

# **THE ANALYSIS OF LEADING ECONOMIC SECTOR AND ECONOMIC GROWTH IN PEMALANG DISTRICT YEAR 2010-2016**

Dewo Arihutomo

## **ABSTRACT**

This study aims to identify the dominant sector in Pemalang District. The analysis was carried out by comparing the 2010 GRDP of Pemalang District Based on Constant Price and the 2010 GRDP of Central Java Province Based on Constant Price for the period 2010-2016, using the Location Quotient (LQ), Shift Share, Klassen Typology, Metode Rasio Pertumbuhan (GRM), and Overlay analysis approach, it can be concluded that the economic potential of Pemalang Regency are the processing industry, electricity and gas procurement, financial and insurance services, and the company services sector. These four sectors despite experiencing such fluctuative value movements from year to year, but the trends created tend to increase, and indicate that these sectors are the dominant sectors in the economy of Pemalang District.

**Keyword:** GRDP, *Leading Sector, Economic Development*

### **A. Background**

Development is a continuous process with the ultimate goal of improving people's welfare. Development always has positive and negative impacts, therefore it is necessary to look at a certain reference to assess the success of development of a region. The development of a region is said to succeed when economic growth in a region is relatively high. The economic growth of a region will affect other regions that have economic linkage with the region. Economic development of a region should be viewed from the sectors that become the seed of the region. Suggestions should be developed as much as possible in order to be a trigger of economic development of the region. The leading sector can be known

in several ways, one of them by using the gross regional domestic product (GRDP) data.

Economic growth is often a reference to how well the government in certain regions in doing their duty to advance the region. The development and growth of a particular region is not necessarily the same and tends to be different, because there are various differences in geography, culture, natural resources, community potential, and others.

The main objective of the development is to create the number and type of employment opportunities for the local people, so that there is emphasis on development policy based on the regional economic potential in using local human resource, institutional and natural resource potentials. Regional economic development planning can be considered as planning to improve the development of public resources that are available in the area and to improve the capacity of the private sector in creating responsible values of private resources (Arsyad, 1999). Some indicators that can provide an overview of the growth or economic conditions of a region are, among others, the level of employment, regional income growth, as well as income levels and regional income structures (Kuncoro, 2006).

Pemalang District is one of the Districts in Central Java province that has lowland (in the north) and mountains (in the south). In this area, the agricultural sector has a very significant effect. Several types of food crops and plantations such as rice, pineapple, and mango are important commodities in Pemalang District. Another activity that has a major impact on the economy of this region is

the processing industry. The processing industry in Pemalang District has increased significantly, both in small industry and medium and large industries. This is evidenced by the increasing value of investment and production value in the processing industry sector of Pemalang District from year to year. However, the industry in Pemalang District is still dominated by small industries, only a few companies are included in medium and large industries. There are only a few large industries, such as PT Phillips Seafood Indonesia which is engaged in chemical industry, agro, and forest products; PT Texmaco Jaya and PT Candi Mekar engaged in electronics, textile and miscellaneous industries, and Gondorukem Factory belonging to Perhutani which is the largest in Southeast Asia.

## **B. Formulation of the Problem**

Based on the background that has been mentioned above, then the formulation of the problem in this study are:

1. Was there any changes of economic structure in Pemalang District between 2010-2016?
2. Which sector(s) of the economy that have high potential to be developed and become a leading sector in Pemalang District in 2010-2016?

## **C. Research Purposes**

Based on the background and the formulation of the problem, the purposes of this research are as follows:

1. To acknowledge the change of economic structure in Pemalang District between 2010-2016.
2. To acknowledge the economic sector(s) that have a high potential to be developed and become a leading sector in Pemalang District between 2010-2016.

#### **D. Benefits of Research**

The results obtained from this research are expected to be used or utilized as:

1. Information materials for the development of sectors owned by Pemalang District.
2. Input and evaluation materials for the local governments to determine future policies relating to regional development.
3. A reference material for future research.

#### **E. Theoretical Basis and Literature Review**

1. Definition of leading sector.

The definition of a leading sector is usually related to a comparison, whether it is regional, national or international scale comparison. In the international sphere, a sector is said to be excellent if the sector is able to compete with the same sector as other countries. While in the national scope, a sector can be categorized as a leading sector if that sector in a particular region can compete with the same sector produced by other regions, both in national and domestic markets (Tambunan, 2001). An area

will have a leading sector if the region can win the competition in the same sector with other regions so that it can produce exports (Suyatno, 2000).

