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LOCATION QUOTIENT ANALYSIS IN DETERMINING BASE AND NON-BASIC SECTORS IN EAST JAVA PROVINCE

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ABSTRACT

One of the important factors in improving people's welfare is through the creation of an investment climate that is easy, fast and conducive. There are two positive impacts that can be enjoyed by the regions, when investment is growing fast and conducive. First, investment will be followed by other economic activities through the opening of new jobs so that people's income will automatically increase and will be followed by massive regional economic growth. Second, investment also provides opportunities for potential economic resources to be processed into renewable economic power in the real sector, which will ultimately lead to economic growth to increase people's welfare and reduce poverty. For this reason, it is necessary to identify the basic sectors and sub-sectors which are one of the stages in planning the expansion of strategic areas as centers of new economic growth. Therefore, Location Quotient Analysis is needed to determine the level of specialization of the economic sector in a particular area in utilizing its base sector or superior sector. The basic sector can be determined using the Location Quotient (LQ) method. The variable used to calculate the economic basis is the GRDP of an activity that is focused on activities within the local economic structure. Gross Domestic Product (GDP) is an important indicator to determine the economic condition of East Java Province in a certain period, both based on current prices and constant prices. The data collection process was carried out using a secondary data survey based on documents from the East Java Province and National BPS. from 2021 to 2022 per Quarter, the manufacturing sector, electricity and gas procurement, wholesale and retail trade, car and motorcycle repair, provision of food and drink accommodation, and the information and communication sector will be a stable basis in terms of increasing LQ scores and its GDP in a period of analysis. It is possible that these sectors have contributed to the increase in GRDP of East Java Province including all other sectors which are also the basis such as the Mining and Quarrying sector, the agricultural sector and others.

***Keywords**: Sector Base, Location Quotient, GRDP, East Java Province*

A. INTRODUCTION

Gross Regional Domestic Product (GRDP) is one of the economic data sets that can be used to evaluate the economic development performance of a region in a certain period, either at current prices or at constant prices. GRDP is basically the total added value generated by all business units in a certain area, or the total value of final goods and services produced by all economic units in a certain area. GRDP value can represent the economic growth of a region. As one example in this discussion, a calculation and analysis of the GRDP of East Java Province is carried out from 2021 to 2022 per quarter which has increased in each quarter. An increase in the GRDP value of East Java Province indicates that there is an increase in economic growth.

Economic growth will always be an important part that cannot be separated from achieving economic development. For this reason, it is necessary to analyze the areas that are the mainstay of the leading sectors in driving economic growth in East Java Province. It is expected that economic development planning can be realized in a structured manner based on

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sectoral potential.

If viewed from the regional GRDP sector value. Demographics and geography of the agricultural sector have a big role in increasing the PDRB of East Java Province. However, it is not yet certain that the agricultural sector is the basis of the East Java Province, because comparisons with a wider area are needed. In this case, the National GDP is a comparison for the value of the East Java GRDP sector. Calculation of the Location Quotient (LQ) value is needed to find out the base and non-base sectors owned by East Java Province.

B. LITERATURE REVIEW

Location Quotient

Location quotient (LQ) analysis is an analysis used to determine the degree of specialization of economic sectors in an area that utilizes the base or leading sectors. The location quotient calculates the ratio of the output share of the sector in the city or district and the share out of the sector in the province. The leading sector here means the business sector which will not run out if exploited by the regional government. According to Hood (1998 in Hendayana 2003), states that the location quotient is a simpler economic development tool with all its advantages and limitations.

The LQ technique is one of the approaches commonly used in basic economic models as a first step to understanding the activity sectors that are driving growth. LQ measures the relative concentration or degree of specialization of economic activity through a comparative approach. The LQ technique is widely used to discuss economic conditions, leading to the identification of specialization of economic activity or measuring the relative concentration of economic activity to obtain an overview in determining the leading sector as the leading sector of an industrial economic activity. The basis of the discussion is often focused on aspects of labor and income.

LQ technique has not been able to provide a final conclusion from the sectors identified as strategic sectors. However, for the first stage it is sufficient to provide an overview of the capabilities of a region in the identified sector. The mathematical formula used to compare the capabilities of the sectors of the region is (Daryanto and Hafizrianda, 2010:21):

Work Force Approach

$$LQ = \frac{Li / Lt}{Ni / Nt}$$

Value added / revenue approach

$$LQ = \frac{Vi / Vt}{Yi / Yt}$$

Location Quotient Analysis

Where :

Li = total workforce in sector i at the lower regional level

Lt = total workforce at the lower regional level

Ni = total workforce in sector i at the higher regional level

Nt = total workforce at the higher regional level

Vi = GRDP value of sector i at the lower regional level

Vt = total GRDP at the lower regional level

Yi = GRDP value of sector i at the higher region level

Yt = Total GRDP at the higher regional level

If the calculation results in the above formulation produce:

1. LQ > 1 means that the commodity is the basis or source of growth. Commodities have a comparative advantage, the result of which is not only able to meet the needs in the region concerned but can also be exported outside the region.
2. LQ = 1, the commodity is classified as non-base, not having a comparative advantage. Its production is only sufficient to meet the needs of its own region and cannot be exported.
3. LQ < 1 this commodity also includes non-basic. Commodity production in a region cannot meet its own needs, so it needs supplies or imports from outside.

