

Potential Analysis of the Development of the Teluk Aru Region in District Level

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Abstract - The purpose of this research is to analyze the contribution of Teluk Aru region in economy of Langkat Regency, to analyze development of Teluk Aru region in development of Langkat Regency, to analyze sector which become sector base of economics of Teluk Aru region. Analysis method used in this research is mixed method (Mix Method) with descriptive analysis, Klassen typology and Location Quotation (LQ). The data used in this study is the data of the Secondary Data of ADHB and ADHK PDRB 2000 in the period 2003-2012 according to the sub-district in Teluk Aru region Langkat Regency and GDP data of Langkat ADHB and ADHK in 2000 and other relevant data. The result of this research concludes that the contribution of PDRB in Teluk Aru region shows great potential in Langkat district economy. Result Analysis of development of Teluk Aru region by Klassen method indicate that Aru Gulf region included in Region which is advanced but depressed compared with North Sumatera Province. The result of LQ analysis of Teluk Aru area shows that the sector that has the potential to become the basic sector is Agriculture and Mining Sector and Quarrying sector.

Keywords : Economic contribution, classification of regional development, basic and non-base sectors.

I. INTRODUCTION

Langkat Regency is divided into 3 (three) Development areas namely:

1. Development Area I (Langkat Hulu)
2. Development Area II (Langkat Hilir)
3. Development Area III (Teluk Aru)

Development Area III (Teluk Aru) covers 7 sub-districts namely Pematang Jaya Sub district, Besitang Sub-district, Pangkalan Susu Sub-district, West Brandan Sub-district, Sei Lapan Sub-District, Babalan District and Gebang Sub-District. The total area of Teluk Aru is 1,706.47 km² (27.25% of the width of Langkat Regency) with a population of 278,611 people (27.49% of the population of Langkat Regency). The closest distance to Aru Aru District with Langkat Regency (Stabat) is 32 km, Gebang Subdistrict and the furthest distance in Teluk Aru is 75 km from Langkat district of Pematang Jaya District (BPS Langkat Regency, 2016).

The distance from the center of the capital of the district and the vast territory makes the range of public services which are the basic needs of inefficient citizens, so it is necessary to structuring the area in the Law no. 23 of 2014 on Regional Government stated that the regional arrangement aims to:

- a. Membujudkan effectiveness of local government administration
- b. Accelerate the improvement of people's welfare
- c. Accelerate the improvement of the quality of public services
- d. Improve the quality of governance
- e. Improve national competitiveness and regional competitiveness
- f. Maintaining uniqueness of customs, traditions, and culture.

Table 1. Distance District within the Teluk Aru Region to the Capital Langkat Regency

The district capital	districts	Jarak (km)
Stabat	Gebang	32
	Babalan	40
	Sei Lapan	40
	Brandan Barat	45
	Besitang	61
	Pangkalan Susu	63
	Pematang Jaya	75

Source: BPS Langkat Regency, 2016

Table 2. Target, Realization and Percentage of Original Regional Revenue per sub-district in Teluk Aru Region.

districts	Target (Rp)	Realization (Rp)	%
Gebang	421.167.000	439.274.402	3,31
Babalan	722.616.000	655.509.844	4,95
Sei Lapan	462.739.000	471.845.457	3,56
Brandan Barat	282.496.000	183.507.266	1,38
Besitang	866.300.000	867.081.378	6,54
Pangkalan Susu	1.396.110.000	766.065.932	5,78
Pematang Jaya	113.938.000	119.384.173	0,90
Number of Teluk Aru	2.870.652.110	3.502.668.452	26,42
Number of Langkat Regency	14.028.334.000	13.253.522.433	

Source: BPS Langkat Regency, 2016

Law no. 33 of 2004 on the balance of central and regional finances of each district / municipality government as an autonomous region is required to develop and optimize the potential of areas excavated from within the territory concerned consisting of local taxes, regional retributions, separated wealth management and others from the legitimate regional revenue that is the source of the Original Regional Revenue, the local government has an obligation to improve the people's welfare level.

