THE STRATEGIC DEVELOPMENT OF KEY POTENTIAL AREA IN SERAM BAGIAN BARAT, MALUKU

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ABSTRACT

The authority of local governments to promote economic development in their own regions was expected to take place more quickly after implementation of policies promoting decentralisation and regional autonomy. Economic development needs effective strategies and allocation of resources in the potential economic areas selected as growth centres. This research was conducted in Kabupaten Seram Bagian Barat, one of kabupaten in the Maluku Archipelago, East Indonesia. The goal of this research was to assist local governments to design their economic development strategies by selecting areas that showed potential for staging a growth centre pilot project. The criteria used to select the growth centre in this study were competitive commodities, infrastructure, quality of human resources and strategic location. The data analysis techniques used in this study were location quotient shift, location quotient share and the analysis hierarchy process, which involved using three different groups: academicians, entrepreneurs and government officials. The results showed that Kecamatan Kairatu and Kecamatan Seram Barat had potential as growth areas and could serve as regional pilot project areas. Furthermore, the results also showed that the infrastructure development must be managed by local governments in both regions and priority (from highest to lowest) given to the provision of educational facilities, construction of highways, construction of health facilities, provision of electricity and clean water.

Keywords: *Regional economics, Location quotient, Analytical hierarchy process*

JEL classification: *O220, O110*

I. INTRODUCTION

The implementation of decentralisation policies and regional autonomy in accordance with law 22 of 1999 on regional governance and law 25 of 1999 on central and regional financial balance follows directly from governance reforms in 1998. These policies changed much of the previous centralised government administrative arrangements to a system of decentralised administration under the authority of regional governments. These administrative changes affected the financial balance between the central and regional governments. The move to decentralisation did not change the central government's controlof foreign policy, defence and security, justice, religious affairs, fiscal, monetary and some other administrative areas.

Decentralisation policies have empowered local governments to encourage economic development in their areas that will lead to solid growth in the long run. This indicates that the role and initiative of local governments, whichhave a close understanding of the potential of their region,are important elements in promoting economic development. Basically, decentralisation policies are to foster equitable economic growth, particularly for a country such as Indonesia where communication between regions is not easy. Control by a central government authority is difficult and less effective than regional control.

One of the areas in Indonesia that has not optimised economic growth is Maluku. The Maluku islands, in the geography of Indonesia, is one of the archipelagos that has been neglected when compared with other islands in Indonesia, such as Java or Sumatra. Economic growth in Maluku in the first quarter of 2011 only contributed less than 2,3% to GDP of Indonesia, lagging behind economic growth in Java and Sumatra, which contributed up to 57,9% and 23,5% to GDP of Indonesia, respectively. Most areas in Maluku have not been able to develop properly; one of the constituent kabupatenof Maluku that has had littlegrowth in the long run is Kabupaten Seram Bagian Barat.[1] Since the promulgation of Maluku as an area for economic development in 2007, the growth of Seram Bagian Barathas beenat a relatively low rate and slow; 3.27% per annum for the period 2002 to 2005, and it was ranked seventh of eight Kabupaten with the lowest growth in Maluku. Its growth rate was even lower than the growth of Maluku island itself, which was 4.17%.

Within the framework of regional autonomy, the local government of Maluku continues to make efforts to increase the growth of Seram Bagian Barat. One of the attempts by the local government to increase economic wellbeing was the launching of a pilot project in those areas that were judged

[1] Kabupaten is the term used for an administrative area and usually translated as 'regency'. Generally, a provinsi (province) comprises a number of kabupaten, which in turn have kecamatan or sub-districts. This study deals with four of the seven kecamatan or sub-districts of Kabupaten Seram Bagian Barat. These kecamatan are Huamual Belakang, Kairatu, Seram Barat and Taniwel.

to have potential for development and that can influence others to grow. The implementation of a pilot project will not be easy;it requires planning, good understanding and deep respect for the characteristics of the kecamatanin Seram Bagian Barat, as well as a knowledge of the economic relations between each kecamatan. However, any analysis of the growth poles cannot be assessed subjectively based on economic data only;it also needsan assessment by practitioners and observers from governments, academia and business who have the requisite experience of conditions in the area.

The goal of this research was to determine which kecamatanhave potential as growth centres in Kabupaten Seram Bagian Barat and sequence the development priorities that need to be implemented. By combining regional economic resources with supportive local governments as regulators, with academicians as observers and with entrepreneurs as participants, this research is expected to produce a regional development policy for Seram Bagian Barat that is concrete, comprehensive and sustainable in the long term.

II. LITERATURE REVIEW

2.1 Regional Economic Growth

The conjunction of theories of location, central place and regional growth, linked to basic economic theory, is at the heart of the concept of growth centres, which considers an industry or industries to be the prime driver of growth for the surrounding areas. Growth centres or growth poles are more associated with the growth of urban areas where there are industrial sectors that stand as economic bases. The term, 'opposite poles of growth' has a wider meaning; it is a region that serves as a driver of growth, including a growth centre or polar function, if the emphasis is on a particular industry (LPEM FEUI, 2003).

Functionally, growth poles can be defined as group of companies, branches of industry or those dynamic elements that stimulate economic life. They initiate a series of economic developments with multiplier effects. Although geographically, a growth pole is defined as a pole of attraction that causes various types of businesses with common interests to gather in one place without any links between each attempt, this does not mean that the polar functional growth has no influence. Economic activities that thrive in one place influence the development of commercial and industrial activity over a wider geographical area (Kadariah, 1985).