Each analytical method has its advantages and limitations, as is the case with the LQ method. The advantages of the LQ method in identifying superior commodities include:

1. LQ is an analytical tool that is used easily and simply, and is fast to use.
2. LQ can be used as an initial analysis for a region, then it can be followed up with other analysis tools.
3. Changes in the level of specialization of each sector can also be known by comparing LQ from year to year.
4. Its application does not require complicated data processing programs. Completion of the analysis is sufficient with a spread sheet from Excel or the Lotus program if the data is not too much.

In terms of its limitations, the LQ method is limited in:

1. Due to the simplicity of the LQ approach, what is required is data accuracy. No matter
2. how good the processed LQ results are, there will not be much benefit if the data used is not valid
3. Collecting very valid data is very difficult to do in the field, making it difficult to collect data.
4. Delineation of the study area. To define the boundaries of the area under study and the scope of activity, references are often unclear. As a result, the results of calculating LQ are sometimes strange, not the same as what we expect.
5. Please note that the value of LQ is influenced by various factors. The value of the calculated results is biased, because of the level of disaggregation of specialization variables, the selection of reference variables, the selection of entities to be compared, the selection of years and the quality of the data.

Commodities that produce LQ values > 1 are normative standards to be designated as superior commodities. However, when there are many commodities in an area that produce LQ > 1, while only one is sought, the commodity that has the highest LQ should be selected. Because the higher the LQ value in an area indicates the higher the potential superiority of the commodity. Thus, the LQ or location quotient analysis method can be used easily and efficiently if you want to calculate the leading sector of a place. Deficiencies encountered in the field can be reduced by being careful and diligent in collecting data. The results obtained then are accuracy and superior sectors that can be empowered and developed by all the people of a certain area.

Based on GRDP data, sectoral contributions and economic growth rates in East Java Province and also nationally, calculations can be carried out using the Location Quotient (LQ) method to find the comparative advantage that East Java Province has against the National by identifying base and non-base sectors. The data used is data at constant prices with the aim of

observing real economic developments whose growth is not affected by changes in prices or inflation/deflation. The sectors included in the base sector show that the sector has a comparative advantage. With an increase in the number of base activities in a region, the flow of income into the region (monetary inflow) will increase due to export activities. Conversely, non-base activities cause an outflow of income from the region to other regions (monetary outflow) due to the region concerned importing a shortage of demand in that sector to meet the needs in the region.

Base and Non-Base Sectors

According to Arsyad (2002) economic basis theory states that the main determinant of economic growth in a region is directly related to the demand for goods and services from outside the region. Basic economic theory essentially distinguishes between base sector activities and non-base sector activities. Base sector activity is the growth of the sector determines the overall development of the area, while non-base sector activity is a secondary sector (city polowing) means that it depends on the development that occurs from the overall development.

Economic basis theory seeks to find and recognize the base activities of an area, then predict these activities and analyze the additional impact of these export activities. The key concept of economic basis theory is that export activity is an engine of growth. Whether or not a region grows is determined by how the region performs against demand for goods and services from outside.

Furthermore, in the analysis of economic basis theory, this theory can be used to determine potential sectors and sub-sectors in Gorontalo Regency based on the Gross Regional Domestic Product (GRDP). If the potential sector can be well developed, of course, it will have a significant influence on the economic growth of a region, which in turn can optimally increase regional income. According to this theory, an area can be distinguished into reliable and non-reliable areas, which are further modified into potential economic sectors/sub-sectors and non-potential economic sectors/sub-sectors.

C. RESEARCH METHODS

The data collection process was carried out using a survey based on secondary data. Secondary data collection comes from documents owned by the Central Bureau of Statistics of East Java Province and the Central Bureau of National Statistics. The analysis technique used in this research is to identify leading sectors and sub-sectors in East Java Province with LQ analysis. The input data used in the calculation is the production value of each sector and sub-sector in East Java Province and the National based on the value of total sector and sub-sector income.

D. RESEARCH RESULTS AND DISCUSSION

To identify a potential and non-potential economic sector/sub-sector, analytical tools are used *Location Quotient* (LQ). Arsyad (2002) explains that technique*Location Quotient* can divide the economic activity of a region into two groups, namely:

1. Activities in the economic sector that serve markets in the area itself and outside the area concerned. Such an economic sector is called a potential (base) economic sector.
2. The economic sector activities that serve the market in the area are called non-potential (non-base) or sectors*local industry*.

