change from primary sector to tertiary with sector, which is the basis sector are agriculture sector and industry from LQ analysis. Afterward, from three analysis methods, the potential sector is agriculture sector

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INTRODUCTION

The regional economy is a measure of regional economic performance which includes the creation of added value, capital accumulation, consumption levels, sectoral performance of the economy, and the level of the cost of living. In planning an area must have the ability to analyze the economic potential of the region because it is related to determining what real sectors need to be developed. This is done so that the regional economy can grow rapidly and then be able to identify the factors that cause the potential of the existing sector to be low and can determine how to overcome these weaknesses. This discussion, which focuses on the potential of the economic sector, is because each existing economic sector will have an impact on other economic sectors. For example in the agricultural sector, the distribution process will require transportation services. This proves that every economic sector has an impact on one another.

After the existence of regional autonomy, each region has become freer in determining which sectors are prioritized for their development. This is because basically the potential of each region is different from other regions, so that in determining government policy, it must be really careful in analyzing the potential sectors that are beneficial for regional development. Because of its strategic location and good potential of the economic sector, the economic growth of Mojokerto Regency should be better than the surrounding areas. Based on the existing potential, to increase the economic growth of Mojokerto Regency, all economic aspects, especially the economic sector, need to be developed so that they can contribute to the PDRB of Mojokerto Regency. Of all the sectors owned by Mojokerto Regency, it is necessary to know which sector is the sector that has the most potential to contribute its role in the PDRB of Mojokerto Regency and how the government can maximize the ex-

istence of this potential in order to achieve better development for Mojokerto Regency so that development is not only felt by the people of Mojokerto Regency itself but also useful for supporting economic growth in the surrounding area.

The theory of structural change focuses on the discussion of the economic transformation mechanisms experienced by developing countries and is subsistence in nature which focuses on the agricultural sector to the structure of the modern economy (Todaro in Kuncoro, 2003: 59). According to Chenery and Syrquin, development can be viewed as a multidimensional transition process that reflects the relationship between various processes of change within a country. The multidimensional change process is characterized by a structural change process. Structural changes are marked by the economic structure which is reflected by changes in sectoral contributions in national income (Arsyad, 2010: 12-17). Therefore, changes in the contribution of each sector can help in identifying structural changes that have occurred in an area.

Leading/potential sectors are sectors, one of which is influenced by the existence of endowment factors. Furthermore, this factor developed further through investment activities and became the basis of economic activity. The criteria for the leading sector will vary widely. This is based on how big the role of the sector is in the regional economy, including: first, the leading sector has a high growth rate; second, the sector has a relatively large labor absorption rate; third, the sector has high inter-sectoral linkages both forward and backward; fourth, it can also be interpreted as a sector capable of creating high added value (Sambodo in Sondari, 2007).

The regional economy can be divided into two sectors of activity, namely the basic and non-basic sectors. Event base (*basic activity*) is an activity that is exporting goods and services to the place

beyond the boundaries of the relevant public economic or market their goods and services to people who come from outside the borders of the economy of the community. Activity is not base (*non basic activity*) is the activity that provides goods needed by the people who reside within the boundaries of society's economy is concerned. These activities do not export finished goods, their scope of production and their market are mainly local in nature.

Based on this description, the objectives of this study are: (1) To calculate and analyze the changes that occurred in the economic structure of Mojokerto Regency in 2015-2019, (2) To identify and analyze the basic and non-basic sectors in the economy. in Mojokerto Regency in 2015-2019, (3) To find out and analyze sectors that have the potential to be prioritized to be developed in increasing economic growth in Mojokerto Regency in 2015-2019.

METHODOLOGY

This study conducted observations on the growth patterns and contributions of economic sectors in Mojokerto Regency . The data used are secondary data, namely from the PDRB data of Mojokerto Regency in 2015-2019 and the PDRB data of East Java Province for 2015-2019 .This study uses several analytical methods in answering the objectives to be achieved. The

analysis tools include: Location Quotient Analysis (LQ), Shift Share Analysis and Growth Ratio Model Analysis (MRP).