The concept of a growth pole strategy depends on the movement of capital (elasticity of movement of capital) and labour. The elasticity of the different movements is important in assessing the different regional strategies. The main task of growth centres is to attract and absorb labour. In the West, the first attempt to develop the basic theory of growth centres was made by Francois Perroux in the 1950s. Based on his thinking, because economic growth was not limited to

polarisation, growth did not occur at all places but only accumulated in a few specific centres with varying intensity. With these conditions in a particular area there would be an industry leader, followed by industry groupings in the vicinity. These industry groups would facilitate economic growth in the near environs because of the cumulative growth generator that was driven by one of the industries (Higgins and Savoie, 1992).

Central place theory, developed by Christaller, is the beginning of location theory. This theory posits that the main functions of a central city is as a centre for the regions around it (complementary area) to supply it with goods and services; such as commercial trade services, banking, education, entertainment and other services from the municipality or region. Central place theory is relevant for urban and regional planning because a hierarchical system is an efficient tool for the administration and allocation of resources to regions. According to Richardson (1973), the large spatial distribution of urban centres was a very important element in the structure of nodal areas and gave birth to the concept of dominance and polarisation that represented the properties of its structure.

2.2 Economic Base Theory

Economic base theory or export base theory, first developed by Douglass C North in 1955,posits that the economic growth of a region is greatly affected by the ability of the region in meeting exogenous demand for goods and services. Thus, the ability to export their products to regions beyond would trigger a multiplier effect in the region itself. The multiplier effect would occur if the revenue received from exports were to be spent in the local area thus creating additional and sustainable revenue. Some activities in a region are basic in the sense that their growth generates and determines the development in the area, but other or non-basic activities are a consequence of the overall development. One of the analytical tools of economic modelling is the base location quotient. This tool can be used to determine the export activities of the leading sectors of a region. The economic base theory is suited to small economies with simple economics for short-term research on regional economic development.

2.3 Neoclassical Regional Growth Theory

Neoclassical growth theory was developed by Borts and Stein (1964), Siebert (1969) and Richardson (1973). This theory uses assumptions developed from neoclassical economics; an understanding of space was expressed in the costs associated with the relocation of the factors of production, movement of goods and delivery of information. According to this theory, regional economic growth is closely connected to three important factors: labour, availability of capital and technology.

An important point stressed in this theory is the existence of migra-

tion or mobility of production factors between regions. The movement of labour and capital within a country is easier than between countries and this can have huge economic effects on regional economic growth. However, this theory assumes perfect flexibility of factor prices so that the displacement of labour and capital across regions would automatically eliminate the differences in factor prices among regions and ultimately create a balance (equilibrium). In other words, the economic system will reach its natural balance if capital and labour flow without restriction. Therefore, capital would flow from high-wage areas to low-wage areas.

2.4 Regional Competitive Advantage (Competitiveness)

Competitiveness is generally defined as how much market share the product of a country has in the world market. But a more precise definition of competitiveness is productivity that will encourage increases in the standard of living. Productivity depends on the value of goods and services that can be produced efficiently. The assumptions underlying competitiveness include macro-economic conditions, anda political and legal environment that supports improvements in the economy. Good macro-economic conditions help to create prosperity but need the support of the micro-economic conditions of the area.

Prosperity basically derives from the micro-economic foundation, activities and corporate strategies of companies. A company's strategy is affected by the quality of inputs, infrastructure conditions, institutions, government regulations and other policies that govern the business environment in which it competes.

A region can increase its prosperity if it can increase productivity and specialise in the production of goods and services that can be generated by the most productive area. A major challenge of economic development is how to create the conditions that will support the development of rapid and sustainable productivity. Political conditions and macro-economic policies that lead to stability can increase the potential for the increased prosperity of a region. However, prosperity is actually created at the micro-economic level in the company's ability to produce goods and services efficiently. A micro-economic basic of productivity refers to two related issues; satisfaction for the company in the national competition, and the micro-economic business environment.

Regional productivity is a function of the productivity of companies in the area. An economy will not be competitive unless companies (national and private) are also competitive in their local environment in that country. In supporting the increased prosperity, companies must compete with each other. The advantage of competition in a state enterprise must be changed from comparative advantage (wage labour and cheap natural resources) to competitive advantage by product differentiation. Changes in the health of

competition depend on the changes in the micro-economic business environment. A business environment can be understood in relation to four related issues: the quality of input factor conditions, a firm's strategies and responses to competitors, the quality of demand conditions, and the circumstances related to supporting industries.

2.5 Rural Economic Development

Development has three basic elements; change, objective and potential. Change means the progress of conditions from the less satisfactory to the better. Objective means the interest of human beings to strive for their welfare. Finally, potential means potential funding and resources in the community to be used in development (Daldjoeni, 1998). Regional development depends on the capacity of the region itself in selling its goods and services, and the capacity itself is regarded as income for residents in the area. Various strategies can be used to examine rural development.

According to Haeruman (1997), there were two points of view to exploring the countryside; rural development, which was seen as a natural process that follows from its potential, and the ability of rural communities themselves. Another view of rural development is as an interaction between the potential ofa village community and encouragement from outside to accelerate development. Economic policies by the government seem obsessed by the belief that the expected economic equity will be achieved slowly and inevitably if economic growth continues to be driven slowly as well.

