

Development of Center for Village Economic Growth: The Case Study of Lombok Barat Regency, Nusa Tenggara Barat Province, Indonesia

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Abstract This study aims to determine the leading sector or basis sector to be prioritized in developing the center of economic growth in rural areas of Lombok Barat Regency, Nusa Tenggara Barat Province. The method used is Location Quotient (LQ). The analysis result shows that the leading sector in Lombok Barat Regency, where the LQ value is greater than 1 for the period of 2010-2013 were electricity, gas and clean water, construction and services sector, while the others including to non-base sector. During 2010 to 2013 the basis sector in Lombok Barat Regency has changed slightly each year. This is indicated by the decline in productivity in the manufacturing sector in 2012 to 2013, so the sector is no longer become a basis sector in Lombok Barat Regency. However, for the long term, the center of rural economic growth is not only based on one basis sector alone because of the dynamics of development that causes the change. Recently, the Lombok Barat Government prioritizes the tourism sector, so that it can be a leading sector even not becoming a basis in establishing a center of rural economic growth. Refer to the results of the study, we propose the Government of Lombok Regency to prioritize electricity, gas and clean water in developing center of economic growth.

Keywords: rural, Lombok Barat, center of economic growth, location quotient

Cite This Article: Yodfiatfinda, Muhammad Rizal Taufikurahman, and Yoni Atma, "Development of Center for Village Economic Growth: The Case Study of Lombok Barat Regency, Nusa Tenggara Barat Province, Indonesia." *American Journal of Rural Development*, vol. 6, no. 1 (2018): 1-6. doi: 10.12691/ajrd-6-1-1.

1. Introduction

Growth-oriented development has had a positive impact on economic growth in Indonesia over the last decades. The government fueled development of industrial sector supported by the agricultural sector as input supplier. Such development orientation brings urban area to the industrialization and financial sectors with better infrastructure facilities. More public facilities, such as education, health, sport, tourism and modern market have created imbalance of society wealth between rural and urban area. On the other hand, rural areas grow with insufficient facilities and infrastructure with the agricultural sector considered as traditional sectors and relatively neglected. This condition fuels a wider gap between rural and urban areas.

This phenomenon is a consequence of adopting the growth poles development concept. Implementing the concept will form growth centers (cities) and is expected to create trickle down effects from the centers of growth. Nevertheless, the fact is not as simple like this. The opposite impacts such as draining resources from rural areas and moving inhabitant to the city (urbanization) are the common effect.

Significant disparities of development levels between urban and rural area exist and identifiable easily in most

countries in the world. Generally the disparities are the result of three sets of factors: natural differences, socio cultural conditions and policy decisions. Natural factors, such as differences in biosphere, climatic conditions, endowment with natural resources or geographical location, such as distance to harbor or a center of commerce, determine the potential for economic development of an area or a region. Some conditions, such as climate and natural endowments, are largely in variable, while others can be improved through providing infrastructure (roads for seclusion area and irrigation to overcome shortage of water).

Indonesian Government is seriously to narrow the gap by establishing the Ministry of Village, Development of Disadvantaged Regions and Transmigration. Develop the country from the periphery by strengthening the regions within the frame of the unitary state in order to increase economic condition is a mission of this ministry. In essence, national development must be fair, open, and participative and integrated, so that the existing regional development gap can be resolved. Local government involvement is very important to overcome the backwardness of a region. One of the proposed strategies is to develop center for village economic growth in rural area.

Concern to the mission, eastern region of the country is underpinning to be boosted by development program especially to support economic activities of small and

medium enterprises. For implementing the program, the Government establish center for village economic growth in many regencies in outside Java. One of the regency is Lombok Barat, located in the Lombok Island. Lombok Barat Regency is one of the regencies in the Nusa Tenggara Barat Province with an area of 1,053.92 km², located at 115.46 ° - 116.20 ° East Longitude and 8.25 ° - 8.55 ° south latitude. The Lombok Barat Regency consists of 10 districts with 122 villages and 820 hamlets. Gerung District is the capital of the Regency act as well as the center of government.

In 2014, the population of Lombok Barat Regency reached 644,586 people, consisting of 315,094 males (48.88%) and 329,429 inhabitants (51.10%). In 2010 IDR per capita of Lombok Barat Regency reached 11.68 million rupiah and this value increase to reach 15.72 million rupiah in 2015. The number of poor people in Lombok Barat Regency in 2014 is 111,100 people (17.2%).