II. LITERATURE REVIEW

According to Nugroho and Dahuri (2004), there are 5 (five) stages that can describe the growth and development of the region, namely:

1. Territory is characterized by a dominant industry. Regional growth is heavily dependent on products

produced by the industry, including oil, plantation and agricultural products, and other primary products. Such industries are owned by many countries at the beginning of their growth.

2. Stages of complex exports. This stage illustrates that the region has been able to export in addition to dominant commodities as well as commodity related. For example, the dominant commodities previously exported are crude oil, so in the second stage the region also exports industrial (method) mining technology (backward linkage) and derivative products from petroleum (forward link) such as premium, diesel and plastic raw materials.
3. Stages of economic maturity. This third stage shows that the economic activity of the region has diversified with the emergence of import substitution industry from outside the region. The third stage also provides a sign of regional independence compared to other regions.
4. Stages of metropolis formation (regional metropolis). This stage shows that the region has become the center of economic activity to influence and serve the needs of suburban goods and services. In this stage the definition of functional areas can be interpreted that the economic activity of the local area serves as a binder and control of other cities. In addition, the volume of economic activity of exports is very large, accompanied by a significant increase in imports.
5. Stages of technical and professional progress (technical professional virtuosity). This stage shows that the region has given a very real role to the national economy. In developing areas of relatively sophisticated, new, efficient and specialized products and production processes. Economic activity has relied on the invasion, modification and imitation that lead to the fulfillment of individual satisfaction rather than the interests of society. Regional economic system becomes complex (economic reciprocating system), linking one activity with other economic activity.

Expansion of the region in principle aims to improve the welfare of the community, by increasing and accelerating services, democratic life, regional economy, regional potential management, security and order, and harmonious relations between regions and centers. In essence the goal of regional expansion as an effort to increase resources in a sustainable manner, enhancing harmonious developments between regions and between sectors, strengthening national integration which as a whole can improve the quality of life. Expansion of regions in Indonesia is the formation of new administrative areas at the provincial and municipal and

district levels of the parent. The latest legal basis for regional expansion in Indonesia is Law no. 32 of 2014 on Regional Government.

Expansion of the region will present a new growth center and cities that will be the center of local activities as well as the regional activity center. Government Regulation No.26 of 2008 states that the National Urban System consists of National Activity Center (PKN), Regional Activity Center (PKW), and Local Activity Center (PKL). PKL is stipulated by the Regional Regulation concerning Provincial Spatial Planning based on the proposal of regency / city government, after consultation with the Minister. PKN, PKW, and street vendors can be:

- a. Megapolitan area;
- b. Metropolitan area;
- c. Large urban areas;
- d. Medium urban areas; or
- e. Small urban areas.

The street vendors as referred to in Article 11 paragraph (1) of Government Regulation No. 26 of 2008 shall be stipulated by the following criteria:

- a. Functional or potential urban areas as centers of industrial and service activities serving the scale of districts or sub-districts;
- b. A functioning urban area or potential as a transport node that serves the scale of the district or some sub-districts. Medium urban areas are defined as urban areas with criteria for population of more than 100,000 (one hundred thousand) to 500,000 (five hundred thousand) souls.

The strategic area from the point of interest of economic growth as referred to in Article 45 of Langkat District Regulation Number 9 Year 2013 paragraph (3) letter a is stipulated by criteria:

- a. Has a fast growing economic potential
- b. Having a leading sector that can drive economic growth
- c. Has export potential

Supported by infrastructure network and supporting facilities for economic activities;

- d. Have economic activities that utilize high technology
- e. Serves to maintain the level of food production in order to realize food security
- f. Serves to maintain the level of production of energy sources in order to realize energy security; and
- g. Defined to accelerate the growth of lagging regions.