III. DATA ANALYSIS TOOLS

3.1 Descriptive Analysis

Descriptive analysis was used to evaluate the condition of public services based on an assessment of the community. This was conducted as a counterweight to previous analyses based on secondary data and from information from the local governments. The importance of the analysis is that it provides policy direction in accordance with the aspirations of the community. Descriptive analysis focuses on public services received by the community: education, health and other support services. A major reason for the analysis is that local government is responsible for meeting the minimum requirements for community and social services.

3.2 Shift-Share Analysis

Shift-share analysis was used in the preparation for strategic regional development planning and rapid growth in Seram Bagian Barat. In this research, shift-share analysis was used to determine which economic sectors in Seram Bagian Barathad the potential to become the basis and support for a sustainable economy. This required an appropriate method so that the results would enable a strong foundation for the strategic regional development planning and rapid growth. Shift-share decomposition is defined as:

$$\Delta e_i = G e_i t_{n-1} + (G_i - G) e_i t_{n-1} + (g_i - G_i) e_i t_{n-1}$$

Where:

G = revenue growth in all sectors atkabupaten level

G_i = revenue growth in sector iatkabupaten level

g = revenue growth in all sectors atkecamatanlevel

g_i = revenue growth in sector iatkecamatanlevel

e_i t_{n-1} = revenue growth of sector i in the previous year

e_i = changes in the level of (nominal) income sectors of the kecamatanifrom the previous period

$G.e_i$ = the area effect, which showed the revenue growth of sector i in revenue growth rate of the kabupaten

$(G_i-G).e_i$ = the industry mix effect, which compares revenue growth in sector i with revenue growth of all sectors in the kabupaten

$(g_i-G).e_i$ = the regional shift effect, which compareskecamatan-revenue growth sector i with revenue growth of all sectors in the kabupaten

3.3 Location Quotient

Location quotient (LQ) is used to answer the problem of how to rate the relative worth of economic sectors in Seram Bagian Barat. LQ analysis uses a formula to determine the extent of regional sector specialisation (Bendavid-Val, 1991: 73; Shaffer, 1989: 268). The LQ coefficient is written as:

$$LQ = \left(\frac{(Q_{ir}/Q_r)}{(Q_{in}/Q_n)} \right)$$

Where:

Q_{ir} = economic sector i indicator observation area

Q_r = economic indicators throughout the observation

Q_{in} = economic sector i indicator reference region

Q_n = economic indicators all areas of reference

LQ >1, the level of sector specialisation in observation region i is higher than the reference area

LQ <1, the level of sector specialisation in observation region i is lower than the reference area

LQ =1, the level of sector specialisation in observation region i is equal with the reference area

Analysis of the economic characteristics of a region can also be based on the development indicators of the numerical value of the location quotient (LQ). The advantage of this indicator is its ability to show the relative excellence of an economic sector in a region against another sector in another region in the aggregate. LQ is generally used to decide the basic economic sector or a regional sectoral specialisation. An LQ analysis is based on real GDP data for each economic sector.

3.4 Location Quotient Numbers are Between 0 and Positive Infinity

LQ amounts of less than one indicate that the regional income sectors,i, have a smaller contribution to the local revenue than the kabupaten average. This means that this sector tends not

to have a relative advantage compared with other kecamatan. If the LQ numbers are equal to 1, then the local income sector, i, contributes the same as thekecamatan with an average income. This means that this sector tends to have the same relative advantage as other kecamatan. If the LQ number is greater than 1,it indicates that the kecamatan income contribution of the sector,i, to the local revenue is higher than the kabupatenaverage, which means that these sectors tend to have relatively greater advantage than they do in other kecamatan. In other words, sectors that have the LQ numbers greater than 1 are a basic economic sector.

However, the LQ analysis does not explain the level of competitiveness of the sector, which is why it must be combined with shift-share analysis. The second problem is that the analytical tools use different mathematical principles: shift-share analysis is a method that requires a period of time; the LQ method is a function to analyse at a single point in time. This problem can be overcome by modifying the LQ equation, so that the degree of the sector's competitiveness can be accommodated. For uniformity of the mathematical principles, the analytical methods LQshare, LQshift and trends LQshare were developed (Rustan and Canon, 2007). To identify the level of specialisation or concentration of the sector over a period of time, the basic equation for LQ is changed in the median of the formula:

$$LQ_{Share} = \left[\frac{\frac{1}{2}(Q_{Rin} + Q_{Ri0})}{\frac{1}{2}(Q_{Rn} + Q_{R0})} \Big/ \frac{\frac{1}{2}(Q_{Nin} + Q_{Ni0})}{\frac{1}{2}(Q_{Nn} + Q_{N0})} \right] = \left[\frac{(Q_{Rin} + Q_{Ri0})}{(Q_{Rn} + Q_{R0})} \Big/ \frac{(Q_{Nin} + Q_{Ni0})}{(Q_{Nn} + Q_{N0})} \right]$$

Where:

Q_{Rin} & Q_{Ri0} = economic sector indicator i

i = observation area late and early study years

Q_{Rn} & Q_{R0} = economic indicator throughout the region in the late and early years of observation studies

Q_{Nin} & Q_{Ni0} = economic sector indicator iat reference area in the late and early study years

Q_{Nn} & Q_{N0} = economic indicators throughout the reference year end andat the beginning of the study

LQ_{Share} > 1, the level of sector specialisation observation region i is higher than the reference area

LQ_{Share} < 1, the level of sector specialisation observation region i is lower than the reference area

LQ_{Share} = 1, the level of sector specialisation observation region i is equal to the reference area

Where:

LQ_{Shift} > 1, sector's competitiveness is higher than the reference area

LQ_{Shift} < 1, sector's competitiveness is lower than the reference area

LQ_{Shift} = 1, sector's competitiveness is equal with the reference area

$$LQ_{Shift} = \left[\frac{\Delta Q_{Ri}}{\Delta Q_{R}} \Big/ \frac{\Delta Q_{Ni}}{\Delta Q_{N}} \right] = \left[\frac{(Q_{Rin} - Q_{Ri0})}{(Q_{Rn} - Q_{R0})} \Big/ \frac{(Q_{Nin} - Q_{Ni0})}{(Q_{Nn} - Q_{N0})} \right]$$

3.5 Analytical Hierarchy Process

The analytical hierarchy process (AHP) is a method developed by the mathematician, Thomas L Saaty. This method is a framework to make decisions effectively on complex issues by decomposing a problem into its components, arranging these components into a hierarchy, giving numerical scores from subjective considerations about the importance of each variable and synthesising the various considerations to determine weight and priority of variables. This method also combines the strength of feeling and logic about various issues, and then synthesises a diverse variety of considerations into results that match our estimates intuitively as presented on the consideration that has been made. (Saaty, 1993)

One criticism of the quantitative approaches in economic analysis is that they do not include the reality of political factors in determining economic activity. An important element that can represent these factors, among others, is the government apparatus. Controlled information and experience between local governments and other organisations are not similar because they will have different perceptions as well. This will be valuable information for planning and implementing infrastructure development in the long term. The AHP technique is one appropriate method used in preparing a development plan. In this case, various problems faced in the implementation of infrastructure development were reviewed carefully.

In this research, the analytical hierarchy process was conducted by, first,planning the sample, the survey schedule and the implementation of activities. Furthermore, focus group discussionswere held with experts in the implementation of strategic regional development and rapid growth. Discussions focused on various criteria for choosing potential areas to be developed into strategic areasfor rapid growth. Other discussions were held to anticipate obstacles in the development area.

The plan of analysis was structured by evaluating factors that are a prerequisite for the development of an economic area and by the need to rank the various areas in order of development. In other words, careful thinking is needed about the selection criteria to ensure that the analysis of various development sites will allow valid comparisons and ranking. In-depth interviewswere conducted with three elements; government (Department of Cooperatives, Department of Industry and Trade, and Parliament), entrepreneurs based in Seram Bagian Barat, and academicians (lecturers from the University of Pattimura, Ambon). The people interviewed as part of the analytical hierarchy process were asked to consider such matters as competitive commodity markets, infrastructure (for education, health, roads and highways, electricity and clean water supply), quality of human resources and strategic location, which implies a central location to enable market access and that is close to the provincial capital.

IV. RESEARCH OBJECTIVE OVERVIEW

The research was in Kabupaten Seram Bagian Baratof Maluku, which is bordered by the Seram Sea on the north, Banda Sea on the south, Buru Sea on the west and Maluku,the capital city, on the east. The total area of Seram Bagian Barat is 53,148 square kilometres; 49,058 square kilometres of ocean and 4090 square kilometres of land. Seram Bagian Baratcomprises seven kecamatan but four only: Kairatu, Seram Barat, Huamual Belakang and Taniwel were the subjects for this study.

The population of Kabupaten Seram Bagian Barat, based on the censuses of population for 1971, 1980, 1990 and 2000, was 66.779, 73.462, 130.460 and 134.118 inhabitants, respectively. The censuses also showed that the average growth of population of Kabupaten Seram Bagian Barat in 1971, 1980, 1990 and 2000 are 2.44%, 2.46%, 1.40% and 0.55%, respectively. During the period 1971-2000, there are significant variations in the rate of population growth in the fourkecamatan; the highest averagerate of growth was in Taniwei with 2.33% per year. In contrast, the population of Kairatu fell by 0.72% per year. The population density in Seram Bagian Barat is 38.64 inhabitants per square kilometreand there were 2,52 families per square kilometre.

Education; Seram Bagian Barat has 20 kindergartens, 195 elementary schools, 56 junior high schools and 26 senior high schools. The student population in Seram Bagian Baratcomprised 848 kindergarten students, 28,623 elementary students, 56 junior students and 26 senior students. There were 2185 teachers in Seram Bagian Barat: 38 kindergarten teachers, 195 elementary teachers, 56 junior high school teachers and 26 senior high school teachers.

Seram Bagian Barat is that part of Maluku that cannot be separated from the Province. Geographically, transport became the main priority for development. Commercial and other inter-island relations in the region rely on sea transport but weather conditions at times make this unreliable. The road transport system is not dominant in serving the needs in this area but its role is quite important in serving current residents for intra-island travel. It is a good alternative transport system at times of uncertain weather, when marine transport can not be used.

Another major supporting infrastructure that is important for Seram Bagian Barat is electric power supply. Electricity supply in Seram Bagian Barat has reached rural areas but the coverage is not complete. In 2005, there were three electricity sub-branch offices in Seram Bagian Barat with the total production is 8,952,682 kWh.

For public health, one vital need for rural and for city communities is potable water. There is a supply of potable water provided to two kecamatan only. The total water consumption in Seram Bagian Barat in 2005 was 28.512.000 litre.