Development of the village's economic center is an effort to reduce the development gap between rural and municipalities in Lombok Barat Regency. Nevertheless, it is important to know the basis sector of the region so that the economic growth center will have an optimal impact on the economy.

Rural area is important for urban to supply many kind of resources such as grain, vegetables, fruits, timber and animals products. [1,2] argue that agricultural is engine in rural development. It is marked by the natural condition and custom, specific economic structure and activities as well as distinct demographic and social characteristics. Rural populations produce 60 percent of the food consumed by them, whereas 90 percent of urban populations depend on the market for their food consumption (McMichael, [3]. In the same context [4] argue that increasing the productivity of agricultural sector is vital to insure food security of the people especially smallholder farmers. Adoption of practices and transfer of agricultural technologies can benefit to achieve this objective. [5] said that polarization between urban and rural areas is a consequence of rapid economic development that forms wealth gap and resistance to block development of society.

The main reason of widen the polarization of economic achievement between rural and urban is not equal the basic public service in the two regions. [6] argue that development concept to give attention to the economic sector only will widen the gab among regions. Therefore, it is importing to sorting out the current situation in effort to attain education justice between urban and rural areas, and studying the reasons and the countermeasures of the problem. In the Pakistan case, studied by [7] found that literacy, education and occupation were the major source of the wealth gap between rural and urban area. [8] argued that dwellers of rural area who migrate to urban region also been identified as a survival strategy utilized by the poor. Mainly, they go for seeking job or education purpose. Study conducted by [9] in Trengganu Malaysia, found significant relationships between education, income/salary, communication, safety and health and transportation and the quality of life in urban and rural area. Quality of life for people in urban area is better than those living in rural areas.

Development that has been more emphasis on economic growth actually creates increasingly large regional disparities.

Investment and resources are absorbed and concentrated in urban and growth centers, while the hinterlands region is experiencing excessive resource depletion. As an illustration of the imbalance that occurs between rural-urban, eastern and western Indonesia, and Java and outside Java [10].

[11] described the periphery as being somewhat neglected in New Economic Geography models wherein rural and peripheral regions are assumed to be subservient to the core region (s). Dominated by agriculture, the periphery has been conceptualized as a place of constant returns to scale where only immobile resources are employed – the assumption being that mobile resources move to the more productive and profitable core regions. In line to the suggestion, [12] argued that economic activities in rural region conducted by the people have made productive utilities of the enormous natural resources as inputs for agriculture, forestry, mining, and other primary production. More recently, the growth of connectivity through improved internet accessibility has increased the desirability of rural locations and reduced the costs associated with outside of an urban region. Indeed, as rural economies are increasingly subsumed into global circuits of value driven by rapidly changing information technology and globalization trends rural regions are becoming increasingly integrated into wider economic processes.

[13] has analyzed that in Bantul Regency leading food crops commodities were determined through an overlay process using the ArcGIS software covering analysis results of LQ, SSA (shift share analysis) and agricultural commodities zone maps based on AEZ (agricultural ecological zone) with scale 1:50.000. The result showed that the wetland paddy is a leading commodity in the study area. Based on comparative and competitive advantages, and compatibility with agricultural commodities zone based on AEZ, wetland paddy is the most leading commodity compared to corn, soybeans and peanuts.

Rural area is characterized by dominant agriculture livelihood of the people. The people in developing countries who live in rural area has been depend on agriculture sector for meet the daily needs [14]. [15] stated that there are the linkage between agricultural productivity and poverty reduction. The multiple pathways which increase agricultural productivity to reducing the poverty through real income changes, employment generation, rural non-farm multiplier effect and food price effect. The case study toward 12 countries concluded that countries with highest agricultural growth for worker conducted the greatest rural poverty reduction [16].

[17] said that the agricultural sector plays an important role in reducing poverty in rural areas compared to urban areas. Rural areas that are full of farming activities should be an important starting point to protect and empower farmer, especially small farmer. The agricultural sector is key and can be a leading sector in reducing poverty in aggregate, since the greatest poverty is in rural areas. Through the concept of agribusiness, farmers as the main subject of poverty program must also be empowered from the internal side of farmers so that at one time it can develop their business and life. Moreover, the poverty incidence data shown that the percentage of population living under poverty in 2014 was 8.2 and 13.8 in urban

and rural area respectively [18]. What we can learn from the data is that development growth in the rural is slower than urban. Average distribution of poor family by sector during 1998 up to 2002 is 59.44 percent (agricultural), 10.42 (industry) and 30.14 (services).