The leading sector according to Tumenggung (1996) is a sector that has a comparative advantage and competitive advantage with similar sector products from other regions as well as providing great value for benefits. The leading sectors also provide added value and large production, have a large multiplier effect on other economies, and have high demand both local and export markets (Mawardi, 1997).

## 2. Determination of leading sector criteria

The determination of the leading sector becomes an important thing as the basis of regional development planning in accordance with the current era of regional autonomy, where the region have the opportunity and authority to make policies in accordance with the regional potential to accelerate regional economic development. The criteria of superior sector according to Sambodo in Usya (2006) is first, the leading sector has a high rate of economic growth; second, the leading sector has a relatively large employment rate; thirdly, the leading sector has a link between the high sector either forward or backward; and fourth, a sector that capable of creating high added value.

According to Rachbini (2001) there are four conditions for a particular sector to be a priority sector, namely:

- The sector must produce a product that has considerable demand, so the growth rate grows rapidly as a result of the demand effect.

- Because there is a technological change that is adopted creatively, the new production function shifts with the development of a wider capacity.
- There has to be an increase in re-investment from the priority sectors of production, both private and government.
- The sector should grow, so as to influence other sectors.

### 3. Concept of development and economic growth.

Sadono Sukirno (1985) defines economic development as a process that causes the per capita income of a population to increase in the long term. The definition implies that economic development is a continuous change through a combination of processes to achieve something better, that is, a continuous increase in per capita income over the long term.

Kuznets (1996) in Sirojuzilam (2008) defines economic growth as a long-term increase in a nation's ability to provide more goods to its population. This capability increases according to technological advances and necessary institutional and ideological adjustments. Meanwhile, according to Boediono (1985) in Tarigan (2003), economic growth is a process of per capita output increase in the long run. According to Adisasmita Rahardjo (2005) economic growth is an increase in the capacity of a long-term nation to produce various goods and services for its people.

#### 4. Gross regional domestic product (GRDP)

Gross Regional Domestic Product (GRDP) is a production produced by a community within a period of one year in a certain region or region. Gross Regional Domestic Product figures are needed and need to be presented, as they can be used as materials for development planning analysis, as well as a barometer for measuring the results of development that have been implemented.

The presentation of GRDP can be divided into two ways, namely GRDP on Constant Prices, meaning that all aggregate income is valued at fixed price, so the aggregate development of income from year to year is solely due to real production growth not because of price increase or inflation. Or in other words GRDP at constant prices is the amount of production value or income or expenditure that is valued at a fixed price (the price of a base year) used for one year. Whereas GDRP at Current Price is the amount of production value or income (expense) that is valued according to the prevailing price in the year concerned.

The calculation of GRDP at constant prices is useful to describe the economic growth of a region both aggregate (whole) and sector. It is also useful to see changes in the economic structure of a region based on the distribution of each sector of the economy to the total value of GRDP. In addition, the per capita income derived from the ratio of GRDP at current prices to the number of residents in the year may be used to compare the level of prosperity of one region to another. The comparison between

GRDP at current price and GRDP at constant prices can also be used to see inflation or deflation occurring.

## **F. Methodology**

The data used in this study is secondary data sourced from the Badan Pusat Statistik (BPS). The data covered in this research is the GRDP data of Pemalang District in 2010-2016 on Constant Price Base, as well as data of Central Java Province's GRDP in 2010-2016 on Constant Price Base, along with other secondary data that relevant to the purpose of writing this thesis.

To analyze the economic structure and identification of base sector is done qualitatively and quantitatively. Qualitative analysis will be presented descriptively, while quantitative data will be processed by using several methods, among others; (a) *Shift-Share*; (b) *Location Quotient*; (c) *Klassen Typology*; (d) *Growth Ratio Model (GRM)*; (e) *Overlay Analysis*

## **G. Findings**

### **1. Location quotient (LQ) analysis**

Based on the table below which presents the results of LQ calculation, it is known there are sectors that have a value  $LQ > 1$  are Agriculture, Forestry and Fisheries, Mining and Excavation, Electricity and Gas, Water Supply, Waste Management, and Recycling, Wholesale and retail trade, Provision of Accommodation and Meals, Financial Services and Insurance, Real Estate, Company Services, Mandatory Administration of Government, Defense and Social Security, Educational Services, Health Services and Social Activities, and also Other Services. These sectors are the base sector,



which has an important role in the economy of Pemalang District. It is indicated by the LQ coefficient with value of more than 1. This shows that these sectors are sufficient to meet the needs in the Pemalang District and tend to be able to export to other regions.