(2) The distribution of strategic areas from the point of economic interest includes:

- a. Development of integrated economic zones (terminals, markets, trade centers) located in Stabat Sub-district;
- b. Local Promotion Activity Center (PKLp) established in Kec District;
- c. Sea port located in Pangkalan Susu, Tanjung Pura and Gebang Sub-districts;
- d. Industrial area located in Kecamatan Pangkalan Susu;
- e. Pulau Sembilan located in Pangkalan Susu Sub-district;
- f. Disadvantaged areas located in District of Pematang Jaya; and
- g. Minapolitan located in Pangkalan Susu Sub-district.

III. RESEARCH METHODS

1. Descriptive analysis, which is a quantitative analysis used to facilitate the analysis of tables and graphs simply to get a picture of the economic growth of the Teluk Aru region using GDP at constant prices with the base year 2000 and at current prices,
2. The analysis used to see the development development of each sub-district within the Teluk Aru region is Klassen Tipologi. If the regional development is seen from comparing the rate of economic growth of the region with the rate of economic growth at the national level on the one hand and the per capita income of the region with the national per capita income on the other, the regional development matrix can be explained as follows:

Table. 3. Matrix Regional developments

Income Per Capita (Y) Economic Growth (G)	$Y_i > Y$	$Y_i < Y$
$G_i > G$	The area is advanced	The area is growing
$G_i < G$	The area is stagnant	Backward area

(Sirojuzilam, 2015)

3. The analysis to determine the base and non-base sectors in the Aru Gulf region economy uses Location Quotient (LQ) analysis. The location quotient (LQ) is a comparison of the magnitude of the role of a sector / industry in a region to the magnitude of the sector / industry's role nationally. There are many variables that can be compared, but the common ones are the added value (income level) and the number of jobs. The formula is as follows:

$$LQ = \frac{xi / PDRB}{Xi / PNB}$$

Information:

LQ: Location Quotient Value

xi: Value added sector i in region of Teluk Aru

GRDP: total GDP of Teluk Aru region

Xi: Value added sector i in Langkat District

GNP: Total GDP of Langkat Regency

If the LQ Value > 1. This means that the sector's role in the area is more prominent than the sector's role nationally and if the LQ value < 1, it means that the sector's role is smaller than the sector's role nationally (Tarigan, 2005).

IV. RESULTS AND DISCUSSION

The calculation of Gross Regional Domestic Product (PDRB) according to Kecamatan in Langkat Regency aims to find out the economic picture of Langkat Regency to the sub-district level by looking at the role of each economic sector in each sub-district and how far the role of each district to the district (BPS Langkat Regency 2010).

Table. 4. GDP contribution on the basis of the prevailing price of Teluk Aru Area to Langkat Regency in 2003-2012 (millions of Rupiah)

Districts	Average	Contribution (%)
Gebang	573.661,95	4,39
Babalan	546.745,16	4,19
Sei Lapan	572.161,45	4,38
Brandan Barat	276.342,89	2,12
Pangkalan Susu	1.846.942,62	14,14
Besitang	1.253.938,46	9,60
Pematang Jaya	182.301,55	1,40
Number of Teluk Aru	5.252.094,09	40,22
Number of Langkat Regency	13.058.932,34	

Source: BPS Kab. Langkat, 2006; 2010; 2013 (Data processed results)

Table 4. shows that the contribution of Regional Gross Regional Domestic Product (PDRB) of Teluk Aru Region to Langkat Regency GRDP in the period of 2003-2012 averaged 40.22% based on the calculation of PDRB of prevailing price where Pangkalan Susu Sub-district contributed 14.14% and Besitang Sub-district contributed 9,

60% of the total contribution of Teluk Aru region to Langkat Regency.

$$LQ = \frac{xi / PDRB}{Xi / PNB}$$

Table 5. Gross Regional Domestic Product (PDRB) contribution at constant price of 2000 Teluk Aru Area to Langkat Regency in 2003-2012 (millions of Rupiah)