Regional economic development is generally defined as the process that causes the per capita income of the population of a region increases in the long term. Regional economic development is a program by which local governments and all components of the community manage the various resources that exist and forming a partnership pattern to create a job field new and stimulate economic growth in the region.

Since many years, location quotients (LQ) method has widely used in regional studies. For instance [19,20,21,22] are among others. [23] argue that LQ by using input-output tables is the appropriate approach to assess regional economic. [24] said the LQ is a useful tool in studying regional economics.

2. Materials and Methods

In this study, LQ was employed to identify the basis and non-basis sector in the economics of Lombok Barat Regency. LQ is an index to compare commodities at the district level with commodities at the regency level. Operationally, LQ is defined as the percentage ratio of total activity in sub-region i^{th} to the percentage of total activity to the observed region. [25]. The LQ method compares the share of employment/total value/added value for a particular sector in an area compared to the share of employment / production / added value for the same sector of national level. The purpose of this LQ method is to identify the leading sectors (bases) within a region [26].

Location quotient (LQ) analysis technique is a beginning manner to know the ability of a region in a particular sector of activity. [27] argue that LQ is the tool most often employed to identify the basis and non-basis economic sector in a region. In regional economics, basic activities is defined as sector that produce goods and services for export outside the region, and non-basis activities that are produced for local consumption. The basis sector stand for it importance role of payment for buying the non-basis production from outside region. To be used as a supporting input in arranging development planning, this method has not given final conclusions, The results is a tentative conclusion which remains to be reviewed and examined through another analytical technique that can answer whether the above provisional conclusions are proved true. It depend on roadmaps of development made by the government.

The formula of LQ is:

$$LQ = (X_{ij} / X_i) / (X_{ij} / X_j)$$

where:

X_{ij} = total production of j-th commodity in the district

X_i = total production of i-th economic activity in the district

X_j = total production of j-th commodity in the regency

X = total production of i-th economic activity in the regency.

Interpretation of LQ analysis result as following:

1. If value $LQ > 1$, means relatively concentration of production activity of a commodity occur in the district

level compare to the total production in regency. On the other word, there is concentration of activity and surplus in district. The commodity is considered as a basis sector.

2. If value of $LQ = 1$, shows the district has production activity equal to the activity in the regency level.

3. If value of $LQ < 1$, means the district has market size relatively smaller than production activity in the regency level, or it can be said there is deficit production in the district.

3. Results and Discussion

3.1. General Description of the Lombok Barat Regency

Lombok Barat Regency is one of the regencies in Nusa Tenggara Barat Province located on the Lombok Island. Prior to 2008 its territory were merged with North Lombok Regency which later expanded through the ratification of Act. No.26/2008. Most of the land of Lombok Regency is covered by tropical forest (protected forest and production forest) to reach 45,16% of total area of Lombok Barat Regency. Land for agricultural production is using technical irrigation and semi technical and rain-fed area of 13,208,71 ha or univalent to 15.31% of the area of the Regency, while mooring/plantation area of 12,957 hectares or 15.02% of Lombok Barat Regency. Area for the settlement reached 4,572 ha or 5.30%.

3.2. Geographical position and Administration

Geographically, Lombok Barat Regency laid on position of 115,46°-116,20° east and 8,25°- 8,55° south, with administration boundary as follow:

- North: Lombok Utara Regency
- South: Indian Ocean
- West: Lombok strait and the City of Mataram
- East: Lombok Tengah Regency

The total area of Lombok Barat Regency is 1,053.92 km². Administrative of the regency consists of 10 districts, 119 villages, 3 urban villages and 813 sub villages. The Sekotong Tengah district has the largest area with 529,38 km square or 50,23%, while the smallest district is Kuripan with area of 21.56 km² or 2.05% of total land area in Lombok Barat Regency. The names of the districts and sub-district area can be seen from Table 1 below.

Table 1. Area of Lombok Barat Regency, by District

No	District	Area (Km ²)	Precentage (%)
1	Gunungsari	89,74	8,51
2	Batulayar	34,11	3,24
3	Narmada	107,62	10,21
4	Lingsar	96,58	9,16
5	Kediri	21,64	2,05
6	Kuripan	21,56	2,05
7	Labuapi	28,33	2,69
8	Gerung	62,30	5,91
9	Lembar	62,66	5,95
10	Sekotong	529,38	50,23
	Total	1.053,92	100,00

Source: Master Plan of Lombok Barat Regency.