If the calculation results show LQ> 1, it means that it is the base sector and has the potential for export, while LQ <1 means it is not the base sector (local / import sector).

MRP analysis is an analysis tool to see the description of potential economic activities or sectors based on the growth criteria of the regional economic structure. The MRP analysis approach is divided into two ratios, namely: RPR (Reference Area Growth Ratio) and RPS (Study Area Growth Ratio). RPR is a comparison between the growth rate of activity i revenue in the reference area with the growth rate of the total activity of the reference area. The RPS is a comparison between the activity growth rate x the study area and the activity growth rate x the reference area.

RESULTS AND DISCUSSION

Table 2 shows that the results of the calculation of Shift Share during the 2015-2019 period in total have a positive value. In the Regional Shift component, all sectors have positive values. This shows that economic growth in East Java Province has an influence on all sectors. The economic growth of East Java Province has a positive role in the growth of sectors in Mojokerto Regency.

Table 1.
Possibilities of the Allocation Effects

code	criteria	A_{ij} Alocation Effect	Component	
			$Y_{ij} - Y'_{ij}$	$r_{ij} - r_{in}$
01	*Competitive disadvantage, spesialized*	Negatif	Positif	Negatif
02	*Competitive disadvantage, not spesialized*	Positif	Negatif	Negatif
03	*Competitive advantage, not spesialized*	Negatif	Negatif	Positif
04	*Competitive advantage, spesialized*	Positif	Positif	Positif

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Table 2.
Results of Shift Share Analysis for Mojokerto Regency in 2015-2019

Business field	RS	PS	DS	Y = RS + DS
Agriculture	458.546,41	-250.898,44	346.167,87	553.815,8
Mining and excavation	41.405,86	16.962,15	-55.525,32	2.842,69
Processing industry	980.400,37	-298.554,33	-405.793,79	276.052,2
Electricity, Gas and Clean Water	22.033,66	637,14	-8.434,74	14.236,0(
Building and Construction	31.680,16	-8.057,71	8.829,26	32.451,7
Trade, Hotel and Restaurant	531.736,87	231.928,85	-130.957,45	632.708,2
Transportation and Communication	77.314,20	61.459,25	-65.052,15	73.721,3(
Finance, Leasing, and Corporate Services	34.738,82	8.039,55	-6.059,52	36.718,8!
rendering services	148.218,45	-19.614,19	65.060,56	193.664,8

Source: Source: BPS Mojokerto Regency (processed)

Next is the Proportional Shift component of Mojokerto Regency during 2015-2019. A positive PS value means that the economy of Mojokerto Regency specializes in the same sector which is growing fast in the economy of East Java Province. Meanwhile, if the PS value is negative, then the economy of Mojokerto Regency specializes in the same sector and grows slowly in the economy of East Java Province.

Sectors that have a positive proportional shift component value are the mining and quarrying sector; electricity, gas and clean water; trade, hotel and restaurant; transportation and communication; finance, leasing and corporate services. Then the sectors that have a negative PS value are the agricultural sector, manufacturing industry, services.

The value of the Differential Shift component in Mojokerto Regency in 2015-2019 has positive and negative values. A positive DS value means that the sector in Mojokerto Regency has good competitiveness to be developed compared to other areas in East Java Province in the same sector. Conversely, if the DS value, the sector has less competitiveness.

In Mojokerto Regency, the sectors that have a positive Differential Shift value are the agricultural sector; buildings and constructions; and services, so these three sectors are good to be developed because they have strong competitiveness. Then the sectors that have a negative DS value are the mining and quarrying sector; processing industry; electricity, gas and clean water; trade, hotel and restaurant; transportation and communication; as well as finance, leasing and corporate services.

Furthermore, in the analysis based on the contribution of each sector in Mojokerto Regency, it can be seen that there has been a shift in the economic structure of the sectors in Mojokerto Regency in 2015-2019. The contribution of the primary and tertiary sectors has increased from year to year. This increase can be seen in Table 4.8 on page 56.