District	Average	Contribution (%)
Gebang	297.062,88	4,57
Babalan	288.355,65	4,44
Sei Lapan	317.821,34	4,89
Brandan Barat	148.709,47	2,29
Pangkalan Susu	673.002,20	10,35
Besitang	587.708,80	9,04
Pematang Jaya	84.943,48	1,31
Jlh Teluk Aru	2.397.603,81	36,88
Jlh Kab. Langkat	6.500.783,14	

Source: BPS Kab. Langkat, 2006; 2010; 2013 (Data processed results)

Table 5 above shows that GDP at constant prices in 2000 Teluk Aru region contributes 36.88% to the formation of Langkat Regency GRDP. The calculation result of GRDP with constant price is smaller than the calculation of GDP of current price, where constant price has removed the influence of inflation on its GRDP calculation. Pangkalan Susu Sub-district still gives the biggest contribution (10.35%) and followed by Besitang Sub-district by 9.04%.

Kecamatan Pangkalan Susu has a big contribution in forming Langkat Regency GRDP from Mining and Quarrying sector. Pangkalan Susu Sub-district has Oil and Gas mining which is the oldest oil and gas field in the history of mining and petroleum industry in Indonesia managed by Pertamina EP Field Milk Base, Asphalt Industry and quartz sand used in glass industry.

Besitang Sub-district has 7 (seven) large / medium industries, 11 (eleven) small industries and 62 (sixty two) households making a significant contribution to PDRB.

The classification of the development of the Teluk Aru region can be seen using the Klassen Analysis Method (Typology Klassen). In principle, the analysis of Klassen can be divided into 2 (two) parts, namely static analysis and dynamic analysis. Static analysis only sees regional classification based on certain period or year, whereas dynamic analysis is more looking at regional development by observing it from 2 (two) momentum that is initial momentum and final momentum. By knowing both momentum, it can be seen the direction of the development of each region as well as see the starting position and the end position of the regions (Sirojuzilam, 2011).

Table. 6. Average GDP per capita ADHK 2000 Teluk Aru Area year 2003-2012

District	Average GDP per capita of Teluk Aru region (Rupiah)	Average PDRB per capita of Langkat Regency (Rupiah)
Gebang	6.610.215,83	6.745.128,50
Babalan	4.831.475,10	
Sei Lapan	6.359.151,62	
Brandan Barat	6.565.316,46	
Pangkalan Susu	12.494.354,11	
Besitang	12.239.421,84	
Pematang Jaya	6.203.510,29	

Source: BPS of Langkat Regency, 2006; 2010; 2013 (Data processed results)

Table 6. above shows that Pangkalan Susu District has the highest per capita GRDP of ADHK 2000 among other sub-districts namely Rp.12.494,354 even higher than the average of PDRB per capita ADHK 2000 Langkat Regency which is in value Rp. 6,745,128,50. District with the smallest PDRB perkapita found in Babalan sub-district of Rp. 4,831,475.10

Table 7. Economic growth rate Teluk Aru Region ADHK 2000 in 2012-2013

District	Average economic growth rate 2003-2012 (%)	Average economic growth rate of 2003-2012 (%) Kabupaten Langkat
Gebang	5,02	4,25
Babalan	5,52	
Sei Lapan	7,71	
Brandan Barat	4,66	
Pangkalan Susu	7,75	
Besitang	4,92	
Pematang Jaya	1,99	

Source: BPS of Langkat Regency, 2006; 2010; 2013 (Data processed results)

The highest growth rate is owned by Pangkalan Susu Sub-district (7.75%) and Sub-district of Sei lepan (7,71) while the lowest is Pematang Jaya Sub-district. Pematang Jaya Sub-district is a subdistrict of the Besitang District and milk bases; GRDP given by the agricultural sector is very dominant compared to other sectors to form PDRB Kecamatan Pematang Jaya. This is in accordance with the opinion of Jhingan (2010) that one of the characteristics of economic growth is the change of economic structure from the agricultural sector to the industrial and service sectors, while the District Pematang Jaya seen slower rate of economic growth compared to other districts in the Teluk Aru Region because the agricultural sector the more dominant has not changed to the industrial and service sectors.