Figure 1. The Lombok Barat Regency (Google, Designmap)

Number of population of Lombok Barat Regency by sex consists of 303,210 men or about 48.92% and 317,202 women or about 51.08%. This data shows that the women population in Lombok Barat Regency is more dominant than male. Detail of population can be seen in Table 2 the following.

Table 2. Number of Population and Sex Ratio

District	Number of Population	Sex Ratio
1. Sekotong	58.154	99,03
2. Lembar	45.998	95,68
3. Gerung	77.007	89,87
4. Labuapi	62.918	94,83
5. Kediri	56.07	95,27
6. Kuripan	35.215	96,87
7. Narmada	91.041	94,64
8. Lingsar	65.677	95,41
9. Gunungsari	81.358	97,87
10. Batu Layar	46.974	99,70
Total	620.412	95,59

Source: Statistic of Lombok Barat Regency, 2014.
Sex ratio: number of men against 100 women.

The economic structure of Lombok Barat Regency is reflected in the role of each sector to the resulting GRDP. During the last 5 (five) years, the most contributor sectors to the GRDP of Lombok Barat Regency are trade, hotel and restaurant sector, agriculture sector and other services sector. Agricultural sector still plays a major role in the economic structure in the Lombok Barat Regency; however since 2010 to 2014 it appears that there is shifting patterns. Percentage of agricultural business field slowly decreases and replaced by other economic business fields that can be seen from the role of each of these business fields on the formation of Lombok Barat GRDP. Construction and business fields of large and retail trade, auto and motorcycle repairs are the next largest field of business after agriculture. If in 2010 the construction business field is larger percentage than the field of large and retail trade, car and motorcycle repairs; but in the year of 2014, the reverse phenomenon occurs where the field of large and retail trade, car and motorcycle repairs percentage greater than the field of construction business.

Table 3. Contribution of Economic Sector to GRDP of Lombok Barat Regency based on Current Price, 2010 - 2014

No	Sector	2010	2011	2012	2013	2014*)
1	Agriculture	26,23	26,46	26,18	25,33	20,89
2	Mining and Quarry	3,97	3,93	3,93	3,96	4,57
3	Manufacturing	3,96	3,55	3,42	3,34	3,37
4	Electric, Gas and Clean Water	0,76	0,75	0,77	0,78	0,85
5	Construction	11,51	11,89	12,60	13,01	14,34
6	Trading, Hotel and Restaurant	22,39	22,47	22,81	23,42	23,63
7	Transportation and Communication	11,2	10,73	10,31	10,09	10,2
8	Finance, Rent and Services	4,08	4,07	4,10	4,16	4,39
9	Other services	16,18	16,16	15,88	15,91	17,74
	GRDP	100,00	100,00	100,00	100,00	100,00

Source : Statistic of Lombok Barat Regency
Note : *) Tentative.

Table 4. Growth Rate of GRDP of Lombok Barat Regency based on Constant Price 2000 by Sector 2010-2014 (%)

No	Sektor	2010	2011	2012	2013	2014*)	Rata-Rata
1	Agriculture	1,93	4,80	3,78	3,50	1,97	3,20
2	Mining and Quarry	6,10	6,35	6,99	4,07	4,54	5,61
3	Manufacturing	3,24	4,64	3,46	4,27	3,52	3,83
4	Electric, Gas and Clean Water	6,83	7,91	8,00	9,59	8,42	8,15
5	Construction	8,68	8,29	7,03	6,98	7,72	7,74
6	Trading,, Hotel and Restaurant	5,69	6,95	6,33	6,67	5,97	6,32
7	Transportation and Communication	5,52	6,08	5,11	5,07	5,55	5,47
8	Finance, Rent and Services	5,56	7,06	6,11	6,25	5,43	6,08
9	Other services	4,23	3,95	2,59	3,29	5,97	4,01
	GRDP	4,78	5,94	5,04	5,10	5,08	5,19

Source : Statistic of Lombok Barat Regency

Note : *) Tentative.

During the period of 2010 - 2014 the economic growth of Lombok Barat Regency is quite stable. The increase and decrease is not too sharp. Average annual economic growth is still above 5 percent. The highest growth rate occurred in 2011 which reached 5.58 percent, while the lowest occurred in 2010 at 4.78 percent. The low rate of growth is more due to the fluctuation in the growth rate of several economic sectors, especially the agricultural sector which is the dominant sector that has experienced significant fluctuations. In 2013 the economic growth rate of Lombok Barat Regency experienced a slight decrease due to the declining growth rate of several sectors forming GRDP. The economic growth rate in 2013 was 4.99 percent and increased to 5.08 percent in 2014.

