The Journal of Social Sciences Research
ISSN(e): 2411-9458, ISSN(p): 2413-6670
Vol. 5, Issue. 11, pp: 1649-1656, 2019
URL: https://arpgweb.com/journal/journal/7
DOI: https://doi.org/10.32861/jssr.511.1649.1656

Academic Research Publishing Group

Original Research Open Access

Analysis of Economic Growth and Structural Changes and the Implication for Choice of Development Strategy: A Case Study of Pasaman Regency

Adrimas*
Faculty of Economics, Andalas University – Padang, Indonesia

Harif Amali Rivai
Faculty of Economics, Andalas University – Padang, Indonesia

Dewi Sartika
Faculty of Economics, Bina Darma University, Palembang, Indonesia

Abstract

The average economic growth rate of Pasaman Regency before the administrative division (1993-2002) was 5.8%, then after the division increased slightly to an average of 5.9%. This figure is far lower than the rate of growth of the New Autonomous Region of West Pasaman Regency (6.4 %). After the division, agricultural and mining sectors became more dominant in the economy of Pasaman making up 54.6% but the contribution of the manufacturing sector declined sharply from 10.3% to 4.6% as most of the existing Pasaman processing industry became part of West Pasaman. The comparative advantages of Pasaman Regency are mainly in the sectors: agriculture, forestry and freshwater fisheries. The district's economic growth is mainly influenced by factors originating from outside the region as indicated by the relatively high regional-share component of 159%. While regional division has benefited West Pasaman, it has provided no significant benefit for the parent region which can still be categorized as underdeveloped. An analysis of the Klassen Typology Matrix indicates that policies and programs that are relevant for the development of disadvantaged areas should be directed at providing employment through the use of labor-intensive technologies. This development should focus on agriculture, forestry and freshwater fisheries producing products with a significantly extensive market.

1. Introduction

This study examines the impact of regional division of a regency on the performance of economic development and local governance using the Pasaman District in West Sumatra as a case study. In 2003, Pasaman Regency was divided into two; Pasaman as the main regency and the New Autonomous Region (NAR), West Pasaman (Adrimas, 2017;2018). This research follows two others focusing on the NAR and looks at the parent region.

During the ten years after the administrative separation, Pasaman Regency has not enjoyed the rapid development of the NAR, which is now classified as a developing region. Pasaman still has the status of a disadvantaged region. Interestingly, the contribution of the agricultural sector in West Pasaman continued to increase, although not as much as in Pasaman, despite it becoming more developed. It is clear different strategies are needed to develop these two districts in the future. Recommended development strategies for West Pasaman District have already been determined (Adrimas, 2018). This present research formulates the development strategy for the parent regency, Pasaman. This case study is an unusual one as, rather than increasing the prosperity of the parent regency, administrative division has resulted in a relative setback in development and so will provide a model for similar situations in Indonesia and elsewhere.

Following Adrimas (2018), Location Quotient and Shift-Share Analysis is used. However, due to the significant difference in potential between the two districts, the Klassen Typology Matrix method was used for deeper analysis.

1.2. Research Objectives

This present research analyses changes in the economic structure of Pasaman Regency before and after division, the comparative advantage of Pasaman Regency after division and the main factors that influence Pasaman's economic growth. From this information, a development strategy is developed for Pasaman Regency.

2.2. Creation of New Autonomous Administrative Districts

The concept of regional administrative division was first put forward by Tiebout (1956) who stated that it was analogous to a perfectly competitive economic model in which regional governments have the power to maintain low tax rates, provide efficient services, and allow each individual community to express its preferences for each type of service from different levels of government by "voting with their feet ".

*Corresponding Author

2.3. Previous Research

Our first study (Adrimas, 2017) used logistic regression to demonstrate that economic performance, regional financial performance, public service performance and apparatus performance all had a significant influence (Mc. Fadden R2 = 0.135) on the development of West Pasaman, improving the welfare of the people.

Subsequently LQ and SSA methods were used to find that the comparative advantage of West Pasaman, whose economy is dominated by extensive oil palm plantations and processing plants, was in (i) agriculture, forestry and fisheries, and (ii) agroindustry, and economic growth was mainly determined by external factors (Adrimas, 2018). The contribution of the processing industry sector in the economy was the highest of any region or city in West Sumatra.

Regional administrative division has been the focus of much previous research using a variety of methods.