V. FINDINGS

5.1 Economic Growth

In the period 2003 to 2005, Seram Bagian Barat's economy grew at an increasing rate every year. After achieving a growth rate of 3.1% in 2003, the gross regional domestic product (GRDP) grew by 3.3% and 4.7% over the next two years but in 2006 it grew slower, by 2.9% only, which indicated a contraction in economic growth at the time. Looking at the kecamatan for the period 2003 to 2006,three (Seram Barat, Huamual Belakang and Taniwel) had an increased GRDP growth rate; Kairatu did not. The highest growth rate was achieved by Seram Barat at 6.1% in 2006, followed by Taniwel (5.7%) and Huamual Belakang (5.5%); Kairatu'srate fell by 1.1%. As a matter of fact, GRDP growth in Kairatu before 2006 was always higher than GRDP growth in other kecamatan. The GRDP growth of Seram Bagian Barat, by economic sectors, is shown in Table 1.

Agriculture and services are two sectors that have increased their growth rates gradually over the period 2002 to 2006. The agriculture sector started growing by 1.7% annually in 2003 and then continued to increase until reaching 4.7% in 2006. The services sector started growing at the annual rate of 3.4% in 2003, then continued to increase until it reached 7.9% in 2006. With the agriculture sector, GRDP growth in the kecamatan was also similar to the growth at the kabupaten level. The four kecamatan have had positive growth that increased every year over the period 2003 to 2006. It could be said that they have relatively balanced growth that produced a consistent growth at the kabupaten level. Unlike the agriculture sector, GRDP in the services sector in the kecamatan showed no increased growth from year

Table 1. GRDP Growth in Seram Bagian Baratby Economic Sector

Annotation	Economic sector	2003	2004	2005*	2006**
A	Agriculture	1.70%	2.70%	3.40%	4.70%
B	Food crop	2.30%	3.10%	-31.40%	53.90%
C	Plantations	-7.10%	9.70%	4.20%	6.50%
D	Farming	2.40%	2.50%	2.80%	2.30%
E	Forestry	-30.70%	3.70%	2.30%	6.50%
F	Fishing	2.60%	3.20%	4.20%	3.40%
G	Mining and quarrying	5.20%	5.40%	5.70%	4.50%
H	Manufacturing industry	1.90%	1.80%	3.90%	-8.60%
I	Electricity, gas and water supply	7.60%	7.10%	5.70%	5.70%
J	Property construction	6.00%	5.30%	6.20%	7.80%
K	Trade, hotel and restaurant	5.40%	4.90%	7.00%	9.10%
L	Transport and communication	6.10%	4.60%	5.40%	5.10%
M	Finance, leasing and business services	6.40%	3.40%	5.10%	1.80%
N	Services	3.40%	4.40%	5.50%	7.90%

Note: * revised numbers, ** temporary numbers.

Table 2. GRDP Growth (%) by Kecamatan and Economic Sector in Seram Bagian Barat

Sec	2003				2004				2005*				2006**			
	K	S	H	T	K	S	H	T	K	S	H	T	K	S	H	T
A	1.6	1.2	2.4	1.9	2.9	2.0	3.3	2.4	3.3	3.5	3.6	3.3	4.6	4.7	4.5	5.2
B	2.7	0.9	1.6	2.1	2.6	3.2	6.8	2.9	-47.6	2.7	-1.3	2.6	102.5	3.0	3.0	3.0
C	-13.8	0.0	0.0	0.1	19.2	1.1	1.4	0.7	4.1	4.2	4.3	4.4	6.4	6.4	6.7	6.6
D	3.4	1.4	0.2	1.1	3.7	1.5	0.5	1.1	2.8	2.7	2.6	2.8	2.3	2.3	2.2	2.2
E	2.0	2.0	3.9	-59.5	4.8	2.2	3.0	4.7	2.3	2.3	2.5	2.4	6.5	6.5	6.6	6.6
F	0.3	2.5	3.7	1.9	2.7	2.0	4.8	1.5	4.1	4.2	4.1	6.2	3.2	3.4	3.4	3.3
G	6.3	5.0	2.1	1.3	5.9	5.3	2.6	3.2	5.7	5.8	5.7	5.8	4.7	4.3	4.2	4.3
H	2.0	1.4	0.9	0.4	1.9	1.3	0.3	0.8	3.9	4.0	4.2	4.1	-10.5	1.2	2.4	1.7
I	8.0	4.6	3.3	5.5	7.5	4.8	3.2	4.7	5.7	5.6	6.3	5.8	5.7	5.6	5.9	5.7
J	8.1	2.8	1.5	2.2	7.5	1.2	1.1	1.5	6.6	5.4	5.4	5.4	7.8	7.9	7.7	7.8
K	5.7	6.0	2.5	4.8	5.0	5.9	2.5	2.7	6.9	7.2	6.8	6.6	9.2	9.1	9.1	9.1
L	7.3	4.5	0.2	3.3	4.9	4.6	2.1	2.7	5.5	5.3	5.2	5.4	5.2	5.1	5.1	5.0
M	7.0	2.7	1.9	2.7	3.6	1.8	1.2	1.7	5.1	5.6	4.9	4.4	1.8	1.8	1.8	1.8
N	3.7	2.9	1.0	1.2	4.9	2.4	0.6	1.6	5.5	6.9	4.4	4.4	7.9	8.2	7.8	7.8

Note 1 * revised numbers, ** temporary numbers

Note 2 K: Kairatu, S: Seram Barat, H: Huamual Belakang, T: Taniwel.

to year. In 2004, the growth of this sector in Seram Barat and Huamual decreased compared with the previous year.