**Table 4.2**  
Coefficient of *Location Quotient* (LQ) of Pemalang District at 2010-2016

Business Field	2010	2011	2012	2013	2014	2015	2016	LQ Average
Agriculture, Forestry and Fisheries	1,80211306	1,78026660	1,79738144	1,86584151	1,84432510	1,81771387	1,81663486	1,81775378
Mining and Excavation	2,14842190	2,30421473	2,30241067	2,27073638	2,25604766	2,21656313	2,02818327	2,21808253
Processing Industry	0,51189214	0,52404432	0,53140458	0,53545047	0,56961389	0,58315482	0,59120449	0,54953782
Electricity and Gas	1,14265303	1,15247949	1,11811034	1,08107978	1,14567725	1,21281214	1,32669773	1,16850139
Water Supply, Waste Management, and Recycling	1,05130825	1,09523520	1,13053127	1,18482657	1,22504632	1,23205802	1,23697735	1,16514043
Construction	0,41852402	0,41918798	0,41844675	0,42003646	0,42011585	0,41799891	0,42008248	0,41919892
Wholesale and retail trade	1,16664204	1,15007324	1,16136399	1,13924336	1,15020950	1,15277764	1,17297129	1,15618301
Transportation and Warehousing	0,96627546	0,96024072	0,97797898	0,94335112	0,90998790	0,89103296	0,90396027	0,93611820
Provision of Accommodation and Meals	1,84097668	1,82019382	1,82853187	1,80031461	1,77977871	1,77435251	1,77421544	1,80262338
Information and Communication	0,58890209	0,59587822	0,60068955	0,60757617	0,60862771	0,60505569	0,58936024	0,59944138
Financial Services and Insurance	1,06101558	1,07571082	1,06699787	1,06089424	1,07790213	1,08506573	1,07801048	1,07222812
Real Estate	1,01336675	1,01798994	1,02399698	1,01177454	1,00616756	1,00081758	0,99423309	1,00976378
Company Services	1,01080033	1,01483906	1,02856131	1,01235977	1,03284007	1,05021415	1,01324713	1,02326597
Mandatory Administration of Government, Defense and Social Security	1,24448031	1,26075634	1,26649367	1,25473536	1,24414066	1,23603968	1,22089462	1,24679152
Educational Services	1,54148853	1,47574507	1,42896906	1,40173611	1,40860402	1,41965388	1,40533593	1,44021894
Health Services and Social Activities	1,35193634	1,33446572	1,31642705	1,28948066	1,24962738	1,24918860	1,22611445	1,28817717
Other Services	1,92044540	1,92638472	1,92077454	1,84715735	1,84585634	1,84700032	1,76676462	1,86776904

## 2. Shift share analysis

*Shift Share* Analysis is one analytical tool that is useful to determine the performance or productivity of a regional economy compared to the national economy. This analytical tool is also used to analyze the economic growth of an area as a change or an increase in an economic growth indicator of a region within a certain period of time (Basuki and Gayatri, 2009). In this study, *Shift Share* is used to determine changes and economic shifts of Pematang District through the provincial growth component (Nij), industrial mix components (Mij) and competitive advantage components (Cij) per economic sector in Pematang District.

The results of the calculation using *Shift Share* Analysis on seventeen (17) economic sectors in Pematang District, from 2010 to 2016 can be seen in table below.