Hodgkinson (2005), studied the Illawarra Region of NSW which had a history of division and competition between its local government authorities (LGAs) hindering a reasonable approach to economic development. This work shows LQ and SS techniques can be used to develop regional development strategies when the full resources for planning and modeling are unavailable. LQ and SS can account for the level of diversity in the unique economic structure of each LGA. By focusing on developing their strengths, each LGA can grow its base industries in a non-competitive manner, while cooperating with other LGAs where interests are shared. This results in a synergistic comprehensive development strategy overcoming past obstacles resulting in productivity.

Chun Yun Shi dan Yang Yang (2008), modified and expanded the SS Model and applied it to tourism. The temporal limitations of a static comparative method were overcome by calculating the SS effect on a multiple year-base using a dynamic model. Also, competitive effect analysis was added to determine the causes of competitive disadvantages. The modified model was regarded by the authors as a descriptive tool but they were unable to determine whether it was sufficiently stable to make future projections.

Han (2016), used SS to analyze the competitiveness of Beijing to optimize and upgrade its industrial structure by eliminating excess production capacity and reorganize supply as part of government supply reform policy. SS analysis enabled the author to determine the best direction for future industrial development.

Leon (2004), uses LQ and SSM analysis of changes in manufacturing industries in three districts of the Los Angeles region: The City of Los Angeles, Riverside, Orange, and San Bernardino according to their standard identification classification to measure the unique dynamics of each district.

LQ and SSM have been found helpful in understanding the economies of districts in Indonesia. For instance, used data envelopment analysis along with SSA to examine the efficiency and competitiveness of the Industrial Manufacturing sector in Central Java around the global financial crisis. This analysis enabled the identification of inefficient manufacturing sectors and several others that were competitive.

LQ analysis, SS and Klassen Typology has been used to analyze the potential of the manufacturing sector in Malang and showed that the district had a comparative advantage for a number of industries and that others had the potential to be developed further.

In the Wonosobo Regency in Central Java LQ analysis of small industries found that the leading industries (base sector) were the sub-sectors of small food, beverage and tobacco industries (Aidiyah, 2005).

Santoso (2005), used commodity LQ with ten different commodities to analyze the role of the agricultural sector in the regional development of Boyolali Regency and discovered that only two of them, rice and tobacco were included in the commodity base. Shift-Share Analysis identified competitive and specialized advantage for both food crops and plantations in the same area.

Further east, Gufron (2008) found three base sectors of Lamongan Regency in 2002-2006 using LQ. A number of other sectors were found to be non-base sectors with LQ <1. SSA was able to show that external factors were the stimulus for most economic growth in the area.

In Sumatra, Jimmi (2004) used LQ to determine that the small industry subsector was a base sector in the Payakumbuh economy as the LQ value of this sector was greater than one based on indicators of income and labor during the 1998-2002 research period.

LQ was used by Harri (2016) to determine the leading subsectors of the processing industry and a development strategy in the Padang Pariaman district. SSA revealed that the role of outside factors on the growth of the manufacturing sub-sector was large in this district. A small proportional-shift indicated that the district economic structure itself did not have a large influence on the development of the three sub-sectors of the industry. Most of the industry's raw materials came from outside and most of the output was sold out of the District.

LQ Analysis of Kerinci plantation commodities demonstrated that cinnamon was a superior commodity with good marketing of production, availability of raw materials and labor skilled work (Adek Irma Rosi, 2016).

3. Method

As in our previous reports, primary data was drawn from official government reports and documents including from the West Sumatran Department of Plantations, Department of Industry and Department of Trade and Indonesian Department of Finance. Data processing used LQ, SSA and a Klassen Typology Matrix. Cross-Tabulation was used to analyze growth and changes in the economic structure.

3.1. Location Quotient

Basic and non-basic sectors can be determined based on expert knowledge of the sectors of the local economy. However, this approach lacks objectivity. Surveys can also be used to determine export values for each business but

this is time-consuming, expensive and, depending on the questions used, subjective. LQ is objective, cheap and depends on pre-existing data so was used to identify general conditions and the main development potential of West Pasaman District, by sector and when possible by commodity. This analysis identifies comparative advantage or regional competitiveness of various economic sectors in an area and determines which are basic or leading sectors and which are non-basic sectors.