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This theory states that the main determinant of economic growth in a region is directly related to the demand for goods and services from outside the region. The growth of industries that use local resources, including labor and raw materials for export, will generate regional wealth and job creation (job creation) (Arsyad, 1999).

The following are data on GRDP (Gross Regional Domestic Product) from East Java Province and GDP as a comparison for location quotient analysis. The following is:

Table 1. Gross Regional Domestic Product at Constant Prices by Business Field in East Java Province 2021 to 2022 per Quarter (Billion Rupiah)

NU	Business Field	Year 2021 (Quarter)				Year 2022 (Quarter)			
		I	II	III	IV	I	II	III	IV
A	Agriculture, Forestry, Fisheries	39 107,09	46.326,92	47.717,25	36.502,89	41.213,27	47.033,73	48.479,58	
B	Mining and Excavation	20 089,62	19.697,26	18.651,59	18.752,59	17.971,84	17.951,07	17.771,49	
C	Processing Industry	124 028,39	122.895,01	127.591,98	130.405,66	132.616,24	132.683,48	134.787,44	
D	Supplay of Electricity and Gas	1 140,25	1.146,55	1.192,36	1.231,90	1.223,10	1.256,42	1.280,14	
E	Water Procurement, Waste Management, Waste and Recycling	430,03	436,44	444,38	450,15	436	450,12	458,84	
F	Constructian	36 845,30	35.753,26	39.272,86	40.546,48	38.289,41	38.622,48	41.706,37	
G	Wholesale and Retail Trade, Car and Motorcycle Repair	76 259,75	76.671,62	78.268,49	81.079,88	81.330,02	82.069,21	84642,98	
H	Transportation and Warehousing	10 375,48	10.642,15	10.342,38	12.625,90	12.510,19	13.241,84	13.512,28	
I	Provision of Accommodation and Food and Drink	21 219,92	21.327,01	20.941,80	22.589,64	22.491,54	23.155,73	23.728,44	
J	Information and Communication	27 389,70	28.333,48	29.127,60	29.136,16	29.205,49	29.752,92	29.761,44	
K	Finacial and Insurance Service	10 457,64	10.533,84	10.546,64	10.606,93	10.696,51	11.006,96	10.601,43	
L	Real Estate	7 533,97	7.544,59	7.569,23	7.593,50	7.751,77	7.914,26	7.970,45	
M, N	Company Service	3 075,51	3.092,60	3.103,63	3.194,66	3.214,16	3.258,66	3.263,44	
O	Government Administration, Defense and Compulsory Social Security	8 347,92	9.272,04	8.495,81	8.832,77	8.409,41	8.730,83	8.612,20	
P	Education Service	11 580,68	11.478,05	11.275,00	12.101,35	11.487,52	11.464,82	11.492,10	
Q	Health Services and Social Activities	3 120,34	3.111,20	3.373,33	3.247,44	3.248,31	3.283,31	3.353,76	
R, S, T, U	Outher Servive	5 433,16	5.444,34	5.122,83	5.566,76	5.722,05	6.155,71	6.118,22	
PDRB		**406 434,74**	**413.706,36**	**423.037,15**	**424.464,67**	**427.816,83**	**438.031,55**	**447.540,6**	

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Table 1. The following is a Table of National Gross Domestic Product from 2021 to 2022 per Quarter (Trillion Rupiah)

NU	Business Field	Year 2021 (Quarter)				Year 2022 (Quarter)			
		I	II	III	IV	I	II	III	IV
A	Agriculture, Forestry, Fisheries\	331,9	376,2	383,5	309,30	337,40	382	390,4	
B	Mining and Excavation	196,7	203,4	211,9	210,10	204,20	211,5	218,7	
C	Processing Industry	558,9	564,9	578,2	582,90	587,30	587,5	606,1	
D	Supplay of Electricity and Gas	28,2	27,9	28,7	30,10	30,20	30,5	31	
e	Water Procurement, Waste Management, Waste and Recycling	2,4	2,5	2,5	2,5	2,5	2,6	2,6	
F	Constructian	271,5	264,7	278,2	288,1	284,6	267,4	280	
G	Wholesale and Retail Trade, Car and Motorcycle Repair	351,6	363,4	369	367	371,3	379,4	388,3	
H	Transportation and Warehousing	97,3	99,2	97,8	111,8	112,7	120,3	123,1	
I	Provision of Accommodation and Food and Drink	76,8	78,3	73,8	82	81,8	85,8	86,9	
J	Information and Communication	169,6	172,4	175,6	178,7	181,7	186,3	187,8	
K	Finacial and Insurance Service	117,1	117,3	115,9	114,3	119,1	119,1	116,9	
L	Real Estate	81,6	82,9	84,2	84,7	84,7	84,7	84,7	
M, N	Company Service	49,2	49,4	48,2	50,3	52,1	53,4	53,4	
O	Government Administration, Defense and Compulsory Social Security	87,8	96,5	80,5	98,4	87,1	95,4	90,5	
P	Education Service	82,6	88,1	84,2	95,6	81,2	87,3	87,9	
Q	Health Services and Social Activities	35,1	36,2	42,1	43,8	36,5	38,6	41,3	
R, S, T, U	Outher Servive	49,7	49,8	49,2	52,1	53,8	54,4	53,7	
PDNB		**2 683,1**	**2 772,8**	**2.815,9**	**2.845,9**	**2.818,6**	**2.924**	**2.976,8**	