**Table 4.3**Calculation results of Pemalang District *Shift Share* 2010-2016 (Million Rupiah)

Sector	2010-2011				2011-2012			
	Nij	Mij	Cij	Dij	Nij	Mij	Cij	Dij
1	176.171,94	12.560.790,89	-5.134.375,618	7.602.587,215	184.705,7332	10.335.791,82	3.332.711,91	13.853.209,46
2	28.790,35239	-1.217.863,398	3.692.293,299	2.503.220,253	30.527,83655	2.996.209,228	-62.272,81262	2.964.464,251
3	113.521,388	11.001.275,81	4.702.787,994	15.817.585,2	123.804,1452	15.436.619,14	3.408.667,581	18.969.090,87
4	753,4703933	103.476,6579	8.820,504541	113.050,6328	810,136306	150.320,1505	-50.119,61905	101.010,6678
5	582,3741327	24.304,77262	43.666,04097	68.553,18772	597,3672973	-16.188,44009	35.230,19333	19.639,12054
6	26.425,43835	1.086.941,909	-61.703,08094	1.051.664,266	28.267,92076	3.322.233,829	-113.631,1234	3.236.870,627
7	109.227,9694	16.853.994,19	-3.780.642,354	13.182.579,81	113.209,4137	3.795.459,464	2.062.862,153	5.971.531,031
8	17.942,78585	1.576.002,803	-319.658,9645	1.274.286,625	19.638,99104	2.419.790,487	713.768,7234	3.153.198,201
9	34.527,82982	3.594.834,028	-965.990,7078	2.663.371,15	36.812,83318	3.622.390,13	313.875,5929	3.973.078,557
10	12.831,74236	1.929.498,017	235.816,3226	2.178.146,082	14.305,92328	2.593.329,392	229.700,3076	2.837.335,622
11	18.478,92635	1.423.850,226	399.915,7608	1.842.244,913	19.131,7339	1.259.709,16	-309.588,4329	969.252,4606
12	11.029,05477	1.254.480,761	38.760,55279	1.304.270,369	11.788,02306	1.186.831,179	131.312,8884	1.329.932,09
13	1.893,299154	331.308,6232	4.651,459123	337.853,3815	2.070,716522	272.190,225	55.034,3062	329.295,2477
14	24.463,37197	1.160.740,261	485.036,1798	1.670.239,813	24.889,21731	207.101,9819	201.099,4381	433.090,6373
15	27.348,62648	9.466.980,328	-2.768.151,83	6.726.177,125	31.372,76628	10.273.344,16	-2.204.084,209	8.100.632,714
16	5.741,45394	1.049.048,641	-186.329,4127	868.460,6824	6.297,449575	1.210.713,368	-178.964,9399	1.038.045,878
17	18.411,1665	915.770,9171	10.378,85004	944.560,9336	18.629,55415	224.834,5159	-111.063,0561	132.401,014

**Table Extension**

Sector	2012-2013				2013-2014			
	Nij	Mij	Cij	Dij	Nij	Mij	Cij	Dij
1	188.012,4655	7.742.814,536	16.035.097,8	23.965.924,8	190.406,0381	-3.637.951,747	-3.303.232,226	-6.750.777,935
2	30.683,20933	3.676.499,006	-601.405,3155	3.105.776,9	33.635,241	4.218.254,291	-283.002,6216	3.968.886,911
3	126.267,9306	13.348.611,24	3.137.297,979	16.612.177,15	148.130,4618	18.424.007,34	19.855.729,16	38.427.866,96
4	814,3779094	131.729,0999	-49.867,76857	82.675,7092	950,7714586	116.287,207	119.514,5155	236.752,4939
5	602,3015206	2.078,845036	62.196,15132	64.877,29788	666,4027189	42.943,78753	47.539,75987	91.149,95012
6	28.571,15159	2.712.021,767	481.368,0533	3.221.960,972	30.854,1042	2.531.393,664	153.658,3158	2.715.906,084
7	111.624,8478	10.196.424,05	-3.373.872,564	6.934.176,331	122.167,7241	10.989.816,05	2.908.120,871	14.020.104,64
8	19.879,40352	3.610.099,077	-1.326.502,932	2.303.475,549	21.673,67343	3.786.691,328	-1.488.061,259	2.320.303,742
9	36.358,84568	3.172.859,067	-826.616,4279	2.382.601,485	40.009,26814	5.733.004,332	-743.860,4231	5.029.153,177
10	14.999,40684	2.332.078,988	504.324,9223	2.851.403,318	17.563,22764	4.314.259,767	152.875,2548	4.484.698,25
11	18.968,8903	1.424.912,084	-52.377,88641	1.391.503,088	20.757,47631	16.01154,405	754.183,9596	2.376.095,841
12	12.040,66473	1.802.801,876	-192.963,2601	1.621.879,281	13.276,13964	1.796.600,837	-87.168,50647	1.722.708,47
13	2.193,449057	518.340,5283	-55.048,15168	465.485,8256	2.499,328845	375.370,109	115.710,708	493.580,1459
14	24.295,15934	1.234.666,796	-241.045,5934	1.017.916,362	25.113,17003	345.802,699	-294.689,1004	76.226,7686
15	32.355,90958	6.006.243,364	-1.023.677,734	5.014.921,54	36.784,51246	6.500.853,737	552.301,1779	7.089.939,427
16	6.342,749964	878.129,4411	-215,116.6556	669.355,5355	7.081,283867	1.520.475,413	-428.680,5602	1.098.876,136
17	18.784,89167	3.377.872,678	-1.370.218,306	2.026.439,263	21.069,09072	3.378.048,032	70.243,02049	3.469.360,143