LQ analysis results in an LQ coefficient based on the number of workers per sector, the amount of production or some other unit of choice. The formulas used in this paper were as follows:

$$LQ = \frac{Si/Ni}{S/N} = \frac{Si/S}{Ni/N}$$

Where:

Si = Economic activity/number of workers in economic sector i in the area under study

S = Total economic activity/number of workers in all economic sectors in the area under study

Ni = Economic activity/number of workers in sector i in the wider reference area containing the area under study

N = Total economic activity/number of workers in all economic sectors in the reference area

This version of the formula uses workforce data but LQ could equally well use other data such as GRDP.

The resulting LQ value of a sector results in the following classifications.

(1) If LQ > 1, The sector is basic, and specialism of this sector in the area under study is higher than in the reference area.

(2) If LQ < 1, The sector is non - basic, and specialism of this sector of the area under study is lower than in the reference area.

(3) If LQ = 1, the degree of specialization is the same as in the reference area.

The assumptions of this method are that the demand for the product of any economic sector in the selected region is the same as in the reference region and that the region's demand for goods will be fulfilled first by regional production, then any shortfalls filled by imports from other regions.

3.2. Shift-Share Analysis

SSA measures changes in economic structure either with regard to employment or regional added value.

In this SS analysis the determinants of regional economic growth used were: (a) Regional Share of economic growth elements originating from outside such as national policies and support and the role of neighboring regions; (b) Proportionality Shift: an element of economic growth that comes from the economic structure of the region; and (c) Shift Differential: the element of economic growth derived from the specific potential of the region. This analysis technique informs formulation of future development strategies and policies. The formula used in the SSA is as follows:

$$\Delta Y_i = [Y_i\,(Y^t / Y^0 - 1] + [Y_i\,(Y_i^t / Y_i^0) - (Y^t / Y^0)] + [Y_i\,(Y_i^t / Y_i^0) - (Y_i^t / Y_i^0)]$$

Where:

Δy_i = Change in value added of sector i

y_i^0 = Value added of sector i at the area level at the beginning of the period

y_i^t = Value added of sector i at the area level at the end of the period

Y_i^0 = Value added of sector i at the national level at the beginning of the period

Y_i^t = Value added of sector i at the national level at the end of the period

3.3. The Klassen Typology Matrix

The grouping of regions based on structure and level of development in this study uses a Klassen Typology Matrix. In this case, regional groupings are carried out using two indicators: the rate of growth and the level of income per capita. The regional grouping based on the Klassen typology can be seen in Table 3.1 below:

Table-3.1. Regional Economic groupings based on Klassen Typography

Growth rate Income per capita	**Growth rate above average**	**Growth rate below average**
Income per capita above average	Developed area	Developed but depressed area
Income per capita below average	Developing Area	Underdeveloped Area

The implications of the Klassen Typology Matrix in the formulation of regional development strategies, policies and programs include the following:

(1) For Developed Regions, development strategies, policies and programs should be directed at economic and social sectors and activities that use more modern and capital intensive technologies.

(2) For Developed but Depressed Areas, strategy, development policies and programs should be directed at solving problems that cause the growth of this region to be depressed, for example, the decline in market prices of

regional superior commodities. Policies that could be used include changing the commodities produced by the region concerned or diversifying the commodities produced for example: developing multiple cropping farming systems.

(3) For developing regions, the formulation of regional development strategies, policies and programs should be directed at encouraging regional economic growth by utilizing the economic potential of the regions. In this case, policy is needed to encourage investment of capital and skilled labor from outside the region.

(4) For underdeveloped regions development strategies, policies and programs should be directed towards expanding employment through labor-intensive technology. Food crops should be prioritized.

4. Results

4.1. Growth Analysis and Changes in Economic Structure

4.1.1. Analysis of Economic Structure

The following table 4.1 compares the rate of economic growth in Pasaman before the division with Pasaman and West Pasaman after the division.

Table-4.1. Regency Economic Growth Rate of Pasaman before the administrative division, and Pasaman and West Pasaman After division (%)

Before Division		**After Division**		
Year	Pasaman	Year	West Pasaman	Pasaman
1993	7.70	2005	6.54	5.61
1994	8.96	2006	6.36	5.77
1995	7.28	2007	6.41	5.92
1996	7.29	2008	6.40	6.08
1997	4.28	2009	6.26	6.12
1998	5.19	2010	6.39	6.14
1999	4.28	2011	6.33	5.36
2000	5.03	2012	6.33	6.01
2001	3.43	2013	6.41	5.89
2002	4.24	2014	6.09	5.87
Average	5.77		6.35	5.88

Source: Kabupaten Pasaman 1993-2003 Kabupaten Pasaman 2004-2015 serta Pasaman Barat Dalam Angka selama 2004-2015.