5.2 Location Quotient Shift Analysis

The result of shift analysis is shown in Table 3. Based on shift analysis calculation, it appears that all economic sectors in Kairatu, Seram Barat, Huamual Belakang and Taniwel have no region effect value in the period 2003-2006. This value indicates the ratio between changes in the magnitude of GRDP in each kecamatanand the GRDP scale changes that are based on GRDP growth in the kabupaten as a whole. The negative sign indicates that the change in GRDP magnitude is smaller than the change in the value of GRDP based on GRDP growth in the kabupaten. And vice versa; a positive sign indicates that the change in real sectoral GRDP magnitude is larger than the change in the value of GRDP based on GRDP growth in the kabupaten. The greater the negative value is an indication that the relevant sectors in each kabupaten were lesser contributors to the GRDP of the kabupaten. Conversely, the greater the positive value is an indication that the relevant sectors in each kabupaten provide greater contributions to aggregate GRDP.

The agriculture sector made an increasingly large contribution in the year 2006 with a relatively large positive value. These conditions are in contrast to the previous three years, where its regional shift effect value was almost always negative. But the mining and quarrying sector tends to contribute above the average. The electricity, gas and water supply sector is similar to the mining and quarrying sector. In 2006, the manufacturing sector almost always had a negative

Table 3. The Result of LQ Shift Analysis

Sec	2003				2004				2005*				2006**			
	K	S	H	T	K	S	H	T	K	S	H	T	K	S	H	T
A	0.69	0.84	3.60	2.47	0.79	0.84	2.65	2.08	0.75	1.11	2.08	1.70	1.87	0.56	0.92	0.87
B	1.16	0.31	1.09	1.33	0.86	0.74	2.86	1.46	1.61	-0.06	0.05	-0.10	3.82	0.03	0.05	0.04
C	1.48	0.00	-0.01	-0.04	1.41	0.14	0.24	0.20	0.81	1.04	1.43	2.00	2.03	0.53	0.71	0.87
D	1.12	0.56	0.01	1.95	1.15	0.53	0.01	2.02	0.84	0.83	0.06	3.46	2.10	0.44	0.03	1.51
E	-0.02	-0.07	-0.22	15.45	0.47	0.86	1.74	6.44	0.39	1.34	2.01	3.89	0.97	0.71	0.96	1.72
F	0.03	1.92	10.50	0.27	0.21	1.19	9.35	0.19	0.27	1.85	5.55	0.44	0.65	0.96	2.85	0.13
G	1.16	0.88	0.03	0.59	1.09	0.87	0.03	1.49	1.04	0.86	0.05	1.87	2.67	0.42	0.02	0.78
H	1.35	0.33	0.20	0.16	1.37	0.30	0.07	0.33	1.33	0.43	0.33	0.56	4.04	-0.03	-0.04	-0.05
I	1.35	0.27	0.01	0.45	1.37	0.28	0.01	0.44	1.38	0.39	0.02	0.49	3.44	0.20	0.01	0.22
J	1.25	0.50	0.26	0.55	1.37	0.23	0.17	0.46	1.11	0.80	0.62	1.01	2.59	0.47	0.35	0.51
K	0.81	1.71	0.74	0.99	0.81	1.83	0.67	0.65	0.83	1.51	1.15	0.83	2.08	0.76	0.58	0.39
L	1.14	0.99	0.02	0.43	1.04	1.27	0.22	0.49	1.05	1.20	0.39	0.61	2.59	0.63	0.20	0.27
M	1.39	0.11	0.10	0.43	1.40	0.13	0.10	0.54	1.38	0.25	0.23	0.68	3.41	0.12	0.12	0.35
N	1.32	0.33	0.05	0.56	1.38	0.20	0.02	0.61	1.30	0.43	0.10	0.94	3.22	0.19	0.06	0.52

Note 1 * revised numbers, ** temporary numbers

Note 2 K: Kairatu, S: Seram Barat, H: Huamual Belakang, T: Taniwel

value. The property construction; trades, hotels and restaurants; transport and communications sectors as well as the services sector tend to provide a greater contribution. Although there was still a negative value in 2003 to 2004, the overall value of each kecamatantend to increase. This situation is in contrast with the finance, renting and business services sector, which tended to decrease. In fact, in the year 2006, the value in allkecamatanhad a negative sign. This means that the role of this sector's contribution to GRDP growth in the kecamatan has declined.

If viewed from the industry mix effect (G_i-G);the agriculture; industry; and finance, leasing and business servicessectors have no constant value (positive or negative). A negative value indicates that the relevant sector in each kecamatan provides a smaller (than average) contribution to GRDP growth; the greater the negative value, the smaller the contribution. Conversely, the greater the positive value, the greater is the contribution by the relevant sectors in each kabupaten to GRDP growth. The difference is that industry mix effect values are measured in percentages (GRDP growth), but the values measured in the securities area are absolute values (magnitude of GRDP). Unlike the three sectors mentioned above, the mining and quarrying sector; electricity, gas and water supply sector; property construction sector; trades, hotels and restaurants sector; transport sector and the communications and services sector, always had a positive industry mix effect value over the period 2003 to 2006. In simple terms, the contribution by these sectors to GRDP growth in Seram Bagian Baratis larger than the contribution by the agriculture, industry and finance, leasing and business services sectors.