**Table Extension**

Sector	2014-2015				2015-2016			
	Nij	Mij	Cij	Dij	Nij	Mij	Cij	Dij
1	205.664,9682	20.856.155,23	-5.321.002,993	15.740.817,21	203.086,4369	8.575.244,574	179.662,9928	8.957.994,004
2	35.865,5697	2.963.763,271	-1.130.009,902	1.869.618,939	37.719,3723	13.536.177,88	-7.150.172,892	64.23.724,358
3	164.802,1943	14.028.233,08	7.846.609,215	22.039.644,49	16.8017,1005	12.891.211,13	4.931.012,288	17.990.240,52
4	1.070,02856	46.598,7982	119.762,0183	167.430,845	1.182,363815	101.169,6314	222.824,6176	325.176,6128
5	706,9620074	20432,11678	8918,472285	30057,55108	700,570558	28164,09091	6850,448837	35715,1103
6	33.774,09313	3.676.866,04	-261.409,7608	3.449.230,372	34.928,41053	4.285.649,681	426.135,3045	4.746.713,396
7	132.268,6382	9.755.899,049	828.530,5199	1.0716.698,21	137.306,1256	14.466.289,43	5.110.326,524	19.713.922,08
8	23.719,82361	3.314.378,366	-925.363,2056	2.412.734,984	24.388,88373	2.248.295,39	755.598,0844	3.028.282,359
9	44.206,61295	5.444.373,739	-172.595,1754	5.315.985,177	45.434,97747	5.469.385,306	89.196,17065	5.604.016,454
10	19848,06647	3440874,438	-191784,0441	3268938,46	20227,76773	3165717,069	-1035074,363	2150870,475
11	23.336,61044	3.225.451,291	354.122,8754	3.602.910,776	24.437,66059	4.196.969,327	-275.976,2719	3.945.430,716
12	14.745,60404	2.032.679,613	-123.921,3989	1.923.503,818	15.112,50025	1.932.022,233	-169.402,9309	1.777.731,803
13	2.861,552522	441.713,6438	101.644,3974	546.219,5938	2.950,348986	591.315,8914	-211.560,4142	382.705,8263
14	27.269,28673	2.622.096,521	-287.129,2336	2.362.236,574	26.636,45977	1.169.752,803	-579.862,0779	616.527,1849
15	41.380,81926	5.673.281,85	725.294,6385	6.439.957,307	42.594,02531	6.125.522,038	-786.359,6494	5.381.756,414
16	7.832,231767	939.011,9166	10.730,79527	957.574,9436	8.158,572387	1.517.022,274	-296.395,4992	1.228.785,347
17	22.582,15325	1.302.594,903	71.400,14954	1.396.577,205	22.666,16668	3.682.228,03	-198.1044,739	1.723.849,458

Source : Data Processed

Annotation:

1. Agriculture, Forestry and Fisheries
2. Mining and Excavation
3. Processing Industry
4. Electricity and Gas
5. Water Supply, Waste Management, and Recycling
6. Construction
7. Wholesale and retail trade
8. Transportation and Warehousing
9. Provision of Accommodation and Meals
10. Information and Communication
11. Financial Services and Insurance
12. Real Estate
13. Company Services
14. Mandatory Administration of Government, Defense and Social Security
15. Educational Services
16. Health Services and Social Activities
17. Other Services

### 3. Klassen typology

Judging from the average growth rate and economic contribution of the Central Java Province and Pemalang District through the results of the *Klassen Typology* classification in table below.

#### Pemalang District GRDP Sector Classification for 2010-2016

Proportion Growth	$\frac{Xi}{X} \geq 1$	$\frac{Xi}{X} < 1$
$\frac{\Delta Xi}{\Delta X} \geq 1$	<p>Rapid Developed Sectors :</p> <p>Agriculture, Forestry and Fisheries (1,82 &amp; 1,09)</p> <p>Electricity and Gas (1,17 &amp; 1,43)</p> <p>Wholesale and Retail Trade (1,15 &amp; 1,04)</p> <p>Financial Services and Insurance (1,07 &amp; 1,07)</p> <p>Company Services (1,03 &amp; 1,02)</p>	<p>Fast Developing Sectors :</p> <p>Processing Industry (0,56 &amp; 1,49)</p> <p>Construction (0,42 &amp; 1,03)</p> <p>Information and Communication (0,60 &amp; 1,01)</p>
$\frac{\Delta Xi}{\Delta X} < 1$	<p>Pressed Developed Sectors :</p> <p>Mining and Excavation (2,23 &amp; 0,84)</p> <p>Provision of Accommodation and Meals (1,80 &amp; 0,91)</p> <p>Real Estate (1,01 &amp; 0,96)</p> <p>Mandatory Administration of Government, Defense and Social Security (1,25 &amp; 0,90)</p> <p>Educational Services (1,42 &amp; 0,86)</p> <p>Health Services and Social Activities (1,28 &amp; 0,82)</p> <p>Other Services (1,86 &amp; 0,75)</p>	<p>Underdeveloped Sectors :</p> <p>Transportation and Warehousing (0,93 &amp; 0,85)</p>