The contribution of the primary sector in 2015 is 21.49 percent, increasing to 23.46 percent in 2019. The increase in the primary sector was supported by an increase in the contribution of the agricultural sector. This is due to an increase in rice agricultural yields which have continuously increased. The second largest production

Table 3.
Contribution of Mojokerto Regency GRDP Sector in 2015-2019 (%)

Sector	2015	2016	2017	2018	2019
Primary					
Agriculture	22,49	22,51	22,43	22,49	22,03
Mining and excavation	1,35	1,38	1,42	1,44	1,43
amount	23,84	23,89	23,85	23,92	23,46
Secondary					
Processing industry	38,30	37,52	36 ,86	36,37	36,36
Electricity, Gas and Clean Water	0,92	0,93	0 ,93	0,92	0,91
Building and Construction	1,32	1,33	1,37	1,38	1,45
amount	40,55	39,78	39,15	38,67	38,73
Tertiary					
Trade, Hotel and Restaurant	23,77	24,33	24,84	25,13	25,43
Transportation and Communication	3,11	3,16	3,27	3,35	3,48
Finance, Leasing, and Corporate Services	1,47	1,51	1,55	1,57	1,61
rendering services	7,27	7,33	7,34	7,35	7,29
amount	35,62	36,33	37,00	37,40	37,81
Total	100.00	100	100	100	100

Source: Source: BPS Mojokerto Regency (processed)

after rice is maize, which is the main palawija commodity in terms of its exploitation and use aspects (food and feed raw materials).

The contribution of the tertiary sector has increased from 2015-2019. The contribution in 2015 was 34.05, increasing to 37.81 in 2019 . This can be seen from the contribution of the tertiary sector which increases every year. The trade, hotel and restaurant sector has the largest contribution in the tertiary sector. This is due to the sharp increase in the performance of this sector which is supported by a significant growth in the wholesale and retail subsector of up to 8.24 percent, the Hotel subsector which reached 14.94 percent and the Restaurant sub-sector by 8.49 percent during 201 9 (BPS, 2012). With the proliferation of wholesale / distributor, retail and salayan / convenience store businesses in the Mojokerto Regency, the growth rate of the Trade sub-sector has increased sharply Trade outside the Mojokerto Regency and abroad has also increased in volume.

The contribution of the secondary sector has decreased in 2015-2019 . The contribution of the secondary sector in 20 15 was 44.6 percent and in 201 9 it became 38.73 percent. This decline was caused by a decrease in the contribution of the manufacturing sector in 20 15 by 42.15 percent, which decreased in 201 5 to 36.36 percent. One of the causes is the global economic crisis which affected the amount of export output.

Of the nine existing sectors, the largest contribution is from the manufacturing sector. From the data on the contribution of GRDP for each sector in Mojokerto Regency, there is a change in the economic structure from the primary to the tertiary sector on the basis of a decrease in the contribution of the industrial sector and an increase in the contribution of the tertiary sector.

Table 4.
Average LQ Value of Mojokerto Regency in 2015-2019

Business field	LQ Average	Information
Agriculture	1.41	base
Mining and excavation	0.68	non basis
Processing industry	1.45	base
Electricity. Gas and Clean Water	0.68	non basis
Building And Construction	0.42	non basis
Trading. Hotel. and Restaurant	0.81	non basis
Transportation and Communication	0.48	non basis
Finance. Rental. And Company Services	0.28	non basis
Services	0.79	non basis

Source: Source: BPS Mojokerto Regency (processed)

From the average LQ calculation results from 20 15 to 201 9 it can be concluded that there are two basic sectors in Mojokerto Regency. These sectors are the Agriculture and Manufacturing Industry sectors. The average LQ result for the agricultural sector is 1.41 and the manufacturing sector is 1.45. Then in addition to the agricultural and manufacturing sectors, the average LQ value shows a value of <1 which indicates that this sector is a non-basic sector in Mojokerto Regency.