The calculation of LQ for each economic sector in East Java Province for a period of 2 (two) years per Quarter (2021-2022) is as follows:

1. Agriculture, Forestry, Fisheries

2021 (Quarter)				**2022 (Quarter)**		
I	**II**	**III**	**IV**	**I**	**II**	**III**
39 107,09 / 406 434,74	**46326,92 / 413706,36**	**47717,25 / 423037,15**	**36502,89 / 424464,67**	**41213,27 / 427816,83**	**47033,73 / 438031,55**	**48479,58 / 447540,60**
331,9 / 2 683,1	**376,2 / 2 772,8**	**383,5 / 2815,9**	**309,3 / 2845,9**	**337,4 / 2818,6**	**382 / 2924**	**390,4 / 2976,8**
= 0,78	**= 0,82**	**= 0,82**	**= 0.45**	**= 0,80**	**= 0,82**	**= 0,82**

The Agriculture, Forestry and Fisheries Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years per quarter show a value of <1.

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2. Mining and Excavation

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
20 089,62 / 406 434,74 196,7 / 2 683,1 = 0,60	19697,26 / 413706,36 203,4 / 2 772,8 = 0,71	18651,59 / 423037,15 211,9 / 2815,9 = 0,57	18752,59 / 424464,67 210,10 / 2845,9 = 0.61	17971,84 / 427816,83 204,10 / 2818,6 = 0,58	17951,07 / 438031,55 211,5 / 2924 = 0,50	17771,49 / 447540,60 218,7 / 2976,8 = 0,53

The Mining and Quarrying Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years per quarter show results of <1.

3. Processing Industry

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
124 028,39 / 406 434,74 558,9 / 2 683,1 = 3,00	122895,01 / 413706,36 564,9 / 2 772,8 = 1,45	127591,98 / 423037,15 578,2 / 2815,9 = 1,50	130405,66 / 424464,67 582,90 / 2845,9 = 1.50	132616,24 / 427816,83 587,30 / 2818,6 = 1,50	132683,48 / 438031,55 587,5 / 2924 = 1,50	134787,44 / 447540,60 606,1 / 2976,8 = 1,50

The Manufacturing Industry Sector is the basis sector because the results of LQ calculations for the last 2 (two) years per quarter show results > 1.5, specifically for Quarter I 2021 results > 3.

4. Supplay of Electricity and Gas

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
1 140,25 / 406 434,74 28,2 / 2 683,1 = 2,00	1146,55 / 413706,36 27,9 / 2 772,8 = 2,00	1192,36 / 423037,15 28,7 / 2815,9 = 2,00	1231,9 / 424464,67 30,1 / 2845,9 = 2,90	1223,10 / 427816,83 30,2 / 2818,6 = 2,00	1256,42 / 438031,55 30,5 / 2924 = 2,80	1280,14 / 447540,60 30,0 / 2976,8 = 2,80

The Electricity and Gas Procurement Sector is the basis sector because the results of LQ calculations for the last 2 (two) years per quarter show results of > 2.

5. Water Procurement, Waste Management, Waste and Recycling

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
430,03 / 406 434,74 24,0 / 2 683,1 = 0,11	436,40 / 413706,36 25,0 / 2 772,8 = 0,11	444,38 / 423037,15 25,0 / 2815,9 = 0,11	450,15 / 424464,67 25,0 / 2845,9 = 0,11	436,00 / 427816,83 25,0 / 2818,6 = 0,11	450,12 / 438031,55 26,0 / 2924 = 0,11	458,84 / 447540,60 26,0 / 2976,8 = 0,11

The Water Supply, Waste Management, Waste and Recycling sectors are non-base sectors because the LQ calculation results for the last 2 (two) years per quarter show <1.

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6. Construction

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
36 845,30 / 406 434,74 271,5 / 2 683,1 = 0,90	35753,26 / 413706,36 264,7 / 2 772,8 = 0,90	39272,86 / 423037,15 278,2 / 2815,9 = 0,60	40546,48 / 424464,67 288,1 / 2845,9 = 0,94	38289,41 / 427816,83 284,6 / 2818,6 = 1,01	38622,48 / 438031,55 267,4 / 2924 = 0,96	41706,37 / 447540,60 280,0 / 2976,8 = 0,99

The Construction Sector is a non-base sector because the results of LQ calculations for the last 2 (two) years quarterly show results < 1 even though in the first quarter of 2022 the results are > 1.