Source : Data Processed



#### 4. Growth ratio model (GRM)

GRM analysis is done by comparing the growth of a sector in a district/city with the same sector growth in the province. The GRM analysis is divided into 2, namely the analysis of the Studied Area Growth Ratio (district/city), which is Pemalang Regency and the Regional Reference Growth Ratio analysis (province), which is Central Java Province. In table below, the results of the calculation and analysis of the GRM of Pemalang Regency are presented to see a description of the activities or economic sectors of the region.

#### **Pemalang District GRM Calculation Results 2010-2016**

Business Field	RGR		SGR	
	Real	Nominal	Real	Nominal
Agriculture, Forestry and Fisheries	0,502255	-	1,09362	+
Mining and Excavation	1,243322	+	0,836095	-
Processing Industry	1,031781	+	1,492847	+
Electricity and Gas	1,231488	+	1,431223	+
Water Supply, Waste Management, and Recycling	0,263024	-	3,078722	+
Construction	0,956208	-	1,033083	+
Wholesale and retail trade	0,921954	-	1,039436	+
Transportation and Warehousing	1,339332	+	0,846565	-
Provision of Accommodation and Meals	1,139216	+	0,909393	-
Information and Communication	1,781755	+	1,013816	+
Financial Services and Insurance	1,021137	+	1,070615	+
Real Estate	1,284015	+	0,964855	-
Company Services	1,75082	+	1,015621	+
Mandatory Administration of Government, Defense and Social Security	0,446116	-	0,903618	-
Educational Services	2,205187	+	0,857786	-
Health Services and Social Activities	1,732393	+	0,818204	-
Other Services	1,037512	+	0,748898	-

Source: Data Processed

## 5. Overlay analysis

*Overlay Analysis* is used to determine potential economic sectors or activities based on both growth and contribution criteria by combining the results of the *Growth Ratio Model* (GRM) and *Location Quotient* (LQ) analysis. Judging by the results of the GRM, whichever, if the value of  $SGR > 1$ , ie positive (+), it means that the growth of the sector at the studied area level is higher than the growth of the same sector in the reference area. And if the  $SGR < 1$ , ie negative (-), it means that the sector at the studied area level is lower than the sector's growth in the reference area. Whereas from LQ analysis, if the LQ value  $> 1$ , ie positive (+), it means that the sector has a large contribution. And if the LQ value  $< 1$ , ie negative (-), it means that the sector has a small contribution.

The results of calculations through *Overlay Analysis* in seventeen (17) economic sectors in Pemalang District from 2010 to 2016 can be seen in table below.

### Result of Pematang District's *Overlay* Analysis 2010-2016

Business Field	GRM (SGR)		LQ	
	Real	Nominal	Real	Nominal
Agriculture, Forestry and Fisheries	1,093619761	+	1,820360565	+
Mining and Excavation	0,836095269	-	2,22969264	+
Processing Industry	1,492846774	+	0,555812097	-
Electricity and Gas	1,431222793	+	1,172809454	+
Water Supply, Waste Management, and Recycling	3,0787216	+	1,184112454	+
Construction	1,033083351	+	0,419311406	-
Wholesale and retail trade	1,039435766	+	1,154439836	+
Transportation and Warehousing	0,846565234	-	0,931091992	-
Provision of Accommodation and Meals	0,909392858	-	1,796231159	+
Information and Communication	1,013816057	+	0,60119793	-
Financial Services and Insurance	1,070615486	+	1,07409688	+
Real Estate	0,964855109	-	1,009163281	+
Company Services	1,015621326	+	1,025343582	+
Mandatory Administration of Government, Defense and Social Security	0,903617971	-	1,247176722	+
Educational Services	0,857785671	-	1,423340679	+
Health Services and Social Activities	0,818203928	-	1,277550641	+
Other Services	0,748898337	-	1,858989648	+

Source : Data Processed

*Annotation :* GRM = *Growth Ratio Model*  
 SGR = Value of Studied Area Growth Ratio  
 LQ = Coefficient of *Location Quotient*

#### H. Conclusions

Based on the results of the research that has been conducted, it can be concluded that:

1. There are changes in Pematang District's economic structure, it can be showed by there is a change in the results of the analysis that is quite significant, and tends to fluctuate between one year and another year.