From Table 4.1. it can be seen that the average economic growth rate of Pasaman Regency before the division (1993-2002) was 5.77 percent. After the division, the growth rate increased only slightly to an average of 5.88 percent. In contrast, the growth rate of West Pasaman Regency had an average of 6.35 percent per year during the period 2005-2014. The growth rate before the division was relatively low and tended to decline because of the national monetary crisis of 1997/1998.

Economic growth before Division can be divided into two; before the monetary crisis (1993-1996) and after (1997-2002). The growth of the still unified region before the monetary crisis was relatively high at an average of 7.81 percent per year but this dropped to an average of 4.41 percent per year over the monetary crisis. After 1998 the economy of the regions (before and after division) was also influenced by the transition from central governmental domination to a more democratic system of the reform era after 1998. So the economy has been influenced both by the monetary crisis and regional expansion.

While the growth rate of the parent area increased slightly after division it never reached the levels before the monetary crisis indicating a significantly reduced potential for economic growth.

4.1.2. Analysis of Changes in Economic Structure

Table 4.2 shows the distribution of Pasaman GRDP before and after regional division. Prior to the division, the economy was still mainly agrarian as indicated by the relatively large role of the agriculture and mining sector, which was around 37.68 percent in 1993. However, after the division (2014) the role of the agriculture and mining sector was even greater (54.62 percent) and employing 60.2 percent of the workforce (Table 4.3).

In contrast, the contribution of the manufacturing sector of the parent region declined sharply from 10.3 percent before division to 4.62 percent and employing only 1.94 percent of the workforce. So after the loss of this part of the economic structure, the parent region became increasingly agrarian. In theory, this change in economic structure indicates a setback.

Table-4.2. Distribution of GRDP according to sector in Pasaman Regency before and after the establishment of West Sumater and of the province of West Sumatra

Business Sector	Before division		After Division		
	Pasaman		Pasaman	West Pasaman	West Sumatra
	1993*	1995*	2014	2014	2014
Farming, Forestry and Fisheries	35.48	35.02	52.44	45.02	25.4
Mining and Excavation	2.18	2.66	2.18	1.79	4.86
Processing Industry	**10.68**	**10.3**	**4.62**	**15.77**	**10.46**
Electricity. Gas and Water	0.27	0.31	0.10	0.03	0.15
Construction	8.18	8.4	4.63	6.13	8.99
Trade. Hotels and Restaurants	14.59	15.38	13.06	11.06	14.29
Financial Institutions,Building Leases, and Corporate Services	4.67	4.65	3.71	3.38	5.47
Transportation, Warehousing, Information and Communication	5.68	5.08	8.27	9.07	16.91
Other Services	18.26	18.22	11.83	10.51	12.72
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: * Pasaman Dalam Angka 1993-1996,
** Sumatera Barat Dalam Angka 2015.
Note: The contribution of the processing industry sector of the provincial capital, Pandang city in 2014 was 15.71% (SBDA 2015)

Table-4.3. Employment by Sector in Pasaman 2015

No.	Employment	Gender		Number of workers	
		Male	Female	Total	Percentage
1.	Farming	37,812	26,236	64,178	60.2
2.	Processing Industry	1,651	513	2,064	1.94
3.	Trade, Hotels and Restaurants	8,857	4,403	17,260	16.2
4.	Services	5,712	6,224	11,936	11.2
5.	Other	10,190	825	11,015	10.3
	Sum	64,122	42,331	106,453	100.00

Source: *Adapted from Kabupaten Pasaman Dalam Angka 2016

4.2. Comparative Advantage Analysis

This study compared sectors of the Regency GDP with those of the West Sumatra Province GRDP during the period 2012-2017 shown in Table 4.4.

Only three sectors had an LQ above 1: (1) agriculture, forestry and fisheries (2.15) (2) Water Procurement, Waste Management and Recycling (1.01) and (3) Government Administration, Defense and Social Security (1.24) indicating that these are the sectors with comparative advantage. This suggests that a development strategy for Pasaman must prioritize these sectors, especially in the agriculture, forestry and inland fisheries sectors which has the highest LQ. Development of these sectors would then encourage the growth of other sectors, especially the trade and services sectors.