7. Wholesale and Retail Trade, Car, and Motorcycle Repair

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
76 259,75 / 406 434,74 351,6 / 2 683,1 = 1,42	76671,62 / 413706,36 363,4 / 2 772,8 = 1,42	78268,49 / 423037,15 369,0 / 2815,9 = 1,42	81079,88 / 424464,67 367,0 / 2845,9 = 1,49	81330,02 / 427816,83 371,3 / 2818,6 = 1,45	82069,21 / 438031,55 379,4 / 2924 = 1,40	84642,98 / 447540,60 388,3 / 2976,8 = 1,45

The wholesale and retail trade sector is the basis sector because the results of LQ calculations in the last 2 (two) years per quarter show results of > 1.

8. Transportation and Warehousing

2021 (Triwulan)				2022 (Triwulan)		
I	II	III	IV	I	II	III
10 375,48 / 406 434,74 97,3 / 2 683,1 = 0,66	10642,15 / 413706,36 99,2 / 2 772,8 = 0,71	10342,38 / 423037,15 97,8 / 2815,9 = 0,70	12625,9 / 424464,67 111,8 / 2845,9 = 0,07	12510,19 / 427816,83 112,7 / 2818,6 = 0,74	13241,84 / 438031,55 120,3 / 2924 = 0,75	13512,28 / 447540,60 123,1 / 2976,8 = 0,75

The Transportation and Warehousing Sector is a non-base sector because the results of LQ calculations for the last 2 (two) years per quarter show results of < 1.

9. Provision of Accommodation and Food and Drink

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
21 219,92 / 406 434,74 76,3 / 2 683,1 = 1,85	21327,01 / 413706,36 78,3 / 2 772,8 = 1,85	20941,8 / 423037,15 73,8 / 2815,9 = 1,88	22589,64 / 424464,67 82,0 / 2845,9 = 1,89	22491,54 / 427816,83 81,8 / 2818,6 = 1,85	23155,73 / 438031,55 85,8 / 2924 = 1,79	23728,44 / 447540,60 86,9 / 2976,8 = 1,82

The Accommodation and Food and Drink Provision Sector is the basis sector because the results of LQ calculations in the last 2 (two) years per Quarter show results > 1.86

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10. Information and Communication

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
27 389,70 / 406 434,74 169,6 / 2 683,1 = 1,06	28333,48 / 413706,36 175,4 / 2 772,8 = 1,07	29127,6 / 423037,15 173,6 / 2815,9 = 1,11	29136,16 / 424464,67 178,8 / 2845,9 = 1,09	29205,49 / 427816,83 181,7 / 2818,6 = 1,06	29752,92 / 438031,55 186,3 / 2924 = 1,06	29761,44 / 447540,60 187,8 / 2976,8 = 1,04

The Information and Communication Sector is the basis sector because the results of LQ calculations for the last 2 (two) years per quarter show results of > 1.

11. Finacial and Insurance Service

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
10 457,64 / 406 434,74 117,1 / 2 683,1 = 0,53	10533,84 / 413706,36 117,3 / 2 772,8 = 0,53	10546,64 / 423037,15 115,9 / 2815,9 = 0,58	10606,93 / 424464,67 114,3 / 2845,9 = 0,58	10696,51 / 427816,83 119,1 / 2818,6 = 0,58	11006,96 / 438031,55 119,1 / 2924 = 0,62	10601,43 / 447540,60 116,9 / 2976,8 = 0,58

The Financial Services Sector is a non-base sector because the results of LQ calculations for the last 2 (two) years per quarter show results of <1.

12. Real Estat

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
7 533,97 / 406 434,74 81,6 / 2 683,1 = 0,60	7544,59 / 413706,36 82,9 / 2 772,8 = 0,62	7569,23 / 423037,15 84,2 / 2815,9 = 0,58	7593,5 / 424464,67 84,7 / 2845,9 = 0,58	7751,77 / 427816,83 84,7 / 2818,6 = 0,60	7914,26 / 438031,55 84,7 / 2924 = 0,64	7970,45 / 447540,60 84,7 / 2976,8 = 0,60

The Mining and Quarrying Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years show results of <1.

13. Company Service

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
3 075,51 / 406 434,74 49,2 / 2 683,1 = 0,38	3092,60 / 413706,36 49,4 / 2 772,8 = 0,41	3103,63 / 423037,15 84,2 / 2815,9 = 0,24	3194,66 / 424464,67 50,3 / 2845,9 = 0,41	3214,16 / 427816,83 52,1 / 2818,6 = 0,38	3258,66 / 438031,55 53,4 / 2924 = 0,38	3263,44 / 447540,60 53,4 / 2976,8 = 0,41

The Corporate Services Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years per quarter show < 1.