2. The sector(s) of the economy that have high potential to be developed and become a leading sector in Pemalang District based on the analysis are:

a. The result of the *Location Quotient* (LQ) analysis of Pemalang District during the period 2010-2016 shows that there were thirteen (13) economic sectors in Pemalang District which could be said to be the base sector or superior sector, which had an important role in the economy of Pemalang Regency, which are the Agriculture, Forestry, and Fisheries sector, Mining and Excavation sector, Electricity and Gas sector, Water Supply, Waste Management, and Recycling sector, Wholesale and Retail sector, Provision of Accommodation and Meals sector, Financial Services and Insurance sector, Real Estate sector, Company Services sector, Mandatory Administration of Government, Defense and Social Security sector, Educational Services sector, Health Services and Social Activities sector, and Other Services sector.

b. The result of the *Shift Share* analysis of Pemalang District during the period 2010-2016 shows that Pemalang District experienced fluctuations in each component and most of its sectors. On the provincial growth component (Nij) side, all sectors experienced a significant increase between the initial year of observation and the last year of observation, although almost all of them experienced fluctuations from year to year. Calculation result from industrial mix components (Mij) shows that there are only 4 sectors that did not experience an increase

between the initial year of observation until the last year of observation, which are the Agriculture, Forestry, and Fisheries sector, Electricity and Gas sector, Wholesale and Retail Trade sector, and Educational Services sector. While the other thirteen sectors experienced an increase between 2010-2016, although most of these sectors experienced fluctuating movements. Calculation result from the competitive advantage components (Mij) shows that all of the sectors experienced fluctuative movements. Also, the calculation result of overall change in income (Dij) shows that all of the sectors have positive value, but varies and fluctuative.

c. The result of the *Klassen Typology* analysis of Pematang District during the period 2010-2016 shows that the developed sectors are the Agriculture, Forestry and Fisheries sector, the Electricity and Gas, Wholesale and Retail Trade sector, Financial Services and Insurance sector, and Company Services sector, in which these sectors have both large contribution in the formation of the Pematang District's GRDP and also a high growth.

d. The result of the GRM analysis of Pematang District during the period 2010-2016 shows that there are five sectors which have a prominent growth at the provincial and district level, which are Processing Industry sector, Electricity and Gas sector, Information and Communication sector, Financial Services and Insurance sector, and also Company Services sector.

The result of the *Overlay* analysis of Pemalang District during the period 2010-2016 shows that Agriculture, Forestry and Fisheries sector, Electricity and Gas sector, Water Supply, Waste Management, and Recycling sector, Wholesale and retail trade sector, Financial Services and Insurance sector, and also Company Services sector are the most dominant sectors, because these sectors have prominent growth and large contribution to the development of Pemalang District.

#### **I. Recommendations**

1. It is expected that the government, especially Pemalang District government, strives to increase the GRDP by prioritizing the development of leading sectors, without ruling out sectors that are included in the inferior sector, so that in the future, these inferior sectors are expected to sustain the economic development of Pemalang District.
2. Local governments are expected to exploit and develop natural resources or potential of region
3. All efforts to increase development by advancing technological means against potential sectors
4. To the investors who will invest their capital in Pemalang Regency so they can be directed to potential sectors, especially those that can be developed.
5. Improvement of human resources, as well as expanding employment in each economic sector to participate in developing the development of Pemalang District.