The area of Protected Forest in Pasaman Regency was 200,539, 68 hectares in 2014 or 25.33 percent of the total protected forest in the province, the most extensive among the 19 districts/cities in West Sumatra. Pasaman also has 26,801, 27 ha of limited production forest area, 11.49% of the limited production forest area of the province. One of the seven 2010 -2015 development goals for Pasaman was to manage natural resources optimally and sustainably with a. Optimal use of natural resources and energy, b. Conservation of forest areas and c. The preservation of the environment. The current forestry products of Pasaman Regency are aloeswood, pine sap, honey, bamboo handicrafts, forestry seeds/seeds.

This protected forest can, under certain conditions, be developed for Community Forestry. This is a newly permitted type of utilization of state-owned protected forest primarily intended to empower and support the livelihood of local communities without the need to acquire management rights or utilization permits and for local communities. Community Forestry can also occur in production forest areas.

The dense forests and ranges of hills result in many small rivers in Pasaman and these have the potential to be used for fisheries and agricultural crops such as rice. Freshwater fisheries can be in (a) public waters and (b) constructed aquaculture ponds. Pasaman freshwater fisheries production in public waters is highest in West Sumatra at around 3,000 tons (2014). Fisheries in public waters generally use cage culture. Pasaman also has the second highest pond aquaculture production after Agam with total production of 46,809. 92 tons compared to 62,539.92 tons for Agam.

The other main agricultural product of Pasaman district is rice and it is one West Sumateran district that produces a surplus. Other crops, including horticultural ones, are also grown and exported to surrounding areas, to West Sumatra and the neighboring provinces of Riau, North Sumatra and Jambi. Conversely, many of the district's needs, in the form of goods and services originate from neighboring regions and larger West Sumatran cities including West Pasaman, Bukittinggi in Agam, Payakumbuh in Limapuluh Kota, Padang and North Sumatra. The

economic development of Pasaman Regency is highly dependent on the smooth flow of land transportation to these areas.

Table-4.4. Calculated Results of LQ and Economic Potential, 2012-2017 Pasaman

No.	Industry	Economic Growth (%)	Location Quotient Index	Regional Economic potential
A	Farming, Forestry and Fisheries	3.9	2,13	Potential
B	Mining and Excavation	3.6	0.43	No Potential
C	Processing Industry	3.9	0.44	No Potential
D	Electricity and Gas Supply	7.8	0.15	No Potential
E	Water Supply, Waste, Waste and Recycling Management	5.0	1.02	Potential
F	Construction	7.5	0.51	No Potential
G	Wholesale and retail trade, Automobile and Motorcycle repair and maintenance	5.8	0.84	No Potential
H	Transportation and Warehousing	8.0	0.38	No Potential
I	Accommodation and Food and Beverage industries	7.6	0.73	No Potential
J	Information and Communication	9.0	0.74	No Potential
K	Financial and Insurance Services	4.9	0.80	No Potential
L	Real Estate	5.2	0.70	No Potential
M/N	Business services	6.1	0.12	No Potential
O	Government Administration, Defense and Social Security	3.7	1.22	Potential
P	Educational Services	8.2	0.57	No Potential
Q	Health and Social Services	7.5	0.71	No Potential
R,S, T,U	Other services	8.0	0.51	No Potential
	Total GRDP	5.6		

Source: Adapted from (1) Kabupaten Pasaman Dalam Angka 2016, (2) Provinsi Sumatera Barat Dalam angka

4.3. Shift-Share Analysis

By using 2012-2017 Pasaman GRDP data and West Sumatra Province data in the same period, the three elements of the Shift-Share equation were calculated quantitatively to find out the components or elements of economic growth that drive economic growth in Pasaman The results of these calculations are shown in Table 4.4.

Table 4.5 shows that the Regional Share value is Rp. 737.41 million or 159.30 percent which shows that the contribution of external factors in the economic growth of the Pasaman is dominant. The neighboring regions, West Sumatra and the rest of the country have a major impact on the economic growth of Pasaman Regency, including its superior sectors, namely: (i) Agriculture, Forestry and Fisheries; (ii) Water Procurement, Waste Management, Waste and Recycling; (iii) Government Administration, Defense, and Social Security.

Interestingly, the Proportionality Shift value is very small. -79.42 (-15.11 percent) which means that the economic structure of Pasaman Regency has a small negative contribution to regional economic growth.