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14. Government Administration, Defense and Compulsory Social Security

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
8 347,92 / 406 434,74 87,8 / 2 683,1 = 0,66	9272,04 / 413706,36 96,5 / 2 772,8 = 0,66	8495,81 / 423037,15 80,5 / 2815,9 = 1,00	8832,77 / 424464,67 98,4 / 2845,9 = 0,66	8409,41 / 427816,83 87,1 / 2818,6 = 0,66	8730,83 / 438031,55 95,4 / 2924 = 0,06	8612,2 / 447540,60 90,5 / 2976,8 = 0,50

The Government Administration, Defense and Compulsory Social Security sectors are non-base sectors because the results of LQ calculations in the last 2 (two) years per quarter show results of <1.

15. Education Service

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
11 580,68 / 406 434,74 82,6 / 2 683,1 = 0,66	11478,05 / 413706,36 88,1 / 2 772,8 = 0,66	11275 / 423037,15 84,2 / 2815,9 = 1,00	12101,35 / 424464,67 95,6 / 2845,9 = 0,66	11487,52 / 427816,83 81,2 / 2818,6 = 1,00	11464,82 / 438031,55 87,3 / 2924 = 1,00	11492,1 / 447540,60 87,9 / 2976,8 = 0,66

The Education Services Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years per quarter show results of <1.

16. Health Services and Social Activities

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
3 120,34 / 406 434,74 35,1 / 2 683,1 = 0,43	3111,2 / 413706,36 36,2 / 2 772,8 = 0,53	3373,33 / 423037,15 42,1 / 2815,9 = 0,50	3247,44 / 424464,67 43,8 / 2845,9 = 0,46	3248,31 / 427816,83 36,5 / 2818,6 = 0,58	3283,31 / 438031,55 38,6 / 2924 = 0,53	3353,76 / 447540,60 41,3 / 2976,8 = 0,53

The Health Services and Social Activities Sector is a non-base sector because the results of LQ calculations in the last 2 (two) years per quarter show results of < 1.

17. Outher Servive

2021 (Quarter)				2022 (Quarter)		
I	II	III	IV	I	II	III
5 433,16 / 406 434,74 49,7 / 2 683,1 = 0,72	5444,34 / 413706,36 49,8 / 2 772,8 = 0,76	5122,83 / 423037,15 49,2 / 2815,9 = 0,70	5566,76 / 424464,67 52,1 / 2845,9 = 0,72	5722,05 / 427816,83 53,8 / 2818,6 = 0,57	6155,71 / 438031,55 54,4 / 2924 = 0,77	6118,22 / 447540,60 53,7 / 2976,8 = 0,66

Other Services Sector, is a non-base sector because the results of the calculation of LQ in the last 2 (two) years per Quarter show < 1.

From the results of LQ calculations during the analysis period (2021-2022) per quarter, the Manufacturing Industry Sector; The Electricity and Gas Procurement Sector, the Wholesale and Retail Trade Sector, Car and Motorcycle Repair, the Accommodation and Food and

Beverage Provision Sector, the Information and Communication Sector are the basis in East Java Province because they have the potential to become base activities. Based on data on GRDP for East Java Province and National Gross Domestic Product (GDP) at Constant 2021 Prices for 2021-2022 per Quarter, calculations can be carried out using the Location Quotient (LQ) method to get the comparative advantage that East Java Province has compared to the National economy. In the same way, the national economy will identify basic and non-base sectors or activities.

In the Manufacturing Industry sector, the processing industry sub-sector itself commercially and industrially has a sizeable contribution. The following is information regarding the results of calculating the LQ value for the manufacturing sector in East Java Province in 2021-2022 per quarter:

1. In 2021 per quarter the manufacturing industry sector has an LQ value of 3.0 > 1 with a total
2. GRDP of 124028.39 in million rupiah during the first quarter.
3. In 2021 per quarter the manufacturing sector has an LQ value of 1.45 > 1 with a total GRDP of 122895.01 in million rupiah during the second Quarter.
4. In 2021 per quarter the manufacturing sector has an LQ value of 1.5 > 1 with a total GRDP of 127591.98 in million rupiah during the third quarter.
5. In 2021 per quarter the manufacturing sector has an LQ value of 1.5 > 1 with a total GRDP of 130405.66 in million rupiah during the fourth quarter.
6. In 2022 per quarter the manufacturing sector has an LQ value of 1.5 > 1 with a total GRDP of 132616.24 in million rupiah during the first quarter.
7. In 2022 per quarter the manufacturing sector has an LQ value of 1.5 > 1 with a total GRDP of 132683.48 in million rupiah during the second quarter.
8. In 2022 per quarter the manufacturing sector has an LQ value of 1.5 > 1 with a total GRDP of 134787.44 in million rupiah during the second quarter.