Of the two effects, industry mix and regional shift, it is the regional shift effect (g_i-G_i) that shows the differences between GRDP growth in the kecamatan for each sector. An increasingly large negative value indicates that the GRDP growth in a kecamatanhas contributed less to the aggregate GRDP growth in the kabupaten. Conversely, greater positive values indicate that the GRDP growth in a kecamatanprovides a larger contribution to GRDP growth in the kabupaten. Economic sectors, except electricity, gas and water supply, have a regional shift effect value that is always changing (positively or negatively). This means that the contribution to GRDP growth by kecamatan tends to fluctuate. Some sectors, such as property construction; trade, hotels and restaurants; transport and communication; and services have tended to increase their contribution in 2005–2006. Meanwhile, the industry and the finance, leasing and business services sectors were unable to maintain their increased contribution that they made two years previously. In 2006, the contribution of these two sectors had fallen.

5.3 Location Quotient Share Analysis

Based on the calculation of LQ share, the agriculture sector is dominant in Huamual Belakang, Taniwel and Seram Barat. Nevertheless, the calculation of LQ shift shows that the competitiveness of this sector in these three kecamatan has tended to decrease. Conversely, although the agriculture sector is not a basic sector in Kairatu, the competitiveness of this sector has tended to increase, especially in the year 2006. The mining and quarrying sector is dominant in Taniwel and it is also a basic sector in Kairatu. Although not as strong as in Taniwel, the competitiveness of this sector in Kairatu has tended to increase. In the manufacturing industries sector, specialisation is a feature of Kairatu's manufacturing. The other three kecamatan were left far behind in comparison with Kairatu. The degree of manufacturing specialisation of Kairatucannot be equalled by the otherkecamatan because it is a growth area and also because the competitiveness Huamual, Taniwel and Seram Barat has decreased.

The electricity, gas and water supply sectors are in a condition similar to the manufacturing industry sector. The domination of Kairatu cannot be challenged by the three other kecamatan and it is supported by an increased competitiveness. In the construction sector, Huamual is relatively backward compared with Kairatu, Seram Barat and Taniwel. In the period 2002 to 2006, the competitiveness between the four kecamatan tended to fluctuate. However, Kairatu became the only kecamatanthat maintained relatively high levels of competitiveness. In 2006, it succeeded in reaching a higher level than for the previous five years. Seram Barat's trade, hotels and restaurants sector is the most competitive followed by Huamual's. However, please note that the competitiveness of this sector in these two kecamatan has tended to

Table 4. The Result of LQ Share

Sec	2003				2004				2005*				2006**			
	K	S	H	T	K	S	H	T	K	S	H	T	K	S	H	T
A	0.77	1.19	1.82	1.54	0.77	1.18	1.84	1.55	0.77	1.17	1.85	1.56	0.77	1.15	1.83	1.55
B	1.06	0.76	1.11	1.02	1.06	0.75	1.11	1.02	0.95	0.90	1.36	1.25	0.97	0.88	1.31	1.23
C	0.78	1.19	1.37	1.77	0.79	1.19	1.37	1.77	0.82	1.14	1.33	1.72	0.82	1.12	1.31	1.70
D	0.82	0.96	0.06	3.04	0.83	0.95	0.06	3.03	0.83	0.94	0.06	3.04	0.84	0.92	0.06	3.00
E	0.31	1.26	1.48	4.73	0.39	1.54	1.84	3.38	0.39	1.52	1.84	3.42	0.39	1.49	1.82	3.38
F	0.27	2.05	5.31	0.27	0.27	2.03	5.42	0.27	0.27	2.02	5.47	0.27	0.27	1.98	5.40	0.27
G	1.03	0.94	0.05	1.70	1.03	0.94	0.05	1.66	1.04	0.94	0.05	1.66	1.05	0.92	0.05	1.64
H	1.33	0.46	0.30	0.48	1.33	0.46	0.29	0.48	1.33	0.45	0.29	0.48	1.33	0.47	0.31	0.50
I	1.37	0.45	0.02	0.44	1.37	0.43	0.02	0.44	1.37	0.43	0.02	0.44	1.38	0.42	0.02	0.43
J	1.00	1.07	0.72	1.06	1.02	1.03	0.69	1.04	1.03	1.01	0.68	1.02	1.04	0.98	0.67	1.01
K	0.83	1.59	1.16	0.79	0.83	1.60	1.14	0.79	0.83	1.61	1.13	0.79	0.84	1.58	1.11	0.78
L	1.02	1.36	0.41	0.56	1.03	1.35	0.40	0.55	1.03	1.34	0.39	0.55	1.04	1.32	0.39	0.54
M	1.36	0.26	0.23	0.71	1.36	0.25	0.23	0.70	1.36	0.25	0.23	0.70	1.38	0.25	0.22	0.69
N	1.28	0.39	0.12	1.08	1.28	0.38	0.12	1.06	1.29	0.38	0.12	1.05	1.30	0.37	0.12	1.03

Note 1 * revised numbers, ** temporary numbers

Note 2 K: Kairatu, S: Seram Barat, H: Huamual Belakang, T: Taniwel

decrease. Conversely, the increasing competitiveness in this sector shown by Kairatu is attributed to increased specialisation.

Seram Barat seems to dominate otherkecamatan in the transport and communications sector though its success is approximated by Kairatu, which is still within the average level throughout the kabupaten. Nevertheless, the competitiveness of this sector in Kairatu increased rapidly in the year 2006. In the same period, the competitiveness of Seram Barat declined drastically. Finance, leasing and business services for Kairatu havebecome specialised. This degree of specialisation has not been reached by the three other kecamatan. The competitiveness of this sector in Kairatu also continues to increase but in other kecamatan it is still relatively low. Kairatu also dominates the services sector and is rivalled by Taniwel only. However, it is just Kairatu that has become highly competitive and this has tended to increase, particularly in the year 2006.