This is in line with the analysis of changes in economic structure stated above that after administrative division (2014) the contribution of the agricultural sector to Pasaman Regency's GRDP increased from 35.48 percent to 52.44 percent. Reduction in the contribution of the agricultural sector (or the overall primary sector) in an area is usually due to industrialization and indicates the economic progress whereas a growing contribution of the agricultural sector reflects the backwardness or underdevelopment of industrialization in the area. In this case, this decline occurred because of the expansion of Pasaman Regency into two districts since 2003, Pasaman and Pasaman Barat.

Differential Shift was calculated from 2012-2017 Pasaman and West Sumatra Province GRDP data to estimate qualitatively the components driving economic growth in Pasaman Regency. The results of these calculations are shown in Table 4.4.

Differential Shift was negative at - 232.30 million Rupiah (- 44.19 percent) which means that Pasaman Regency had no specific potential contribution to regional economic growth rather to economic decline. This is quite logical because Pasaman does not have any special potential resource that can drive rapid regional economic growth such as oil palm has in West Pasaman.

The total land area of Pasaman is almost the same as West Pasaman's, but West Pasaman has more cultivatable land. On the other hand, the area of land that cannot be planted in the Regency of Pasaman is abundant because most of the area is a range of hills which are protected forest. Besides that, the economy of Pasaman Regency is still very agrarian (52.44 percent) based on rice. However, rice production is not particularly high compared to other regencies like Solok. And, although Pasaman is the second largest producer of freshwater fishery products in West Sumatra after Agam District, this sector is still of relatively low value.

Table-4.5. Calculated Results of *Shift-Share Analysis* Pasaman Regency by sectors 2012-2017 (Rp. Million)

No.	Industry	Regional Share	Propor-sionality Shift	Differen-tial Shift	GRDP
A	Farming, Forestry and fisheries	429.23	-89.75	-71.23	268.25
B	Mining and excavation	16.46	-2.74	-2.60	11.12
C	Processing Industries	42.76.	-13.37	-15.42	13.98
D	Electricity and Gas Supplies	126.97	-26,34	28,04	128,67
E	Water Supply	867,38	-133,75	-126,30	607,33
F	Construction, wholesale and Retail Trade	37.51	14.79	-32.99	19.31
G	Automotive and Motorcycle repair	107.80	-1.66	-35.12	71.02
H	Transpotation and Wharehousing	35.03	15.09	-19.10	30.11
I	Accomidation and Food and Beverage	6.12	690,96	-2.59	4.23
J	Information and Communication	38.76	24.11	-25.64	37.22
K	Financial and Insurance Services	20.34	-3.71	-5.10	11.53
L	Real Estate	11.55	-688,80	-5.09	5.77
M,N	Business services	437.71	83.01	-236.28	284.44
O	Government Administration, Defense and Social Security	59.87	-31.76	-2.65	25.46
P	Educational Services	16.32	6.21	-6.75	15.77
Q	Health and Social Services	7.67	2.69	-4.59	5.77
R,S, T,U	Other services	6.59	776,99	-2.21	5.15
	Sum	837.41	-79.42	-232.30	525.70
	Percentage	159.30	-15.11	-44.19	100.00

Source: Adapted from (1) Kabupaten Pasaman Dalam Angka 2016, (2) Provinsi Sumatera Barat Dalam angka

4.4. Klassen Typology Analysis

This was used to formulate the development strategy of Pasaan Regency for the future. In this case, the indicators used were (a) Per capita income and (b) Economic growth rate. The results of these calculations are shown in Table 4.6.

Table-4.6. Klassen Typology Grouping of Regencies and Cities in West Sumatraaccording to 2007-2011 Per Capita Income and growth rate

Per capita Income	Economic growth rate	
	Above average	Below average
Above average	Developed area Padang City Bukittinggi city Padang Panjang City	Depressed Area Sawahlunto city Solok city Pariaman city Limapuluh Kota Regency
Below average	Developing Area Solok Regency South Solok Regency Payakumbuh City West Pasaman Regency	Underdeveloped area South Pesisir Regency Sijunjung Regency Tanah Datar Regency Padang Pariaman Regency Agam Regency Pasaman Regency Dharmasraya Regency

Klassen Typology Analysis indicates that when compared to the other 19 districts/cities in West Sumatra, Pasaman District is a Disadvantaged Region but West Pasaman Regency which used to be part of Pasaman is actually a Developing area. This means that with the separation of West Pasaman from Pasaman it has become more advanced than its parent area due to the greater potential of the West Pasaman region, especially in plantation crops and the oil palm industry.