The Processing Industry plays a role in increasing the PDRB of East Java Province. In 2022, the LQ value will not change significantly from 2021 to 2022 from 124028.39 to 134787.44 in million rupiah. However, the amount of GRDP continues to increase. There is no significant change in the LQ value because this occurs when the economic growth rate of the National sector is greater than that of the East Java Province sector.

In the electricity and gas procurement sector, the electricity sub-sector includes the generation of electricity and the operation of distribution networks for the distribution of electricity, for sale to consumers, both by PLN and non-PLN as well as the gas procurement sub-sector for which the household, commercial and industrial segments have a significant contribution. large enough. The following is information regarding the results of calculating the LQ value for the electricity and gas sector in East Java Province in 2021-2022 per quarter:

1. In 2021 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1140.25 in million rupiah during the first quarter.
2. In 2021 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1146.55 in million rupiah during the second Quarter.
3. In 2021 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1192.36 in million rupiah during the third quarter.
4. In 2021 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1231.9 in million rupiah during the fourth Quarter.

5. In 2022 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1223.10 in million rupiah during the first Quarter.
6. In 2022 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1256.42 in million rupiah during the second quarter.
7. In 2022 per quarter the electricity and gas procurement sector has an LQ value of 2.0 > 1 with a total GRDP of 1280.14 in million rupiah during the second Quarter.
8. In the procurement of electricity and gas play a role in increasing the GRDP of East Java Province. In 2022, the LQ value will not change significantly from 2021 to 2022 from 1140.25 to 1280.14 in rupiah million. However, the amount of GRDP continues to increase. There is no significant change in the LQ value because this occurs when the economic growth rate of the National sector is greater than that of the East Java Province sector.

In the wholesale and retail trade sector, car and motorcycle repair, commercially and industrially have a sizeable contribution. The following is information regarding the results of calculating the LQ value of the wholesale and retail trade, car and motorcycle repair sectors in East Java Province in 2021-2022 per quarter:

1. In 2021 per quarter the wholesale and retail trade, car and motorcycle repair sectors have an LQ value of 1.42 > 1 with a total GRDP of 76259.75 in million rupiah during the first quarter.
2. In 2021 per quarter the wholesale and retail trade sector, car and motorcycle repair have an LQ value of 1.42 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 76671.62 in million rupiah during the second quarter.
3. In 2021 per quarter the wholesale and retail trade, car and motorcycle repair sectors have an LQ value of 1.42 > 1 with a total GRDP of 78268.49 in million rupiah during the third quarter.
4. In 2021 per quarter the wholesale and retail trade sector, car and motorcycle repair have an LQ value of 1.49 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 81079.88 in million rupiah during the fourth quarter.
5. In 2022 per quarter the wholesale and retail trade, car and motorcycle repair sectors will have an LQ value of 1.45 >1 with a total GRDP of 81330.02 in million rupiah during the first quarter.
6. In 2022 per quarter the wholesale and retail trade sector, car and motorcycle repair have an LQ value of 1.40 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 82069.21 in million rupiah during the second quarter.
7. In 2022 per quarter the wholesale and retail trade, car and motorcycle repair sectors have an LQ value of 1.45 > 1 with a total GRDP of 84642.98 in million rupiah during the third quarter.
8. In the procurement of wholesale and retail trade, repair of cars and motorcycles in increasing the GRDP of East Java Province. In 2022, the LQ value will not change significantly from 2021 to 2022 from 76259.75 to 84642.98 in million rupiah. However, the amount of GRDP continues to increase. There is no significant change in the LQ value because this occurs when the economic growth rate of the National sector is greater than that of the East Java Province sector.

In the sector of providing accommodation and food and drink, commercially and industrially have a sizable contribution. The following is information regarding the results of calculating the LQ value for the electricity and gas sector in East Java Province in 2021-2022

per quarter:

1. In 2021 per quarter the accommodation and food and beverage provision sector has an LQ value of 1.85 > 1 with a total GRDP of 21219.92 in million rupiah during the first quarter.
2. In 2021 per quarter the food and beverage accommodation provision sector has an LQ value of 1.85 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 21327.01 in million rupiah during the second quarter.
3. In 2021 per quarter the food and beverage accommodation provision sector has an LQ value of 1.88 > 1 with a total GRDP of 20941.8 in million rupiah during the third quarter.
4. In 2021 per quarter the food and beverage accommodation provision sector has an LQ value of 1.89 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 22589.64 in million rupiah during the fourth quarter.
5. In 2022 per quarter the wholesale and retail trade, car and motorcycle repair sectors have an LQ value of 1.85 > 1 with a total GRDP of 22491.54 in million rupiah during the first quarter.
6. In 2022 per quarter the food and beverage accommodation provision sector has an LQ value of 1.79 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 23155.73 in million rupiah during the second quarter.
7. In 2022 per quarter the food and beverage accommodation provision sector has an LQ value of 1.82 > 1 with a total GRDP of 23728.44 in million rupiah during the third quarter.
8. In procuring the provision of accommodation for eating and drinking in increasing the GRDP of East Java Province. In 2022, the LQ value will not change significantly from 2021 to 2022 from 21219.92 to 23728.44 in million rupiah. However, the amount of GRDP continues to increase. There is no significant change in the LQ value because this occurs when the economic growth rate of the National sector is greater than that of the East Java Province sector.