## REFERENCES

- Agus Tri Basuki dan Utari Gayatri. (2009). Penentu Sektor Unggulan dalam Pembangunan Daerah : Studi Kasus di Kabupaten Ogan Komering Ilir. *Jurnal Ekonomi dan Studi Pembangunan*, Volume 10. No. 1.
- Arsyad, Lincoln. (1999). *Ekonomi Pembangunan*. Yogyakarta: Bagian Penerbitan STIE YKPN.
- Arsyad, Lincoln. (1999). *Pengantar Perencanaan dan Pembangunan Ekonomi Daerah*. Yogyakarta: BPFE Yogyakarta
- Azhar, Syarifah Lies Fuaidah, dan M. Nasir Abdussamad. (2003). *Analisis Sektor Basis dan Non Basis di Provinsi Nanggroe Aceh Darussalam*. Open Journal Univesritas Udayana
- Basuki, Agus Tri. (2009). *Analisis Potensi Unggulan Kabupaten Kepulauan Yapen dalam Menopang Pembangunan Provinsi Papua Tahun 2004-2008*. UNISIA, Vol. XXXII No. 71
- Bendavid-Val, Avrom. (1991). *Regional and Local Economic Analysis for Practitioners*, 4th edition, Praeger, New York
- Boediono. (1999). *Teori Pertumbuhan Ekonomi*. Yogyakarta: BPFE
- Gardiner, B. (2013). Regional Competitiveness Indicator for Europe-Audit, Database Construction and Analysis presented in Regional Studies Association International Conference, April 12 to 15, Pisa
- Goschin, Zizi. (2014). *Regional Growth in Romania After its Accession to EU: a Shiftshare Analysis Approach*. Elsevier B.V
- Gujarati, Damodar N. (2003). *Basic Econometrics*. New York: McGraw-Hill/Irwin Companies, Inc.
- Hajeri, Yurisinthae, dan Dolorosa. (2015). Analisis Penentuan Sektor Unggulan Perekonomian di Kabupaten Kubu Raya. *Jurnal Ekonomi Bisnis dan Kewirausahaan*, Vol. 4, No. 2, 253-269
- Hasani, Akrom. (2010). *Analisis Struktur Perekonomian Berdasarkan Pendekatan Shift-Share di Provinsi Jawa Tengah Periode Tahun 2003-2008*. Semarang: Universitas Diponegoro

- Houston, David. (1967). The shift and share analysis of regional growth: A critique. *Southern Economic Journal* 33 (4): 577-581
- Hussin and Wuan Ching. (2013). The Contribution of Economic Sectors to Economic Growth: The Cases of Malaysia and China. *International Journal of Academic Research in Economics and Management Sciences*. Vol.2 No.2
- Jaranjana Heralth *et al.* (2012). *A Dynamic Shift Share Analysis of Economic Growth in West Virginia*. Morgantown: Regional Research Institute, West Virginia University
- Khusnaini, Moh. (2015). *A Shift-Share Analysis on Regional Competitiveness – a Case of Banyuwangi District, East Java, Indonesia*. Elsevier Ltd.
- Ma'ruf, Ahmad. (2009). *Anatomi Makro Ekonomi Regional: Studi Kasus Provinsi DIY dalam Jejak Vol II No. 2.*, h 114-125
- Mankiw, N. Greorgy. (2000). *Teori Makro Ekonomi*. Edisi Keempat. Jakarta : Erlangga
- Mondal, Wali I. (2009). An Analysis of The Industrial Development Potential of Malaysia: A Shift-Share Approach. *Journal of Business & Economic Research*, Vol. VII No. 5
- Prayoga, Nanang Gilang. (2008). *Analisis Sektor Unggulan Dalam Struktur Perekonomian Jawa Tengah Tahun 2000 dan Tahun 2004 ( Analisis Input Output )*. Skripsi thesis, Universitas Muhammadiyah Surakarta
- Rostow, Walt.W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto*. London: Cambridge University Press.
- Saerofi, Mujib. (2005). *Analisis Pertumbuhan Ekonomi dan Pengembangan Sektor Potensial di Kabupaten Semarang (Pendekatan Model Basis Ekonomi Dan SWOT)*. Skripsi thesis, Universitas Negeri Semarang
- Susanto, Dedi. (2011). Pertumbuhan Ekonomi, Sektor Unggulan dan Kesenjangan Pada Empat Kabupaten di Pulau Madura. *Jurnal Ekonomi Pembangunan*, Vol 9 No. 1
- Titisari, Kartika Hendra. (2012). Identifikasi Potensi Ekonomi Daerah Boyolali, Karanganyar, dan Sragen. *Jurnal Ilmiah Orasi Bisnis*, Edisi Ke-IV
- Todaro. M.P., (2000). *Pembangunan Ekonomi di Dunia Ketiga*. Jakarta: Erlangga.



Toma Lankauskiene and Manuela Tvaronaviciene. (2013). Economic Sector Performance and Growth: Contemporary Approaches in the Context of Sustainable Development. *Intellectual Economics Journal*, Vol. 7 No. 3

Yusuf, Maulana, (1999), Model Rasio Pertumbuhan (MRP) sebagai Salah Satu Alat Analisis dalam Perencanaan Wilayah dan Kota. Aplikasi Model: Wilayah Bangka-Belitung. *Ekonomi dan Keuangan Indonesia*, Volume XLVII, Nomor 2, 219-233.