3.3. Income Per Capita

GDRP per capita of Lombok Barat Regency based on current price is estimated at IDR 7,966,270 in 2012, 9.82 percent higher than the previous year. Along with the population growth in 2012 which is estimated at 1.17

percent, the increase of GDRP per capita bring significant contribution to economic prosperity of the people of Lombok Barat Regency. This is supported by GDRP growth at constant prices of year 2000 which is 1.39 percent, which has an impact on per capita GDRP growth at constant prices of 00 although the increase is not as high as 2011. While for 2013 and 2014 GDRP per capita of Lombok Barat Regency based on current prices is projected to be respectively IDR 8,726,313 and IDR 9.767.194 and based on current price 2000 is IDR 3,328,262 and IDR 3,461,797 respectively. (Table 5)

3.4. Basis Sectors

The economic potential to be investigated is defined as the basis sector in Lombok Barat Regency. The basis sectors mean those sectors that export goods and services to places outside the economic boundaries of the region. The input of their goods and services may come from outside the boundaries of the economy of the society itself (Glasson and Marshall, 2007).

Table 5. GDRP per Capita Lombok Barat Regency Based on current price and constant price 2000 (2010-2014)

Description	2010	2011	2012	2013	2014*)
(1)	(2)	(3)	(4)	(5)	(6)
I. Current Price					
1. GDRP per capita	6.585.272	7.386.388	8.152.878	8.945.071	9.769.194
2. Growth Index (2000 = 100)	286,05	320,84	354,14	388,55	420,31
3. Growth rate (%)	13,02	12,17	10,38	9,72	10,43
II. Constant Price					
1. GDRP per capita	2.951.375	3.095.447	3.213.618	3.338.051	3.641.797
2. Growth Index (2000 = 100)	128,2	134,46	139,59	145,00	150,37
3. Growth rate (%)	6,82	4,88	3,82	3,87	4,01

Source : Statistic of Lombok Barat Regency

Note : *) Tentative.

Table 6. LQ of Lombok Barat Regency, 2010-2013

No	GDRP Sector	Value of LQ				Note
		2010	2011	2012	2013	
1	Agriculture	1.05	0.95	0.89	0.90	Non Basis
2	Mining and Quarry	0.14	0.19	0.27	0.26	Non Basis
3	Manufacturing	1.12	1.04	0.97	0.98	Non Basis
4	Electric, Gas and Clean Water	1.56	1.43	1.36	1.36	Basis
5	Construction	1.59	1.50	1.43	1.47	Basis
6	Trading,, Hotel dan Restaurant	0.72	0.66	0.59	0.58	Non Basis
7	Transportation and Communication	0.32	0.31	0.29	0.30	Non Basis
8	Finance, Rent and Services	0.87	0.78	0.72	0.71	Non Basis
9	Other services	1.43	1.31	1.24	1.22	Basis

The basis sector may differ from region to region. This is due to geographical differences, conditions of society, human and natural resources. The basis sector can be identified by several approaches. One of the commonly used methods is Location Quotients (LQ). LQ method is used to identify superior commodities in a region. The following is the LQ value of each sector in Lombok Barat Regency 2010-2013.

By using the LQ formula, the result from this study as presented in Table 6, shows that the leading sectors in the Lombok Barat Regency (the value of $LQ > 1$) for the period of 2010-2013 are electricity, gas and clean water sector; building sector, and services sector. This result explains that demand of people to basic infrastructure is high. Economic growth increase purchasing power of society and people desire to obtain a better live for their family. Such phenomenon is common to occur in an emerging developing region. Other sectors of these three sectors are non-base sector. During the period of 2010 to 2013 the basis sector in Lombok Barat Regency has changed slightly. This is evidenced by the decline in productivity in the manufacturing sector in 2012 which declined until 2013, so this sector is not a base sector again in Lombok Barat Regency.

4. Conclusion

To develop center or village economic growth in Lombok Barat Regency, based on the calculation result by using LQ formula shows that the leading sector (value $LQ > 1$) for the period of 2010-2013 were electricity, gas and clean water, construction and services sector, while the others were including to a non-base sector. During 2010 to 2013 the basis sector in Lombok Barat District has changed slightly each year. However, this is not a permanently suggestion, because it is also influenced by the priority in development program conducted by the government. For example, the Nusa Tenggara Province decided tourism as focus in creating regional income, therefore tourism can be a leading sector after next year.

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