In the information and communication sector, commercially and industrially have a sizeable contribution. The following is information regarding the results of calculating the LQ value for the electricity and gas sector in East Java Province in 2021-2022 per quarter:

1. In 2021 per quarter the information and communication sector has an LQ value of 1.06 > 1 with a total GRDP of 27389.70 in million rupiah during the first quarter.
2. In 2021 per quarter the information and communication sector has an LQ value of 1.07 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 28333.48 in million rupiah during the second quarter.
3. In 2021 per quarter the information and communication sector has an LQ value of 1.11 > 1 with a total GRDP of 29127.6 in million rupiah during the third Quarter
4. In 2021 per quarter the information and communication sector has an LQ value of 1.09 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 29136.16 in million rupiah during the fourth quarter.
5. In 2022 per quarter the information and communication sector has an LQ value of 1.06 > 1 with a total GRDP of 29205.49 in million rupiah during the first quarter.
6. In 2022 per quarter the information and communication sector will have an LQ value of 1.06 > 1 with an LQ value of 2.0 > 1 with a total GRDP of 29752.92 in million rupiah during the second quarter.
7. In 2022 per quarter the information and communication sector has an LQ value of 1.04 >

1 with a total GRDP of 29761.44 in million rupiah during the third quarter.

8. In procuring the provision of information and communication in increasing GRDP of East Java Province. In 2022, the LQ value will not change significantly from 2021 to 2022 from 27389.70 to 29761.44 in million rupiah. However, the amount of GRDP continues to increase. There is no significant change in the LQ value because this occurs when the economic growth rate of the National sector is greater than that of the East Java Province sector.

Based on the results of an overall analysis of the five sectors which are considered to be the basis of East Java Province from 2021 first quarter to 2022 third quarter. However, the agriculture, forestry and fisheries sectors experienced a decrease in the value of LQ by 0.78 in 2021-2022. Followed by the Mining and Quarrying Sector, the LQ decreased by 0.60. The water supply, waste management, waste and recycling sectors experienced a decrease in LQ by 0.11, so did the construction with a decrease in LQ by 0.90, the transportation and use sector also experienced a decrease in LQ by 0.66, the financial services sector and insurance experienced a decrease in LQ value of 0.53, followed by real estate which also experienced a decrease in LQ value of 0.60. The decline was also followed by the corporate service sector where the LQ value decreased by 0.38, followed by government administration, defense and social security mandatory where the LQ value decreased by 0.66, the education services sector also experienced a decrease in LQ by 0.66 followed by a decline in the health services sector and social activities where the LQ decreased by 0.43, including other services also experienced a decrease in LQ value as big as 0.72.

The increase or decrease in the value of LQ is due to the rate of growth of the national economy being higher or lower. In the electricity and gas procurement sector, the value of LQ with total GRDP continues to increase steadily. Therefore, of the five basic sectors of East Java Province, the Electricity and Gas Procurement sector is the most stable sector to be used as a base activity in the East Java Province region. With a relatively high contribution and also the LQ value of East Java Province to the National economy which is also quite high, this activity is an excellent basis for development because there are many positive impacts arising from this sector. In the Electricity and Gas Procurement sector, it plays a very large role in the needs of the people of East Java Province, both for industrial scale or office needs up to household consumption. Even though there has been an increase in the TDL (electricity tariff) increase, the need for energy continues to increase.

The Regional Minimum Wage (UMR) for East Java Province is quite high when compared to other provinces except DKI Jakarta. Due to the advanced economic growth in East Java Province which is the second largest city in Indonesia, where many entrepreneurs have invested their capital in various sectors based in East Java Province to build processing industries, wholesale trade, car and motorcycle repair, provision of accommodation and food and drink, information and communication, construction, will directly increase the Regional Revenue of East Java Province. With the development of this sector, it is possible for other sectors that provide raw materials to grow, especially if the industry uses local raw materials.

E. CONCLUSION

Of the five basic sectors of East Java Province, the Electricity and Gas Procurement sector is the most stable sector to be used as a base activity in the East Java Province region. With a fairly high contribution with an LQ > 2 to the national economy, making the activities of the Electricity and Gas Procurement sector an excellent basis for development because there are many positive impacts arising from this sector on other sectors.

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