The mining and quarrying sector at the level of East Java Province has a prominent growth with a value of RPr of 1.41. However, in Mojokerto Regency, this sector has less prominent growth compared to other regions in East Java Province with a RPs value of 0.07. So that the mining and excavation sector has less potential in the Mojokerto Regency area.

Then for the manufacturing sector, both at the level of East Java Province and Mojokerto Regency have low growth. This sector has a value of RPr = 0.7 and Rps = 0.28.

The electricity, gas and clean water sector is not a potential sector in terms of growth. The electricity, gas and clean water sector has a prominent growth in East Java Province with a RPr value of 1.03, however in Mojokerto Regency it is not prominent with a RPs value of 0.65. So that this sector has less potential to be developed in Mojokerto Regency.

Furthermore, the building and construction sector is a potential sector in Mojokerto Regency. This sector has a positive RPs value (1.02) compared to a negative RPr value (0.75). This shows that in Mojokerto the building and construction sector has a better and more prominent growth compared to other regions in East Java Province. So that this sector is good for development in Mojokerto Regency.

In contrast to the trade, hotel and restaurant sectors, growth at the provincial and Mojokerto district levels are both prominent. The value of growth in the East Java region is 1.44 and in the Mojokerto Regency area of 1.19, so it is called the dominant growth.

The growth of the transportation and communication sector in Mojokerto Regency is prominent at the provincial level with a value of RPr of 1.80. However, it is different from the negative RPs value, which is 0.95. This means that the transportation and communication sector is not a potential sector to be developed in Mojokerto Regency.

The financial, leasing and corporate services sector has prominently grown at both regional levels as well as the trade,

Table 5.
Results of the Analysis of the Growth Ratio Model for Mojokerto Regency in 2015-2019

Business field	RPr	Score	RPs	Score
Agriculture	0.45	-	1.21	+
Mining and excavation	1.41	+	0.07	-
Processing industry	0.70	-	0.28	-
Electricity, Gas and Clean Water	1.03	+	0.65	-
Building And Construction	0.75	-	1.02	+
Trade, Hotel and Restaurant	1.44	+	1.19	+
Transportation and Communication	1.80	+	0.95	-
Finance, Leasing, and Corporate Services	1.23	+	1.06	+
Services	0.87	-	1.31	+

Source: Source: BPS Mojokerto Regency (processed)

hotel and restaurant sector. The financial, leasing and corporate services sector has a value of RPr 1.23 and a value of RPs 1.06, both of which have positive values. So that this sector is called the dominant growth.

The latter is the services sector which has a positive RPs value of 1.31 and a negative RPr value of 0.87. This means that at the provincial level, the growth of this sector is less prominent than that in Mojokerto Regency. So that this sector is a potential sector in Mojokerto Regency.

Based on the data displayed and the analysis above, in the MRP analysis, which is a potential sector in Mojokerto Regency, it is the agricultural sector, the building and construction sector and the services sector. These sectors are good for development in Mojokerto Regency.

CONCLUSIONS

There was a change in the structure of the economy in Mojokerto Regency. From the calculation of Shift Share and the contribution of each sector, it can be concluded that the economic structure of Mojokerto Regency has shifted from the primary sector to the tertiary sector. This is shown by the decline in growth of the secondary sector (especially the industrial sector) every year accompanied by growth and increased contribution of the tertiary sector in Mojokerto Regency.

The sector which is the base sector according to the calculation of LQ, in Mojokerto Regency is the agricultural sector and the processing industry with an LQ value> 1.This sector has the advantage to be developed in Mojokerto Regency because the results of activities in the agricultural sector and processing industry can meet the needs in the Mojokerto Regency and also the surrounding area.

Based on the results of the three Shift Share, LQ and MRP analyzes presented in the appendix, the sector that is most superior and has the potential to be developed so that it can be prioritized in planning and development in Mojokerto Regency is the agricultural sector because this sector as a whole has the best analysis results so that it is superior. compared to other sectors. From the analysis, the agricultural sector is a basic sector that supports the economy of Mojokerto Regency, then has good competitiveness with other regions, and is a potential sector to be developed.

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