5.4 Analytical Hierarchy Process

Determination of the strategic kecamatan was based on the analytical hierarchy process (AHP). AHP focuses on the opinions of experts and stakeholders in Seram Bagian Barat. The use of AHP was preceded by the determination of the necessary criteria for kecamatan to be used as a priority development area. Preliminary interviews and literature studies were conducted to establish the necessary criteria. The kecamatan-selected were Seram Barat, Huamual Belakang, Taniwel and Kairatu. The assessment for a potential kecamatan through the AHP was through the distribution of questionnaires and in-depth interviews. The results of AHP consist of two findings, the selection of the criteria and the determination

of the kecamatan with the most potential. The result of the assessment of criteria priority is shown in Table 5.

AHP results indicate that the quality of human resources is the most important criterion in deciding the potential of a kecamatan for the implementation of a fast-growth strategy. The priority given to the human resource criterion is 42.3% , which is the highest compared to the other three criteria; competitive commodities, infrastructure and strategic location, which have priorities of 21.5%; 17.6% and 18.7% respectively. Related to infrastructure, the most important elements are educational facilities, highway infrastructure and health facilities, which have priorities of 23.7%; 21.5% and 21.0% , respectively. Based on AHP as well, the kecamatan in Seram Bagian Baratwith the greatest potential is Seram Barat (40.1%), followed by Kairatu, Taniwel and Huamual Belakang, with priorities of 27.9%; 17% and 15%, respectively.

Table 5 shows that education facilities are the most important elements of infrastructure to be developed; a relatively non-urgent facility to be provided is a clean water supply. As depicted in Table 6, the kecamatan that are most ready to provide some public services, such as education facilities, are Seram Barat and Kairatu. Seram Barat, with the highest priority (40.1%) is where a city could be built that would become the capital of the kabupatenbecause ithas the potential to become the centre for economic activity and public services in Seram Bagian Barat. Kairatu, with a priority 27.9%, was also capable of providing educational facilities that are relatively better because of its proximity to the ferry ports and marine communication with Ambon, the provincial capital of Maluku.

Table 6. Kecamatan Piority

Sub-district	Priority
Kairatu	27.9%
Seram Barat	40.1%
Huamual Belakang	15.0%
Taniwel	17.0%

Health facilities in Seram Bagian Barat are provided by 19 doctors, 7

Table 5. The Priority of Infrastructure Development

Criteria	Priority
Competitive commodities	21.5%
Infrastructure	17.6%
Education facilities	23.7%
Health facilities	21.0%
Highway infrastructure	21.5%
Electricity supply	17.3%
Clean water supply	16.5%
Quality of human resources	42.3%
Strategic location	18.7%
Total	100.00

dentists, 10 health service workers, 11 pharmacists, 233 general nurses, 14 nutrition workers, 30 environmental health workers and 2 health care administrators. of the ratio of health-care workers to the general population is 1 to 372, which means the quality of health services is still far from satisfactory. A central hospital is being built in Seram Barat. Up to August 2007 there was not a full 24-hours-a-day supply of electric power in Seram Barat though Kairatu does have such a supply. Interviews with officials from Perusahaan Listrik Negara, the national electricity company, in Seram Bagian Barat elicited the information that power shortagesare mainly caused by insufficient storage capacity for the fuel oil that is used for electricity generation. Assigning local government as the electrical service provider would enable enough storage capacity to meet the needs of power plants. Clean water facilities can be met through community self-help programs that encourage the digging of ground water wells. There is an abundance of land in the area that can be exploited to ensure the availability of clean water that is relatively safe. Therefore, ensuring the availability of good water is considered not so important in terms of public service.

Furthermore, sensitivity analysis results showed that Seram Barat was the area that had the most potential to develop infrastructure, human resources and it had a strategic location. With the exception of commodity production in Kairatu, Seram Barat showed more potential for development in terms of infrastructure, human resources and location than the other three kecamatan. Kairatu has the potential to excel incommodities. In other words, Seram Barat is a suitable location for the development and marketing of competitive products from other kecamatan, especially Kairatu.

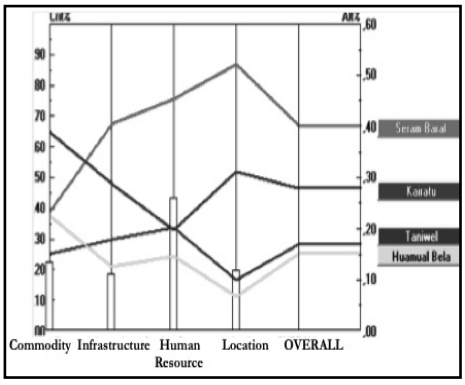

Figure 1. The Priority of Kecamatanfor Pilot Projects

VI. CONCLUSION

Based on location quotient analysis, Seram Bagian Barat can focus on developing its agriculture sector. Three kecamatan; Taniwel, Huamual Belakang and Seram Barat, can be developed by improving their agriculture sector and local government must increase the competitiveness of this sector. Increasing the competitiveness in mining and quarrying should be encouraged by local government to boost economic growth. Shift-share analysis shows that the agriculture sector's contribution was increasingly large in the year 2006 with a relatively large positive value. The mining and quarrying sector makes and above-average contribution.

AHP analysis shows that Seram Barat is the best choice to be developed as a pilot project area. It has better condition in economic resources, location and infrastructure. The second best is Kairatu. The main criterion in choosing the pilot project area is human resources.

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