After doing the calculation by Klassen method using data of difference between economic growth rates of Teluk Aru region with economic growth rate of Langkat Regency. Comparison between incomes per capita of Teluk Aru region with per capita income of Langkat Regency hence obtained result like matrix below:

Tabel.8. Matrik perkembangan daerah di Wilayah Teluk Aru

PDRB percapita (Y) Ekonomi Growth (G)	Y1 > Y	Y1<Y
	The area is advanced Kec. Pangkalan Susu Kec. Besitang	The area is growing Kec. Gebang Kec. Babalan Kec. Sei Lapan Kec. Brandan Barat
G1 >G		
G1<G	The area is stagnant -	Backward area Kec. Pematang Jaya

Source: BPS of Langkat Regency, 2006; 2010; 2013
(Data processed results)

The areas included in the category of advanced areas are Pangkalan Susu and Besitang Sub districts. With GRDP per capita higher than Langkat Regency PDRB and economic growth is also higher than the economic growth of Langkat Regency make these two sub-districts are categorized as a developed region, the main sector forming GRDP Pangkalan Susu district is mining and quarrying sector in 2003-2012 ADHK 2000 has a flat the value of 373,912.75 million of rupiah while the main sector of Gross Regional PDRB Besitang is the manufacturing sector with the average value of GRDP in 2003-2012 ADHK 2000 amounted to 283,841.93 million rupiah.

Sub districts in the Teluk Aru region included in the category of developing areas of the District Gebang, District Babalan, West Brandan District and District Sei. Lapan where the PDRB per capita value of these sub-districts is smaller than the PDRB per capita of Langkat Regency and the economic growth of these sub-districts is bigger than the economic growth of Langkat Regency. Particularly for Sei Lapan Sub-district based on research conducted by Wan Mukhlis (2001) mentioned that Sei Lapan Sub-district has the potential of regional development with industrial area of Pangkalan Geland while District of Pematang Jaya belongs to subdistrict category whose area is relatively backward where PDRB per capita and its economic growth is smaller of GDP per capita and growth rate of Langkat Regency.

V. CONCLUSION AND SUGGESTION

A. Conclusion

1. Based on data of PDRB Kecamatan in Teluk Aru region year 2003- 2012 based on constant price of year 2000 indicates that Teluk Aru region has big contribution in economy of Langkat Regency that is equal to 38,66% and based on GRDP based on current price contribution Teluk Aru region equal to 40 , 22% so it has potential to develop its territory.
2. Result of classification of development of Teluk Aru If region by Klassen method can be seen that Teluk Aru region including stagnant area (advanced area but depressed). For the development of the sub-districts within the Teluk Aru region, Besitang sub-district and Pangkalan Susu sub-district belong to the advanced sub-district, while the Gebang sub-district, Babalan sub-district, West Brandan district and Sei Lapan sub-district belong to the category of developing areas, while Pematang Jaya sub-district belongs to the underdeveloped sub-district category.
3. The result of LQ analysis of Teluk Aru area shows that the sector of Teluk Aru area base is Agriculture sector (LQ = 1,8) and Mining and Quarrying sector (LQ = 15,3).

B. Suggestion

1. Langkat Regency Government is expected to give more attention to the Gulf of Aru region by looking at the potential of the sub-districts within Teluk Aru
2. The amount of contribution and potential of Teluk Aru region can be a supporting factor in the development of Teluk Aru region
3. It should be further investigated by adding other research variables such as Human Development Index (HDI), Facilities and other supporting infrastructure.

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