In light of this, policies and programs for the development of Pasaman as a Disadvantaged Region (Syafrizal 199): should be directed at efforts to provide employment through the use of labor-intensive technologies and the main economic activities should continue to be agricultural activities that still use traditional technology The current agricultural and aquaculture sectors need to be further developed by training available labor to produce higher value products with a fairly broad demand and supported with improved infrastructure to get these products to markets outside the regency.

5. Conclusion

While West Pasaman has flourished economically after the administrative division from Pasaman Regency, this analysis shows the parent regency has not. The loss of the most of the profitable palm oil production sector and associated food processing industry to the daughter region has left it more heavily dependent on primary industries which now account for more than half of its GDP. The economic growth of Pasaman Regency is dominated by factors originating from outside the region.

Pasaman Regency has comparative advantages in (a) agriculture, forestry and fisheries with the large protected and production forest areas, surplus rice production and extensive freshwater fisheries. As Pasaman Regency remains an Underdeveloped Region hence development strategies should focus on the provision of employment though the use of labor-intensive technologies in these sectors that have comparative advantage. Nevertheless, to increase the added value of agricultural and aquaculture products, relevant agro-industry businesses should be developed, training and using surplus labor in the region.

Because of its high dependence on external markets, it is also necessary to develop infrastructure, especially transportation infrastructure, both within Pasaman Regency and those connecting the Regency with other regions, especially marketing centers to increase the effectiveness and efficiency of the leading sectors.

Acknowledgment

The authors would like to acknowledge the Directorate of Research and Community Service, the Directorate General for Research and Development, The Ministry of Research, Technology and Higher Education, who funded this research through research contract no : 050/UN.16.17/PP.RGB/LPPM/2018 (Fiscal year 2018).

References

Adek Irma Rosi (2016). *Strategic analysis of development of plantation prime commodity in kerinci regency.* Magister Thesis in Development Planning. Andalas University. Padang.

Adrimas (2017). Impac analysis of local government fragmenyation of economic development and local government performance in west sumatera A case Tudy of West Pasaman. *International Journal of Sciences and Research,* (73): Available: http://www.pontejournal.net/mainpanel/abstract.php?TOKEN=gRkgF5411G&PID=PJ-KPL67

Adrimas (2018). Analysis of economic growth and structure change and the implications for choice of development strategy A case Tudy of West Pasaman. *International Journal of Sciences and Research,* 74(6): Available: http://www.pontejournal.net/mainpanel/abstract.php?TOKEN=gRkgF5411G&PID=PJ-TL52R

Aidiyah, S. (2005). *The role of small scales industries in regional development in wonosobo regency.* Bogor Institute of Agriculture: Central Java.

Chun Yun Shi dan Yang Yang (2008). *A review of shift-share analysis and its applications in tourism.* Xuzhou Normal University and the Hongkong Plitechnical University.

Gufron (2008). *Regional development based on prime sector in lamongan regency.* East Java Province.

Han, L., 2016. "Analysis on the industrial competitivenes of beijing based on the shift-share analysis. Industrial economics system and industrial security engineering (ieis)." In *International Conference on Sydney, NSW, Australia.*

Harri, K. (2016). *Identification of prime subsectors in manufacturing and its development strategey in padang pariaman regency.* Magister Thesis in Development Planning. Andalas University. Padang.

Hodgkinson, A., 2005. "Location quoteients and Shift-share analysis: a low cost approach to regional development planning." In *Dalzel (Eds), Refereed Proceedings of th 29th Annual Economic and Regional Development Conference . New Zealand: AERU Research Unit.* pp. 299-312.

Jimmi, A. (2004). *Economic development in payakumbuh city.* Magister Thesis in Development Planning. Andalas University. Padang.

Leon (2004). *Comparative analysisof the manufacturing industri in the los angeles region by selected variabeles from 1972-1997.* Disertation Urban Planning University of California Los Angels.

Santoso, J. (2005). *Analysis of the role of agricultural sector in regional development in boyolali reegency.* IPB Bogor: Bogor.

Tiebout, C. M. (1956). Theory of local expenditure. *Journal of Public Economy,* 64(5): 416-24.